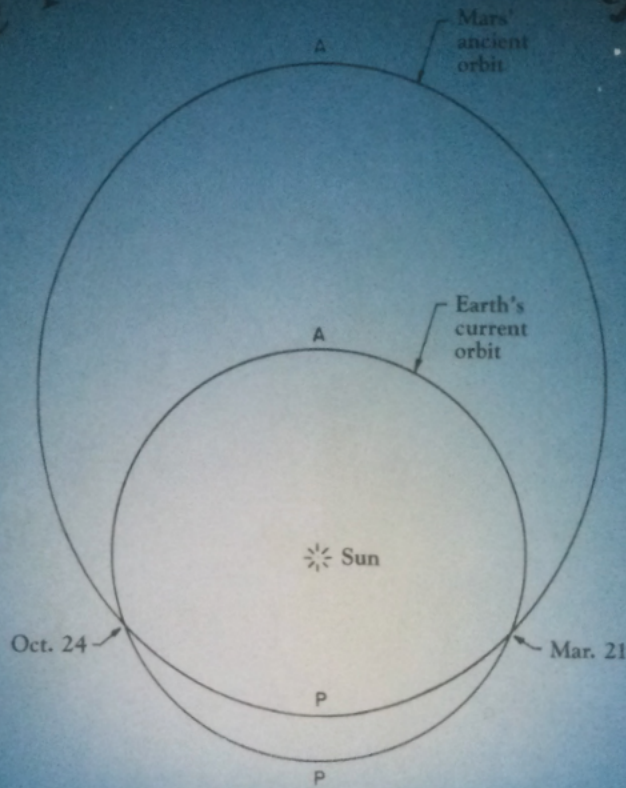


CATASTROPHISM

AND THE OLD TESTAMENT

The Mars-Earth Conflicts



by Donald Wesley Patten
Author of *The Biblical Flood and the Ice Epoch*

HISTORIAN

Marvin A. Luckerman (Editor *Catastrophism and Ancient History*)

Uniformitarianism has ruled almost supreme for the last 100 years. However with the advent of the space missions investigating the planets, and with our planet being littered with fossils indicating sudden deaths, catastrophism has slowly advanced to challenge uniformitarianism. It has risen with the help of pioneers like Donald Patten. His new book, *Catastrophism and the Old Testament*, ought to lead astronomers, cosmologists and others to re-examine their old ideas and theories, linked to the 200-year old nebular hypothesis,

Now, established scholars are forced to recognize that conditions on Mars like the atmosphere, the heat, the volcanism, the cratering, the former abundance of water and the Martian flood have changed its surface radically and suddenly. They assume those changes were billions of years ago; Donald Patten in his book affirms that those changes were thousands of years ago.

My area of specialization is ancient history. It is my belief that the ancient records and legends of man detail and describe such planetary disasters. It is my opinion that only with a study of catastrophism can archaeology, astronomy and geology gain a true understanding of our solar system. It is this combination that makes Donald Patten's work very valuable in both ancient history and astronomy.

ENGINEER

Samuel R. Windsor (Mechanical Engineer, Naval Architect)

This is a book I wish I had read forty years ago.
(See introduction in the Foreword)

PHYSICIST

Ronald R. Hatch (Orbital Analyst)

Don is inquisitive. He looks for patterns in geography and in history, and he finds them. Would you have thought of counting the craters on Mars (by 10° grids) looking for a pattern? Or would you have thought of analyzing the Biblical record of ancient catastrophes, looking for a cyclic pattern? In both cases, Don perceived, he

looked and he found. Now he offers to the 20th century the explanation constructed in accord with Newtonian mechanics. He found that 91% of the craters of Mars were all in one hemisphere if its center were viewed at 45° south latitude and 160° west longitude. Such indicates that 82% of the thousands of craters of Mars all occurred during one single catastrophic hour. Furthermore, those fragments which missed Mars proceeded on to become the asteroids. This cataclysmic event he estimates at about 12,000 years ago, not 3 or 3½ billion years past.

He has sensed that catastrophes described (and to some extent dated) in the Old Testament were astronomical in nature. Historically a 108-year pattern has been found. The 108-year pattern fits an orbital resonance model which I had the pleasure of working out with Don when I was with the aero-space division of the Boeing Co. I think you will enjoy and be challenged by Catastrophism and the Old Testament.

CATASTROPHISM AND THE OLD TESTAMENT

The Mars-Earth Conflicts

by Donald Wesley Patten
Pacific Meridian Publishing Company

Dedication

To my father Eugene P. Patten

and my mother Ella D. Patten

and my wife Lorraine K. Patten.

Acknowledgments

THIS IS TO EXPRESS MY THANKS to those friends who have given so much help and encouragement with this endeavor. I owe much to:

My wife, Lorraine K. Patten.

Ronald R. Hatch, physicist and orbital analyst, Magnavox Research Corporation, Torrance, California.

Marvin Luckerman, historian and editor, *Catastrophism & Ancient History*, Los Angeles, California.

John R. Patten, architect and engineer, Friday Harbor Washington.

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Leonard Schroedter, engineer and physicist, Salt Lake City, Utah.

Samuel R. Windsor, marine engineer, Bronson and Windsor, Seattle, Washington.

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Preface

This work is intended to enrich and to invigorate the literature of catastrophism and creationism. It is intended to carry on the rich literary tradition of such catastrophists as:

- Noah, the quality carpenter, 25th century B.C.
- Isaiah, the perceptive prophet, 8th century B.C.
- William Whiston, astronomer and theologian, 17th century.
- Baron Cuvier, founder of paleontology, 19th century.
- Louis Agassiz, conceptualist of the ice age, 19th century.
- George McCready Price, catastrophic geologist, early 20th century
- Byron Nelson, catastrophic writer, early 20th century.
- Alfred Rehwinkel, catastrophic writer, mid 20th century.
- Immanuel Velikovsky, catastrophic writer, mid 20th century.

These last six catastrophists have suggested or supported tides as agents for catastrophism, usually in the sense of global oceanic upheavals. With the exception of Whiston and Velikovsky, no attempt was made to identify the astronomical planet causing those global tides. Our endeavor is to understand the astronomical nature, hence also the inherent cyclicism of these catastrophes, their intensities and the nearness of the flybys. This is to establish the celestial mechanics, that is, the orbital mechanics of catastrophism. In so doing, a deeper and more comprehensive understanding is achieved both for the geography and the history of our planet.

Foreword

This book is a direct challenge to the contenders in the debate on origins. Don Patten is offering explanations that correspond to reported observations and is challenging the yard sticks for Earth history employed by science. His book essentially says "Yes mother, I know we are all supposed to appreciate the emperor's fine dress, but the emperor is wearing no clothes." Don Patten has written a story so engrossing that I doubt any student of the "large" questions can put it aside. Those large questions include:

- What caused mountains? (It wasn't continental "drift.")
- What is the cause of geomagnetism on earth? (Indeed, what is its cause on any planet or star?)
- Why are warm-weather animal remains found at both poles?
- Why, once frozen, did quick-frozen mammoths never thaw?
- What mechanism could quick-freeze "elephants" together with subtropical vegetation surrounding them?
- Why, if the significant changes are gradual, do virtually all earth changes occur in violent, debris-littered environments?
- What gradual mechanism could put a saline lake (like Lake Titicaca in Bolivia) with sea-horses in it at a 13,000-foot elevation, then steadily decrease its salinity?
- What could have been going on in nature that encouraged ancient armies to schedule battle for the "natural failure" of a city's defenses, even to predicting the day?
- Why, if mountain uplifts occurred before people inhabited the earth, do we find historical description of those same changes?
- How can we be asked to believe seriously that exact descriptions of Mars and its satellites (Deimos and Phobos) from antiquity were lucky guesses?
- How could all cultures before our modern era have been unable to correctly count $365\frac{1}{4}$ days per year? And why were they all wrong (in unison) by the same $5\frac{1}{4}$ day increment?
- How (and why) did ancient astronomy/astrology (circa 4500 B.C.) observers predict that constellations would be eventually located where they came to be found in 700 B.C.? (Contemporary astronomers, note that zodiac constellations

are 2 millennia out of phase with contemporary astronomy conditions, i.e. when the "crab" should have been in Gemini, why did the ancients name it Cancer)?

Don Patten embarked on a quest many years ago. He wanted to know why explanations he received on origins were corroborated neither by physical evidence nor by recorded history.

This book proposes a refreshingly new concept that "fits" the observed data. It is also a commentary on the extreme and unsubstantiated positions taken by "establishment" scientists and by "inspired" fiat creationists. At one point in this work, Don notes the need each extreme camp has for the other. The creation extremists find themselves addressing the implications of natural upheaval, the circumstance described and the time required by explaining that "there are mysteries about which we must content ourselves with faith." The evolutionary extremists find themselves addressing the implications of catastrophism by explaining that large changes require extended periods of time, or if incremental, have occurred in the dim recesses of the astronomical past.

The promotion of these positions finds the fiat creationists demanding a universal pursuit of ignorance and finds the evolutionary scientists riding over hill and dale in search of non-existent evidence to support their unsubstantiated "certainties."

Our scientific community has been able to look at close-up evidence of astronomical catastrophism on other planets such as Mars and not comment on the fact that civilization's ancient histories gave physical corroboration. The "faith" position demanded by uniformitarian science for all astronomical catastrophism being eons ago forces them to identify historical accounts as "coincidence" and "lucky guesses" on the part of early day reporters.

Don has taken the position of inquiry. He asks the "logical" questions. When he finds historical accounts of celestial lightning in three different ancient cultures and then finds an actual physical example operating in the Jupiter-Io system, Don asks why is it "logical" to assume our ancient forefathers "imagined" such phenomenon when they correctly described both event and consequence. How could they guess such phenomena exist? How could they correctly describe astronomical motion changes attendant to such electrical phenomena? Don describes the crust, shifting

and skidding on the mantle that strips electrons to create the geomagnetic field and interplanetary current, plus, of course, the shifting of the Sun and Moon (in tandem) in wild deviation from the horizon norm.

Were ancient reports of eyewitness accounts a series of "lucky guesses" or "coincidental" patterning on the part of our imaginative ancestors? It becomes more difficult to accept the evolutionary communities' pronouncements on each new discovery with any response more serious than a curt guffaw!

The fiat creationists are quick to pounce upon the absurdity of embarrassed "scientific" explanations. However, they then throw the baby out with the bath water when they claim that the lack of supporting evidence for accepted evolution dogma "proves" that their own, unsupported positions "must" be true.

It was a fiat creationist that noted the "annual silt layers" used by science to account for years as "eras" may be seen in the fallout from Mount St. Helens. Thus, the analytic processes that "prove" dinosaurs ceased roaming the earth 70 million years ago also "prove" Mount St. Helens last erupted in the 16th century. However, because it was a contemporary event, news releases are convincing evidence that the "last" eruptions occurred from 1980 on. Don Patten believes the scientifically accepted evolutionary processes are as faulty without contrary filmed evidence of the event as with it.

A fiat creationist has observed that all geomagnetic data available to us demonstrates a decay of permanent magnetism. Evolutionary science, in a magnificent leap of faith, preaches that the earth's geomagnetic field is currently diminishing in strength but is doing so following a "pulsating" or oscillating scheme. The fiat creationist points out the absurdity of the evolutionary science "faith" position when he notes that there is not now, nor has there ever been any data collected showing slowly increasing "trends" of the geomagnetic field. There is not now, nor has there ever been evidence supporting the "fact" that the earth's geomagnetic field is being generated by ongoing electrical currents. Unencumbered by this lack of evidence (and to support uniformitarian dogma), considerable public money has been spent in a failed search for such "current."

The fiat creationist in turn then ignores the significance and the ramifications of some 170 paleomagnetic polarity reversals, only to claim that any failure of evolution to live up to its image of logic and fact adherence "proves" a fiat creation some four millennia B.C.

Any reader who has looked at the Grand Tetons and questioned the engineering mechanics required to extrude" them vertically by alleged horizontal or lateral forces will find this book an oasis of reason in a desert of wishful thinking. Any astronomer, trying to ascribe the Uranian skewed magnetic axis and devastated satellites to some theory of gradualism or even to a violent beginning followed by a "peaceful" life, will find this book a precursor to some real, productive thought. Such thought will be useful when the data about Neptune and the third example of interplanetary lightning (Triton to Neptune) becomes available in 1989. (The historical Mars-Earth lightning is the second example.)

This is a book I wish I had read forty years ago.

Samuel R. Windsor, P.E. Bronson and Windsor

Chapter - I

World Views of Origin and Time

CURRENT INTEREST AND CONFRONTATION. In America during the last 10 or 15 years, the public has been the spectator to a series of open debates on Earth history between Fiat Creationists¹ and Humanistic Evolutionists.² Frequently, the forum of the debate has been a lecture room on a college or university campus in the evening. Usually the interest has been brisk. Usually there has been confrontation.

On one side has been one or two veteran (and persuasive) creationists. On the other side has been one or two knowledgeable, humanistic faculty members, specialists in perhaps anthropology, biology, geology or astronomy. Interest in the subject of origins has always been popular. The confrontational nature of the event has added excitement and expectation. Knowing this, the media have found such forums to be good copy. Thus, publicity has been relatively easy to achieve.

More recently, in addition to debate forums on college campuses, Fiat Creationists have moved out another step. Litigation concerning school textbooks has been instituted by Fiat Creationists in the courts, usually in a Southern state. The litigation has been on the basis of a need for "equal representation" or "fairness" in classroom curricula and materials, including textbooks.

The decision-makers in education have been hesitant to grant to Fiat Creationism such privileged status. They have had no trouble granting uniformitarian-based views and literatures such status due to the widespread acceptance of uniformitarianism³ over the last 10 or 12 decades. Appeal courts have agreed with the decision-makers in education by denying Fiat Creationists their contentions and aspirations in state education.

THE ROLE OF SCIENCE IN INVESTIGATIONS OF EARTH HISTORY.

The modus operandi of science is experimentation. Duplicating and rerunning similar experiments and comparing the results for verification has been the basic historical system for science. But events in Earth history cannot be put into

experiments and rerun. Therefore, an addition to experimental science is needed, and that addition is known as "theoretical science." Theoretical science is only as valid as its assumptions, many of which are conscious assumptions and some of which are subconscious assumptions. Too often, theoretical science is presented in a dogmatic and pretentious way, and sometimes, theoretical scientists claim opinions and consensus as facts which later are reversed or changed.

Fiat Creationists have taken the role of "theoretical theologians" rather than theoretical scientists, and they, too, have tended to render their insights and opinions as the final word both in their writings and in their debate presentations.

Evolutionary Humanists, representing a far different approach to Earth history, have been quick to seize such debate forums to demonstrate their leadership to the academic community on or about campus. In so doing, Evolutionary Humanists affirm their status among academia.

Simultaneously, Fiat Creationists have been quick to seize such debate forums in order to gain exposure and in order to rattle the skeletons in the closets of evolution, loudly and publicly when possible. Thus, they also gain a following from among the American populace, a populace which has a place in its heart for the "underdog." Also, the American populace has not responded well to the idea of "chance," sponsored by the evolutionists. Invariably, a small but significant following has been developed by the Fiat Creationists, and that following has come from a segment of our society with evangelical backgrounds and with Biblical allegiances. Usually, the funding provided for Fiat Creationism has been spent far more on promotion than on trying to do superior science.

The Evolutionary Humanists⁴ already have their funding in place in the form of faculty salaries and tenure. The Fiat Creationists use these forums to develop a support base. The Evolutionary Humanists need such forums (and the Fiat Creationist opponent) in order to make a good showing and in order to candidate for academic promotion and leadership. The Fiat Creationist also needs a good showing in order to gain support. Although each group does not care for the other (at all), yet they need each other for such confrontations. This is what one may term "The Like Needs of Opposites."

In this process of confrontation, some six changes occur within education and within society at large:

A. Fiat Creationists do their homework and rattle the skeletons in the closets of Evolutionary Uniformitarianism in public quite effectively.

B. Fiat Creationists score well and gain a wider following among some student groups and among some evangelicals with Biblical allegiances.

C. Fiat Creationists imply that the only alternative to the Evolutionary Uniformitarian view is their world view. And vice versa. Thus, if one doesn't accept the opponent's view, he automatically falls into the other camp.

D. Humanists present Evolutionary Uniformitarianism as fact usually and not as theory, and further, it is offered as the only alternative world view to Fiat Creationism.

E. Both groups have no interest in suggesting there might be a third or a fourth world view which could be viable. These two groups prefer an "either/or" conclusion.

F. The gulf presumed between the Biblical account of origins and science thus widens perceptibly. This widened gulf is observed by the general reading public, by the media, and by students.

AN ASSESSMENT OF CREATIONIST-EVOLUTIONIST CONFRONTATIONS

Fiat Creationists, regular church-goers and fundamental traditionalists, assume and posture that they understand the Old Testament on the topic of origins. The Evolutionary Humanists, regular non-church goers, mistakenly agree. That Fiat Creationists in fact do not understand the Old Testament with respect to Earth history and origins is precisely a major theme of this book. Their criticisms of evolutionary theory are often valid, however, as are the criticisms by the Evolutionary Humanists of Fiat Creationism. Yet, the "either/or" context of the presentation leaves the audience to conclude that one position or the other must be so. None of these debaters or speakers allows the possibility that they are both mistaken. This is the possibility which must be examined. One has to ask the

naughty question, "What if the criticisms of both groups are mostly correct?" And, "What if both groups have flawed premises?" Who then is the real winner? Who then are the real losers?

FOUR WORLD VIEWS INSTEAD OF TWO. Examples could be cited describing what each of the two sides affirms to be the most important. Instead, perhaps the more cogent approach is to cite *THE ASSUMPTIONS* that each side brings to the forum. Identifying the assumptions will make it easier to ascertain both the inherent strengths and the inherent weaknesses of each side.

But, there aren't just two views. A third view, the "Theistic Evolution View"⁵ needs to be included, because here is another attempt to reconcile theoretical science, Earth history and the Biblical narrative. Fourthly, yet another view should be considered, the "Planetary Catastrophist View."⁶ It is advocated that the Planetary Catastrophist view is better Earth history, is better theoretical science, and offers a more consistent Biblical perspective.

BASIC ASSUMPTIONS ABOUT FIVE CASES IN EARTH HISTORY

Four issues common in cosmology will be cited for analysis of the assumptions inherent in each approach. To these four will be added a fifth topic, a seldom-if-ever considered issue, yet one of considerable import. These five issues will help identify the radically different assumptions of each world view and their responses to events recorded in ancient literature, a heritage of which the Old Testament is the flagship. Those five cases are as follows.

- CASE 1. How did the solar system originate and when?
- CASE 2. Did the Flood of Noah occur and if so, how and when?
- CASE 3. Was was the Long Day of Joshua actually extended and if so, why and by how much?
- CASE 4. Why is the Earth's orbit located between the astronomical regions of fire and ice?
- CASE 5. Why did Moses repeatedly describe semi-arid Palestine as a land of "milk and honey" in the Pentateuch?

It is interesting to explore and to observe how each World View responds to these five pivotal issues.

CASE 1. THE ORIGIN OF THE SOLAR SYSTEM

UNIFORMITARIAN VIEW: In the evolutionary system, about 4 or 4.6 billions of years ago, there was an extrusion of a gaseous filament out of our Sun. The hot, extruded materials dispersed and cooled. In cooling, they coalesced and collected or accreted into planets or sometimes into planet satellites, asteroids or even meteor streams. What caused the gaseous extrusion from the Sun is unknown. What is known is that such a theoretical event was not caused by a closely-passing star in our galaxy on a close flyby to the Sun.⁷

Concerning the distribution of the eight largest (and innermost) planets, Pluto excepted, they line up on a single, thin plane of alignment. It is known as the planetary ecliptic plane." This plane is more than 7° deviant from the Sun's equatorial plane. Thus it would seem that such ejecta, if it occurred, was neither ejected from the Sun by centrifugal force nor was it pulled out by a passing star. Once again, this offset alignment is explained "by chance."

Light vs. Heavy Elements. If such an ejecta occurred, the Sun kept such lighter elements as helium (25% of the Sun's mass) and hydrogen (73½%). The Sun ejected or extruded such heavier elements as aluminum, calcium, iron, silicon and uranium in large amounts. This was also by chance.

Distribution of Ejecta. In addition, within the inner 400 million miles of the solar system was extruded only 1 part in 225 of the total extrusion (forming Mercury, Venus, the Moon, Earth, Mars and the asteroids). Out beyond the 400 million mile zone was expelled 99½% of the ejecta, or 224 parts of 225. This thin inventory (½%) of the inner solar system and the heavy inventory (99½%) of the outer solar system makes little sense distributionally.

Spin. The spin rates of Mars and the Earth are 1477 minutes and 1436 minutes respectively, a 97% similarity. (Their tilts are 98% similar also.) The spin rates of Saturn and Jupiter are 615 and 590½ minutes respectively, a 96% similarity. In all four instances there is abundant spin. If ejecta were to cool, to collide, and to stick or accrete, this still would not produce spin. In the uniformitarian cosmology, spin for the planets arose by processes unknown. The similarities of spin rates (Mars with Earth (97%), Neptune with Uranus (98%) and Saturn with Jupiter (96%)) are also accorded to chance. Better explanations are needed and are possible.

The Solar Orbit. In uniformitarianism, time (like chance) assumes a major role. The Sun is known to have an orbit around the Milky Way galaxy, and that orbit is known to require about 180 million years. In the evolutionary system, in 4.6 billions of years, the Sun has necessarily made 25+ such orbits around the galaxy.

However, the Sun's nearest stellar neighbors, such as Alpha Centauri and its partners, Barnard's Star and its partner, and Sirius each have different trajectories and different velocities. Yet, somehow, by chance and despite 4 billions of years of time, these several stars (after 25 trips around the galaxy) remain in a spiral arm structure along with others of the Sun's nearer stars. Our spiral arm happens to be considered the second outermost of the spiral arms of the Milky Way. That such a spiral arm, The Orion Arm, would have retained its structure after 25 long 180-million-year orbits is a remarkable dogma indeed.

FIAT CREATIONIST VIEW: In contrast, somewhere between 6,000 and 10,000 years before the present, God formed the Earth, the Moon, the other 8 planets, their satellite systems, their craters, their volcanoes, their spin rates and spin axis tilts, the icy rings of Saturn, the asteroids, comets and meteor streams along with the Milky Way galaxy and any number of other galaxies.

If some of those galaxies happen to appear to have a distance of 30,000 or 40,000 light years (well beyond the 10,000-year limitation), they were created with their light already en route at the instant of creation. All of these planets, comets, satellites, stars and asteroids were created (suddenly) by the Word of God, which is energy. So creation has occurred according to this theological attempt at theoretical science.

THEISTIC EVOLUTION VIEW: This view is much like the uniformitarian view, known popularly as the "Nebular Hypothesis" for the origin of the solar system, with the exception that such was directed throughout the ages by God, more or less as He is revealed in the Old Testament. Although the solar system may be (and is) a product of much time, it is not a product of chance. The basic problems inherent in the nebular hypothesis, some of which were suggested in previous pages, remain without any additional insights.

PLANETARY CATASTROPHIST VIEW: Recently, between 100,000 and 500,000 years ago (that is, roughly 250,000 years ago), the Sun in its galactic travels (about 12 miles per second) travelled about 1 light year per 600 Earth years. In those travels, it bumped into" or overran a collection of relatively small planets revolving around each other in a complex "binary" system.

As the Sun draws a comet in, so the Sun attracted and drew in this complex system of at least 30 mutually revolving planets and satellites, some with pre-existing spin rates. The entire collection (or binary) came in on one single plane, now called the "ecliptic plane of the planets." The Sun's immense gravity began to pierce and to break the gravitational bonds of these planets as they revolved around each other.

Neptune was sorted out among the earliest of the planets, at 3 billion miles from the Sun. Some 15 or 20 years later (as the binary approached like a comet), Uranus was dislodged (or severed) from its gravitational bonds, at about 2 billion miles. Thirdly, Saturn was sorted out and divorced (astronomically) from its binary partner, probably Jupiter. This occurred in the range of 0.9 billion miles from the Sun. Finally, Jupiter was shorn of its binary partners. Jupiter's orbit was stabilized at about $\frac{1}{2}$ billion miles from the Sun, and significantly, in an orbital resonance with Saturn's orbit, a 5:2 resonance. This procedure involved the cluster of planets crossing 22 billion miles of space, like a comet's path. This planetary divorce could have occurred in a time period of 25 to 40 years, the time required for a comet to cross $2\frac{1}{2}$ billion miles of space (like Halley's Comet).

In this theory, Jupiter and Saturn both had a passel of inner satellites which they retained. Perhaps each planet had a passel of more distant satellites also, which they lost as the Sun's gravity pierced those gravitational bonds, and broke the primordial linkage. It was an astronomical divorce of complex dimensions. Perhaps the outer satellites, like older children in a divorce, were sent on their own independent way. These included Mercury, Venus, the Earth-Moon system, Mars, and Astra, a small planet we understand once existed. In time, Astra approached too close to Mars, and fragmented, leaving one side of Mars badly cratered where these fragments hit. Other fragments which missed Mars became asteroids, except a relative handful, which formed an ancient ring orbiting Mars. Evidence supporting such an event will be considered in a future chapter.

By contrast, in the Nebular Hypothesis, Jupiter (owing to its giant gravity) is considered to have been the distributive force, or perhaps an "anti-creative" force. Jupiter prevented asteroid material between Mars and Jove from gathering or coalescing into a planet which "ought to have been formed there." However, in the Planetary Catastrophism hypothesis, Mars (not Jupiter) is the planet, along with its gravitational field, which fathered the asteroids. These views are very different. One in scope is solar and the other is galactic. One is heliocentric while the other considers the greater regions of the galaxy as the place of origin of the Sun's planets. Also the concepts of their arrivals (the timing) are very different, that is, 0.15 million years versus 4.6 billion years.

In the Planetary Catastrophe theory, the ancient break up of the 30-member binary provided the Sun, for the first time, with a planetary family, only 150,000 years ago. The Sun travels about $\frac{1}{4}^\circ$ in its orbit around the Milky Way in 125,000 years. Planetary Catastrophism underlines "recentness."

A Dark Star. With a new family of planets, suddenly the Sun began to experience tides. If the Sun were a cold, crusty body, those tides would be inconsequential. But the Sun is massive, hot and its materials are volatile. The planet-induced tides began to create sunspots, and 11-year (average) sunspot cycles, cycles involving magnetic storms and intense frictions in the volatile solar mass. A frightening degree of turbulence developed. In short, the Sun had an ignition experience. It was something akin to: "And the Lord said, let there be light, and there was light." Before the capture of its family of planets, the Sun we propose was a less radiant star, and possibly was a dark star.

Since its ignition experience, the Sun has been losing energy steadily, by radiation to space and by solar wind blowoff. During the same time, the Sun has been cooling, and hence it has been shrinking, or contracting in size. The Sun has been shrinking in our century at a rate of about 4 miles in radius per year, or 60 feet per day.⁸ This works out to a half diameter of shrinkage every 115,000 years. (In 250,000 years, the Sun's diameter theoretically would have been halved twice and a little more.) All of the action involving capture of a family of planets has occurred while the Sun progressed only $\frac{1}{2}^\circ$ in its orbit around the Milky Way, and conceivably only $\frac{1}{4}^\circ$.

CASE 2. NOAH'S FLOOD AND ITS SCOPE AND TIMING

UNIFORMITARIAN VIEW: Noah's Flood is a myth with very little if any factual basis. Noah and the Ark rank along with Santa Claus and his reindeer, and with Little Red Riding Hood and the big, bad wolf, as fanciful literary heritages. For rain to float such a large barge as the Ark is thought to have been patently improbable. The best guide to the past is the uniformitarian motto, "the present is the key to the past."

Moreover, if the Ark were floated, it could not have been floated upward into a mountainous basin. Downhill is the only direction water flows.

FIAT CREATIONIST VIEW: The details of this catastrophe are not given in the Bible; therefore they are not necessary for man to know. The timing can be reconstructed, about 2500 B.C. Also one can surmise that there was a very heavy and lengthy rain throughout the Middle East, coinciding with God opening a vast cache of new and fresh or juvenile water from somewhere under the Earth's crust. Such theoretical juvenile subcrustal waters were suddenly extruded, and the rain waters added to them. Together, the waters covered the continents for 40 days, and perhaps for up to a year.

At the end of The Flood, the waters receded back into the secret, subterranean cache, which was resealed by God. This cache of subterranean, subcrustal water has not been discovered yet by modern geology but nevertheless is there. Such is the attempt of Fiat Creationists at theoretical science, a theological attempt.

THEISTIC EVOLUTIONIST VIEW: God caused an intense, extended hurricane (or typhoon) in the Middle East. Perhaps it came in along a northerly direction from the Indian Ocean. This typhoon resulted in 40 days and nights of intense downpour, floating the Ark. The reports that the Ark floated upward (rather than downhill) and landed in the mountainous heart of inner Eurasia only seems to be in conflict with the idea that rainwater always runs downhill and toward the oceans. This rainy event and the floating of the Ark were not mythological. Moreover, why the Ark was floated into the mountains is of little concern. Noah was a historic person, and this event occurred somewhere between the third and the seventh millennium B.C.

PLANETARY CATASTROPHIST VIEW: The Planetary Catastrophist View is in agreement with the Theistic Evolutionary View that Noah (and his family) survived the Deluge by floating through it on the Ark. But it was not 5 to 7 millenniums ago; it was in October of the year 2484 B.C. The Planetary Catastrophist View also is in

agreement with the Fiat Creation View that the waters upwelling in The Flood floated the Ark into the highlands of Armenia, the "Mountains of Ararat," at elevations in the range of 7,000 to 9,000 feet above sea level. But the waters which achieved this were from the Indian Ocean in the form of massive tides; the waters were not from a secret subcrustal cache which God unzipped, so he could release the waters and then call them back again into the secret subcrustal cache.

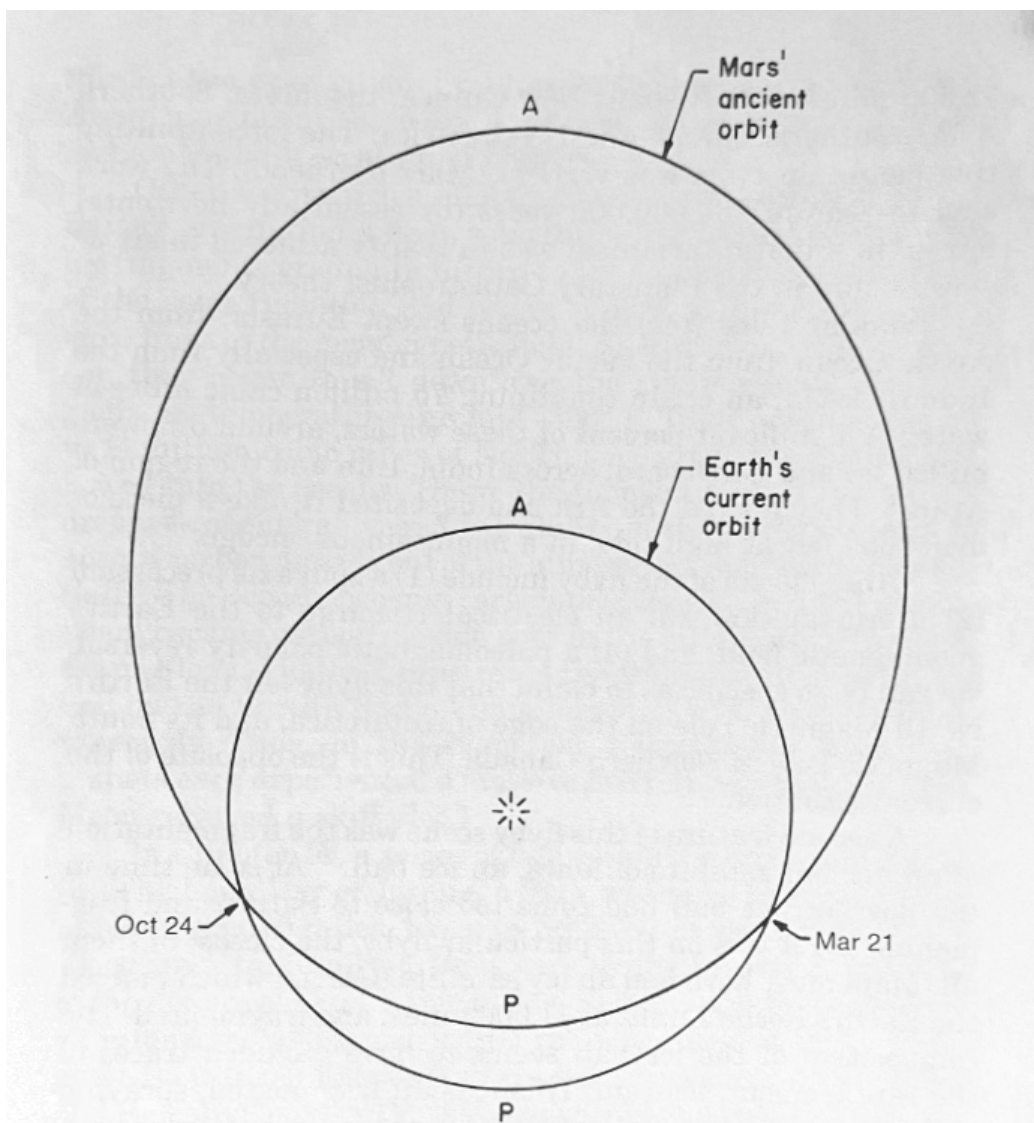
Furthermore the Planetary Catastrophist view is in some limited agreement with the Evolutionary Uniformitarian View that indeed there has been some "Santa Claus stuff" distributed into our society, but that "stuff" is uniformitarianism itself.

The Noachian Flood, as understood through the Planetary Catastrophist model, differs both in kind and in detail from each of the other three World Views. As an actual event of great significance, its ramifications reach into the fields of astronomy, geology, geomagnetism, glaciology, oceanography and ancient history. Our analysis is, in part, illustrated by Figure 1. Concerning timing, it occurred as a Mars flyby, the closest of them all, during the daytime (Middle East time) of October 24, 2484 B.c. This was the closest of some 170 flybys in all, flybys which commenced about 9900 B.C. and ended in the year 701 B.C. The catastrophic orbit of Mars is sketched in Figure 1. The catastrophic orbit of the Earth in that era was featured by a 92.1 million mile orbital radius and a 360-day year. This is in slight contrast to the contemporary 93 million mile orbit and the 365¼ day year. The reasons for later orbital changes of both Mars and the Earth will be presented in Chapter VII.

Concerning the astronomical scene, during the year of The Flood, we have discovered that Jupiter was in the zone of the zodiac known as Cancer, where it was elongating (and narrowing) the orbit of Mars. The position of Saturn was 180° opposite that of Jupiter, in Capricorn, where it was also influencing or warping the orbit of Mars, also influencing an elongation at the end regions (the aphelion and the perihelion) and a narrowing at the central portion. The catastrophic orbits of the two planets, as are the contemporary orbits, were coplanar. The closeness of the flyby we consider to be 15,000 miles (core to core) between Mars and the Earth, extremely close. It was in fact so close that, another 4,000 miles closer, and Mars would have fragmented due to the sudden, immense arising of subcrustal tides. That distance of fragmentation for a smaller planet approaching the Earth is known as Roche's Limit and is 10,500 to 11,000 miles for our planet.

In the case of the Noachian flyby, as in the case of other flybys, there is an indication that some of the ancients understood the cyclicism of the catastrophes. One illustration of this will be from the story of the flood from Assyrian clay tablets, The Epic of Gilgamesh, in Chapter III. We will cite that it says "the fixed time arrived." On another occasion of a catastrophic scene, the writer of II Samuel uses a similar phrase, "even to the time appointed." (II Samuel 24:15.) As Figure 1 indicates, the flybys were orbital and hence cyclic. Our theory is that for October catastrophes, that cyclicism was once every 108 years. We propose that Noah understood something of that cyclicism and in so understanding had the Ark ready when "the fixed time arrived."

The extremely close flyby of Mars caused a variety of gigantic changes on the Earth. Mars, one-tenth the mass of the Earth, passed over only 15,000 miles distant from the Earth's core and perhaps even less. At that close distance, subcrustal tides would be over 10,000 feet high. The last great cycle of mountain-building does exhibit a swath-like, or a flyby-like pattern. It is the great Alpine-Himalayan cycle, some 12,500 miles long. It spans New Guinea, Indonesia, Southern Asia, Southern Europe and North Africa. The force uplifting this mountain cycle was vertical (Mars overhead). The work said to require 200,000,000 years (by essentially horizontal forces) in uniformitarianism was in reality achieved in six or seven hours in the Planetary Catastrophist theory.



ESTIMATED ANCIENT ORBITS OF MARS AND EARTH

	MARS	EARTH
Position of Ancient Perihelion	January 6	January 6
Distance of Ancient Perihelion	75,000,000 mi.	90,100,000 mi.
Distance of Ancient Aphelion	218,000,000 mi.	94,500,000 mi.
Length of Line of Apsides	293,000,000 mi.	184,600,000 mi.

Figure-1

Similar tides from the oceans swept Eurasia, from the Arctic Ocean, from the Pacific Ocean and especially from the Indian Ocean, an ocean containing 75 million cubic miles of water. A significant percent of these waters, around 5%, were pulled up and northward, across India, Iran and the region of Ararat. They floated the Ark and deposited it, like a piece of driftwood left at high tide, in a mountainous "hedge."⁹

Other effects of the flyby include (1) a spin axis precession (2) a crustal skid, (3) an electrical recharge to the Earth's geomagnetic field, and (4) a paleomagnetic polarity reversal. We can be so specific as to claim that this flyby left the Earth's North Magnetic Pole on the edge of Antarctica, and its South Magnetic Pole in Northern Canada. This is the opposite of the current situation.

A second feature of this flyby scene was the fragmentation of an ancient satellite of Mars, an ice ball.¹⁰ At some time in the past, an ice ball had come too close to Saturn and fragmented. So it was on this particular flyby, the closest of them all. Mars must have had an icy satellite (Glacis) which pierced the Earth's Roche Limit, at 11,000 miles, and fragmented. The composition of the ice ball seems to have included traces of the rare element, iridium. This ice ball fragmented, spraying both planets. Figure 2 illustrates. Those fragments which entered the Earth's atmosphere, like meteors, vaporized, recondensed and fell as a sudden, hot rain. Those fragments which sprayed the surface of Mars, a planet without an atmosphere, hit the surface directly, at which time their kinetic energies converted instantly to heat. The icy fragments melted, vaporized and recondensed in huge volumes, The resultant waters created rivers. Some of the rivers were huge, one was half as wide as the Amazon River, an outflow channel. Others had tributaries or distributaries. Their velocities seem to have been in the range of 20 m.p.h and 30 m.p.h. on a planet with one-third of the gravitational pull as at the surface of the Earth. Everything about these dry river beds indicates a suddenness and a once-only occasion of flow.

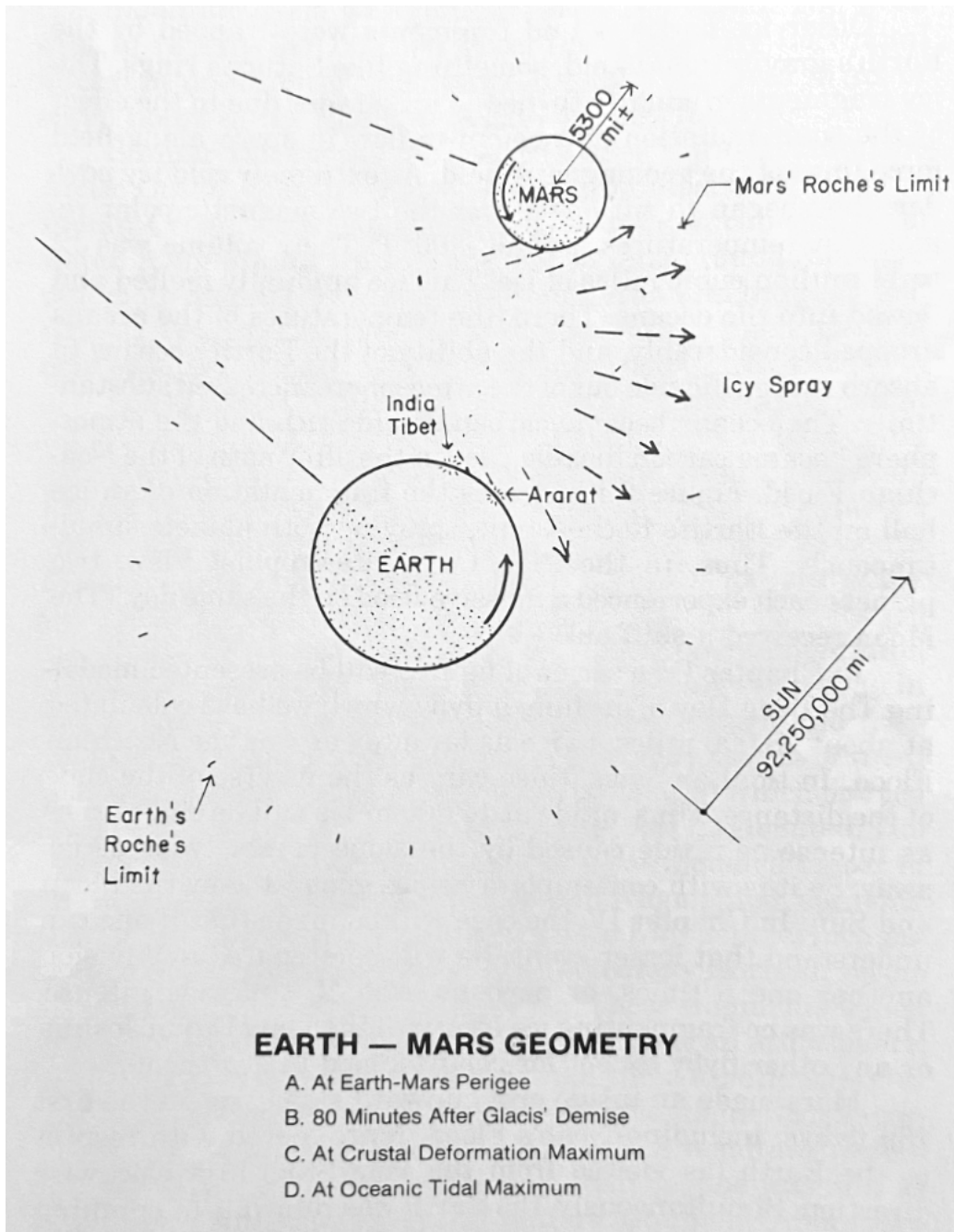


Figure-2

Other ice particles and fragments were trapped by the Earth's gravitational field, something like Saturn's rings. The icy fragments gradually turned to icy powder due to the effect of the solar radiation and began to flow in space along field force lines of the geomagnetic field. As extremely cold icy powder, they began to sift down

over the two magnetic polar regions, at temperatures around -300° Fahrenheit. Their volume was 12 to 14 million cubic miles of ice. This ice gradually melted and flowed into the oceans. There, the temperatures of the oceans dropped considerably, and the ability of the Earth's oceans to absorb carbon dioxide out of the atmosphere increased substantially. The oceans became carbon dioxide rich and the atmosphere became carbon dioxide poor in the aftermath of the Noachian Flood. Figure 2 illustrates the fragmentation of an ice ball on the Earth's Roche Limit, spraying both planets simultaneously. Thus, in the Planetary Catastrophist View, two planets each experienced a massive flood on the same day. (The Moon received a skiff also.)

In Chapter IV, a series of figures will be presented modeling The Long Day of Joshua, a flyby which we have calculated at about 28,000 miles, twice as far away as was the Noachian Flood. In tidal analysis, tides vary as the inverse of the cube of the distance. Thus, a tide at 14,000 miles will be eight times as intense as a tide caused by the same planet twice as far away. So it is with contemporary tides generated by the Moon and Sun. In Chapter IV, the case will be made that if one can understand that lesser event, he will be prepared to envision another one 8 times, or perhaps even 10 times as intense. There was no fragmenting ice ball with the Long Day of Joshua or any other flyby except for Noah's Flood in our theory.

Mars made an inside or a sunward side flyby on the first 169 flybys, including Noah's Flood. Mars moved with respect to the Earth (as viewed from the Pole Star) in a clockwise direction. Simultaneously, the Earth was rotating, or spinning in the opposite direction, counter-clockwise. This is important to realize for reasons to appear in Chapter IV. With respect to the Earth, the point directly under Mars (called the subpoint) was moving. Its motion was roughly 1000 m.p.h. due to the motion of Mars and an additional 700 m.p.h. due to the rotation of the Earth. It was advancing thus about 1700 m.p.h. in an east-to-west direction, across Southern Eurasia on the morning of October 24, 2484 B.C. The menagerie had already been loaded the day before, along with the provisions. It was unfortunate that so few persons were aboard on that morning, but there wasn't much time for persuasion. This seems clear from the clay tablet record of The Flood found in Assuribanipal's library, which shall be examined in Chapter III.

On the day of the Noachian Flood, Mars could not have come much closer and survived as a planet. It might have come another two or three thousand miles closer, but no more. The Earth experienced the maximum in the way of a global

cataclysm. Perhaps it can be best understood (except for the ice ball fragmentation aspect) by gaining an understanding of a long series of flybys, catastrophes of lesser intensity but every bit as cyclic as was Noah's Flood. Twelve such catastrophes in addition to the Noachian Event are to be discussed in Chapters III thru VII. Perhaps, in gaining insights through the lesser flybys, one will realize what a key person Noah was in the history of the human race. If so, the day that he began to build the Ark will take on a special significance. Usually, the subject of Noah's Flood is considered from the commentary given in the 6th and 7th chapters of Genesis. In our Chapter III, our prime source for commentary will be the clay tablets from Assyria, The Epic of Gilgamesh, with the Genesis account playing a supporting role.

CASE 3. THE LONG DAY OF JOSHUA, ITS SCOPE AND TIMING

The account of this event is found in the 10th chapter of the Book of Joshua and also in Josephus' Antiquities of the Jews, Book V, pp. 17. It is reported as occurring during the second year of the Israelite conquest of Canaan in the 15th century B.C.

UNIFORMITARIAN VIEW: This historical event during the Hebrew conquest was a normal 24-hour day, except there was a group mirage which was experienced by Joshua and his army. As everyone knows, a sudden stoppage of the Earth's rotation is (and was) impossible. The lengthened day was a matter of perception but was not real. Scant attention need be paid to the associated falling of thunderbolts from the sky or from celestial regions, which were also reported on that day as being lethal to major sections of the Canaanite army.

FIAT CREATIONIST VIEW: This event demonstrates the power of God, who put out his hand and stopped the Earth's rotation. Then, after a period of non-rotation of about 24 hours, He restarted it once again, same spin rate, same axial tilt and same spin axis polar locations. Such may be impossible for most secular scientists to envision, but such was not difficult for an all-powerful God to accomplish. Again, scant attention need be paid to the electrical nature of the simultaneous "hail stones," or "thunderbolts" hurtling in from the celestial regions upon the Canaanite divisions. This event occurred sometime between 1400 B.C. and 1500 B.C.

THEISTIC EVOLUTION VIEW: The adherents of this view, with a relatively high respect for Scripture, including the Book of Joshua, tend to be rather uncertain. However, their consensus is that it was probably much like the analysis of the uniformitarians, a group mirage, and again, scant attention need be paid to the celestial thunderbolts which occurred simultaneously. This event occurred somewhere between the 12th and 14th centuries B.C. according to certain leading archaeologists. Its timing correlates well with the time of the collapse of the walls of Jericho.

PLANETARY CATASTROPHIST VIEW: This catastrophe was also caused by a close flyby of Mars, perhaps between 25,000 and 30,000 miles distant. It was a sunward side flyby, during the morning (Jerusalem time). It occurred during the morning of October 24th, 1404 B.c. It was on the 1080th anniversary of the Flood of Noah. It also occurred on the 540th anniversary of the Tower of Babel Discharge.

As it had been years before during Noah's Flood, so it was once again, a Mars flyby while Jupiter was located in the zone of Cancer (the Crab). The line of apsides (and the aphelion) of the orbit of Mars pointed toward Cancer. And also, as it had been years before during Noah's flood, so it was once again, a Mars flyby while Saturn was located 180° opposite Jupiter, in Capricorn. The perihelion of Mars, like its ancient line of apsides, also pointed toward Capricorn. This astronomical geometry repeated once every 540 years, and it had also occurred during the Tower of Babel Crisis. As previously mentioned, when Jupiter and Saturn were in these positions, they were each lengthening and narrowing the orbit of Mars, and their separate influences added.

During this particularly close flyby, the Earth behaved like a gyroscope experiencing precession. A gyroscope is a rotating sphere. A precession is a wobble. Mars in its close flyby was putting a gravitational torque on the Earth's spin axis. To some extent the Earth's spin axis went into a temporary, brief barrel roll.

In addition to spin axis precessions and torques, there was also to a significant extent some crustal skidding. The Earth's crust as a whole skidded on what may be a small gaseous layer forming the boundary between the crust and the mantle. To what extent the Earth's crust skidded is not understood, but a more detailed discussion will occur in Chapter IV and in our sequel.

Thirdly, Mars was raked slightly as it skimmed by the Earth's magneto-head region of its geomagnetic field. A couple of hours later, the surface of the Eastern Hemisphere was raked by the magneto-tail of Mars and the electricity involved therein. The concentration of iron in Palestine, represented by Canaanite armor, was very attractive to the loop of celestial electricity, a flux tube of ions and charged particles, flowing between Mars and the Earth at immense voltages, amperages and wattages. The celestial lightning was attracted to the Canaanite iron, the battlefield armor.

Timing. It has already been mentioned that Joshua's Long Day was the 1080th anniversary of Noah's Flood; also it was the 540th anniversary of the Tower of Babel Discharge. That is looking backward. Looking to later events, this day would become the 108th anniversary of the Celestial Blitzkrieg of Sisera. This day would become the 324th anniversary of the Philistine Phalanx Catastrophe. This long day would become the 432nd anniversary of the Davidic Catastrophe of 972 B.C., amply described in the Scriptures.

In addition, this day would become the 540th anniversary of the occasion when Elijah faced the prophets of Baal on Mt. Carmel, expecting fire to fall from heaven on his altar. (It did.) And finally, this October 24, 1404 B.C. would become the 648th anniversary (to the day) of the catastrophe or flyby of 756 B.C. This was the day when Jonah expected God to zap the wicked city of Nineveh. This was the day when Joel described earthquakes, fire falling from heaven, and general cosmic chaos befalling Judah. This was the day in 756 B.C. that Josephus described when he said the First Temple suffered extensive earthquake damage.

The timing of this series of catastrophes was October 24th on our modern calendar. However on the ancient Hebrew calendar, it was the 17th day of Marchesvan. Marchesvan was the month of autumn flybys, even as Nisan (March to the Romans) was the month of spring passovers, or flybys. The Hebrew word for Mars seems to have at least two forms, *Ma Ayish* and *Ma'or*. "Ma" in Hebrew is an adjective meaning "the great" as does *magna* in Latin.

By all reports, Josephus, the Talmud, the Book of Joshua and other scattered references, the celestial lightning which struck central Palestine was attracted to the concentration of iron much as weather lightning will prefer a lightning rod or a promontory. By Hebrew reports, this lightning, accompanied by vaporization at the

strike spot and an ensuing lethal shock wave, struck the heart of the Canaanite formations, resulting in more casualties than those from Hebrew arms. The temperature at the strike spot may have been for a ten-thousandth of a second in the million degree range. This flyby occasion shall be discussed in its total picture (not just its lengthened day) in Chapter IV, since obviously this discussion is only an introduction to a rather important flyby.

CASE 4. THE ORBITAL LOCATION OF THE EARTH MOON SYSTEM

In our present era, the Earth-Moon system is located almost 93 million miles (average) from the Sun. The Earth's orbit is sandwiched in between that of Venus at 67 million miles and that of Mars which averages 142 million miles.

VENUS: Venus is a planet that is almost the twin to the Earth in size and in mass. It has a deep atmosphere resulting in an atmospheric pressure 90 times the Earth's atmospheric pressure at sea level. Carbon dioxide comprises 97% of this atmosphere. It is like a furnace except that there isn't any fire and its temperature exceeds 800° Fahrenheit.

MARS: Mars on the outer side has very little atmosphere. Atmospheric pressure on the surface of Mars is about 1/100th of what it is at sea level on the Earth. Crustal and atmospheric temperatures adjacent the crust vary from between +50° Fahrenheit (in the summer in the tropics) to -240° Fahrenheit. The average temperature of that thin atmosphere at crustal locations or elevations is about -120° Fahrenheit.

EARTH: The Earth's orbit is located about one-third of the way between Venus and Mars, closer to Venus. It is believed that if the Earth's orbit were located at 80 million miles, rather than 93 million miles, the Earth's atmosphere, too, would be very deep as the oceans of the Earth would vaporize and produce an immense pressure gradient on the surface. Here, too, temperatures would exceed those of a steam boiler at 212° and could conceivably exceed the surface temperatures of Venus.

On the other hand, if the Earth's orbit were halfway out to Mars, at 115 million miles from the Sun, the surface of the Earth would be largely frozen. Its tropical oceans would resemble the Arctic Ocean, and its continents would resemble Antarctica in

climate. The Earth's orbit, thus, would seem to be located advantageously between the zones of perpetual steam and constant ice. Why is this remarkable position possessed by the Earth-Moon system?

UNIFORMITARIAN VIEW: The Earth's ancient orbit was identical with its present orbit, some 93 million miles from the Sun. The Earth has escaped the steam boiler environment of Venus and the deep subzero freezer environment of Mars by chance. The Hand of God has never been detected in the positioning or in the repositioning of the orbit of our planet or of any planet.

FIAT CREATION VIEW: By God's design, the Earth's orbit was like people see it today, at 93 million miles from the Sun. God brought such to be, in this view, sometime between 4000 B.C. and 8000 B.C., or possibly a little earlier. During this era of some 10,000 years, the Earth's orbit has been unchanged. However its geomagnetic field has steadily weakened from one of a strength of about 9.6 Gauss in 5000 B.C. Its geomagnetic half-life is 1400 years. Today that strength is .307 Gauss. The Earth has always had an orbit of 365¼ days and any indications in ancient literature otherwise can be easily ignored.

THEISTIC EVOLUTION VIEW: The Earth's happy location between the steam boiler and the deep freeze is due to the design of God and is not due to chance. Furthermore, God achieved this some 4.0 to 4.6 billions of years ago. The Earth has always had a 365¼ day year. Moreover, the ancient 360° circle has nothing to do with the ancient day count per year. The geomagnetic field, if it is declining in our century, has been averaging its present strength and has been oscillating up and down over several billions of years. The 20th century could just happen to be in a down oscillation.

PLANETARY CATASTROPHIST VIEW: In the period of time of 701 B.C. to 699 B.C., the Earth's orbit expanded from a former 92.1 million miles to the current 93 million miles. This is an expansion of the radius by about 1%. The day count per year has increased from the ancient 360 to the observed 365¼. This is due to the larger perimeter of the Earth's orbit and also to the fact that the Earth's velocity is slightly slower.

The day count of the lunar month also changed at the end of the 8th century B.C. and the beginning of the 7th, circa 701 B.C. The day count of the lunar month decreased from 30 days to 29½ days by synodical measurement. This is a reduction of about 1.79% in day count. The Moon's orbit also contracted or shrunk from about 242,000 miles to 238,900 miles. We now have 12.4 months per year. This is partly because the year is 5¼ days longer (or 1½%). But it is also partly because the Moon (like the Earth) at 93 million miles has a slightly slower velocity.

The day count for the orbit of Mars has shifted from the ancient 720 days (Earth days, not Mars days) down to the current 687 days, a diminishing of 33 days, or 4%. The orbit of Mars did two things. First, its average radius contracted from 1462 million miles down to the present 141 million miles. Secondly, its orbit rounded out from an ancient, catastrophic eccentricity of about .49 to the present eccentricity which is .093.

The Moon lost a bit of energy. The Earth lost a good deal of energy. Mars gained a lot of energy. In the catastrophic era, the Moon was in 24:1 resonance with the orbit of Mars. The orbit of the Earth was in 2:1 resonance. Jupiter's orbit was in 1:6 resonance and Saturn's orbit was in 1:15 resonance.

Today, Jupiter has an orbit of 4332.6 Earth days. In the catastrophic system, Jupiter is believed to have had an orbit of 4320 "ancient Earth days" or the length of Earth day in the catastrophic era. For the Earth, twelve 360-day years would equal 4320 days, one Jupiter year. This means that Jupiter would have been in the same zone of the zodiac precisely for a one-year period during every twelfth year.

If ancient catastrophes had a cyclicism of 108 years, that is especially interesting in light of the 12:1 resonance which has been ascertained. The number 108 is divisible evenly by twelve, 9 times. This means that if there were catastrophes, like clockwork, every 108 years, those catastrophes would correlate with Jupiter's 9th orbit, and they would correlate with one particular zone in the zodiac for the consistent catastrophic location of Jupiter. This chapter is introductory. Much more discussion shall be devoted to this matter in subsequent chapters.

At this point in the early part of this book, we will merely state that it can be calculated where Jupiter was in 701 B., and in 8644 B.C., 1404 B.C., 1944 B.C. and 2484 B.C. for instance. In the even dates listed above, Jupiter was in Cancer, and

Saturn was in Capricorn. In the odd date of 701 B.C., Jupiter and Saturn have been discovered to have exchanged positions, and such positioning is noteworthy during the year of the final flyby. Perhaps this advance bit of information will cultivate additional interest.

In the united consensus of the three world views, the Uniformitarian, the Fiat Creationist and the Theistic Evolutionist, the orbit of Mars has always been as it is now. Also, presumably, its 24° tilt has always been as it is now for its spin axis. This consensus is not unanimous due to the Planetary Catastrophist View. This view holds that there were three ancient orbits of Mars. Each was distinctive. Those orbits were as follows:

A. The Primordial (Pre-Catastrophic) Era. This is the era prior to 10,000 B.C. when Mars roamed in the regions of today's asteroids, 250 and 300 million miles from the Sun. The Primordial (or pre-catastrophic) era ended with the fragmentation of Astra. On this occasion, Mars was battered on one side only by at least 3,000 fragments, each of which created a crater 20 miles or larger in diameter. One fragment, the core of Astra, formed the Hellas Crater, 990 miles in diameter on such a small planet. The Isidis and the Argyre craters are about 600 and 450 miles in diameter. In one hemisphere, 3000 other large fragments hit Mars.

On this occasion, Mars was hit by and digested some 65% of the mass of Astra. After the digestion, the planetary diameter of Mars must have increased about 50 miles. It seems that at the time of the catastrophe, Mars was approaching the Sun. Astronomers use the term "ascending" in its orbit.) Also, Astra seems to have been retreating or "descending". Both had velocities in the range of 40,000 m.p.h. Like two football players meeting nearly head on, their velocities added for impact purposes. Mars was staggered and lost momentum. Mars fell into its catastrophic orbit, wherein its new perihelion was 75 million miles and its new aphelion was 218 million miles. Those fragments which missed Mars, comprising perhaps 34% or 35% of the mass of Astra, became asteroids. The fragmentation occurred about 210 million miles from the Sun, AND, it occurred in the zodiacal zone we know as Cancer.

B. The Catastrophic Era. The orbit of Mars is depicted in Figure 1. This orbit was semi-stable. It lasted for about 9200 years, from 9900 B.C. to 701 B.C. During this era, Mars made some 85 flybys of the October 24 variety, and it also made some 85 flybys of the March 20-21 variety. These 170 flybys alternated in type, and their cyclicism was 54 years between flybys. This is of course the equivalent of 108 years between October flybys.

For the present purposes, this era ended in 701 B.C., but in another sense, it ended in 699 B.C. as shall be discussed in detail later in this volume. Figure 6 illustrates the Martian orbit of the catastrophic era in comparison to Jupiter's orbit.

C. The Uniformitarian Era. It may be shocking to the uniformitarian mind set, but the bad news is that the uniformitarian era began about 700 B.C. It is less than 2700 years old as of the writing of this manuscript. It is less than a million days old. It is less than 1% billion minutes old. Figure 3 illustrates the catastrophic orbit of Mars in comparison to the current orbit of Mars. Both sweep out roughly the same amount of space.

CASE 5. THE LAND OF MILK AND HONEY IN THE PENTATEUCH

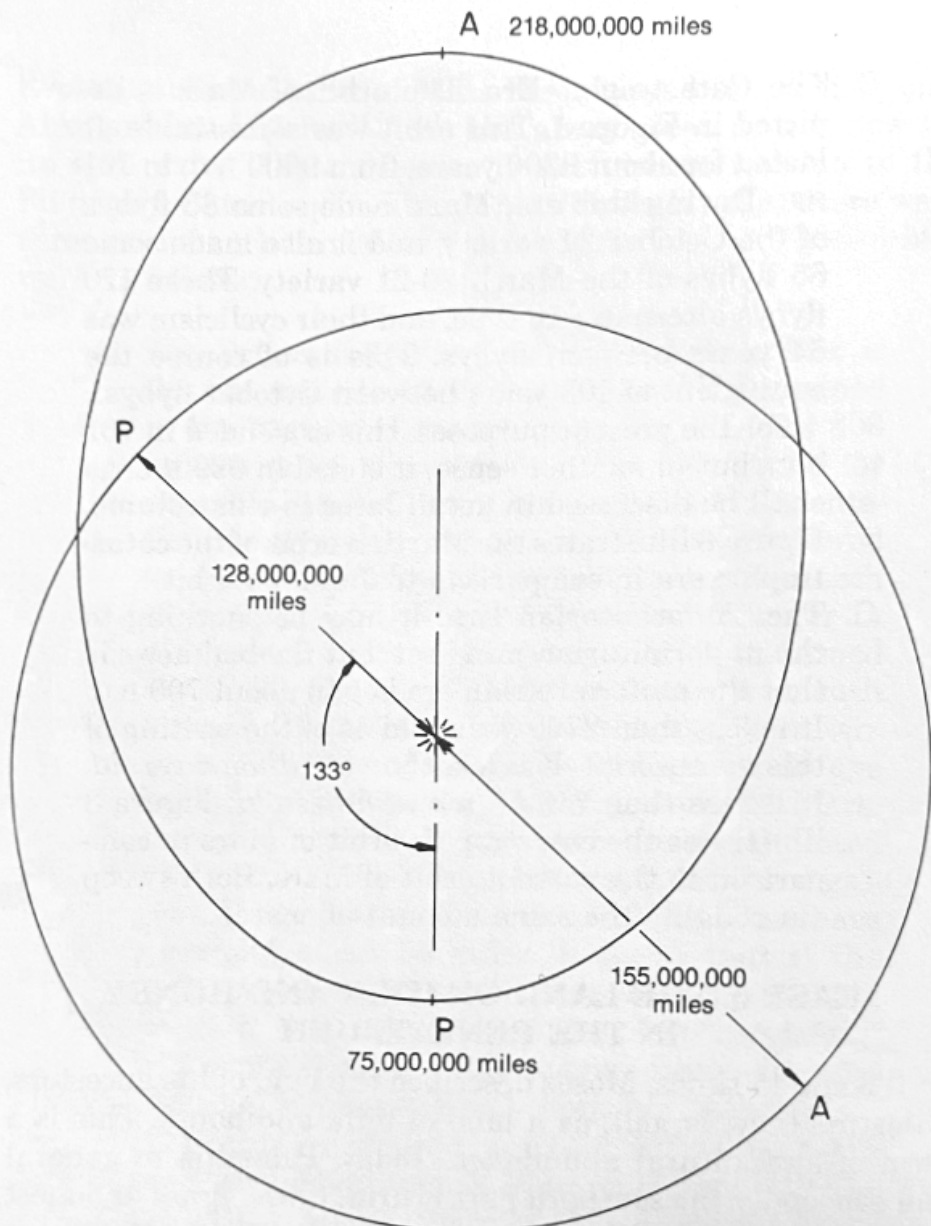
Some 15 times, Moses described the land of his ancestors, Palestine (now Israel), as a land of milk and honey. This is a term of agricultural abundance. Today, Palestine in general and especially the southern part is arid. Cows, grass and most flowers do not do well in arid climates. Why would Moses use Such an agrarian term of abundance to describe Palestine? Jerusalem was 250 miles from Moses and the Sinai Peninsula. There is no indication Moses ever visited Palestine.

"The land of milk and honey" is a poetic term in these views:

- UNIFORMITARIAN
- FIAT CREATIONIST
- THEISTIC EVOLUTION

Adherents of these three world views hold in unison that Jerusalem in that era had a latitude of 32° just like it has today. And the North Pole remains unchanged. To suggest that Jerusalem's latitude has shifted, along with the location of the North

Pole is an unthinkable thought.



**THE ANCIENT ORBIT OF MARS (AS PROPOSED)
 COMPARED TO THE MODERN ORBIT OF MARS**

- Old Line of Apsides - 293,000,000 Miles
- New Line of Apsides - 283,000,000 Miles
- Old Orbital Eccentricity - Circa .5
- New Orbital Eccentricity - .093
- Old Perihelion - Aligns to January 6
- New Perihelion - Aligns to August 26

Figure-3

PLANETARY CATASTROPHIST VIEW: The Exodus passover was a Mars flyby of the mid-March variety. It was a sunward flyby which happened during the midnight hour, Egypt time. In that era, Jerusalem's latitude was somewhere around 42° N., some 10° farther north and some 700 miles closer to the North Pole than is the case in our era.

In the era following the Exodus Catastrophe, between 1447 B.C., and 750 B.C., there were seven October flybys and six mid-March flybys. In the Biblical record, the mid-March flybys of this era are hardly mentioned until that of 701 B.C. But the October catastrophes are vividly described, all except for the one in 1188 B.C. It might be that generally, October catastrophes were more severe (or closer) than were mid-March catastrophes.

The Bible records a series of October catastrophes on occasions we can date as 1404 B.C., 1296 B.C., 1080 B.C., 972 B.C., 864 B.C. and 756 B.C. Of these six, five occurred during the midday. The geometry of a midday flyby dictates that the North Pole, if it relocates, would relocate in a direction moving toward Alaska and away from Europe and the Middle East. It is proposed that such a relocation in the direction of Alaska occurred repeatedly in 50-mile, 100-mile, 150-mile and perhaps 250-mile increments. There was some relocation in the opposite direction (during March flybys) also, as in 809 B.C. and 701 B.C. The net change, it is held, was about 700 miles, which is 10° or 11° of latitude.

At a latitude of 42° N. or even 44° N., Jerusalem and Palestine would have been well within the path of the cool, moist, rain-bearing westerly winds system. A comparable latitude change from 42° N. to 32° N. today would be from Eureka, California, to San Diego and as it would be from Oporto, Portugal to Safi, in Southern Morocco.

In the Planetary Catastrophist View, Palestine was between 40°N. and 44°N. Lebanon was even farther north. The renowned cedars of Lebanon were the ancient counterpart to the California redwood groves and the Douglas fir stands of Southern Oregon. This is because of the similarity of today's Oregon-California border and the latitude of Palestine in the time of Moses.

With an abundance of winter regime rains, flowers and grass will proliferate, especially when under cultivation. With ample flowers and grass, bees and cows proliferate, particularly more than do camels and goats, which are dry climate animals. With a substantial population of bees and cows, milk and honey were at that time in agricultural abundance. Today, Jerusalem's latitude is similar to that of San Diego, and its climate, if adjusted to sea level, is also semi-arid.

Another example of agricultural abundance in that era in Palestine was the burden to two of the twelve spies sent out by Moses to reconnoiter Palestine. Two of the spies, Caleb and Joshua, returned by walking some 250 miles across the Negev with a cluster of grapes so large than one man could hardly carry it. It was evidence of the good farming. Other cases of agricultural abundance could be cited. Today Southern Judea is arid, and the Negev, like the Sinai, is parched.

Yet a third example of North Pole relocation is the archaeological location of the First Temple, whose foundation was laid in 967 B.c. That date is about midway between 1450 B.C. and 702 B.C. If one assumes that it was built with a true north-south and east-west orientation, like the Second Temple, then the uniformitarian would expect the First Temple foundation to be in a true directional alignment. It is not, in the amount of 6°. This topic will be discussed in some detail in Chapter V.

THE SEARCH FOR COMMON GROUND

Common ground is often sought to reconcile opposing views. Note the common ground between the Humanistic Evolutionist and the Theistic Evolutionist. This is their shared belief in the Nebular Hypothesis and its billions of years timing. Note the common ground between the Fiat Creationist and the Theistic Evolutionist, both adherents to the Bible. The common ground is that God (not chance) guided the unfolding events of Earth history. Note the common ground between the Humanistic Evolutionist and the Fiat Creationist, who are usually at loggerheads. Their common ground happens to be their passion that there are two, and only two, mutually exclusive options in choosing one's world view ... one of their particular two views.

The Planetary Catastrophist also seeks for common ground. With the Humanistic Evolutionist, he shares the mutual desire to understand the origin and development of Earth history and of solar system history within the scope of applied Newtonian

mechanics, except the Planetary Catastrophist wants to apply those mechanics more rigorously.

On the other hand, with the Fiat Creationist, the Planetary Catastrophist agrees that biological life has appeared on this Earth during the catastrophic era, which is the only era that the Earth has had a protective shield, the geomagnetic sheath. He is told by physicists that without a geomagnetic sheath, exposure to direct alpha particles from the Sun would in time destroy all biota. He senses that there was no significant geomagnetic sheath during the era of Uniformitarianism I. Thus the sudden appearance of life on this planet is an area of common agreement. A second area of agreement is that the biota seems to be a product of amazing engineering, God's design and engineering. Chance does not suffice, and extended time spans are invalidated by the cyclicism of catastrophism.

On yet a third front, the Planetary Catastrophist shares with the Theistic Evolutionist a desire to occupy higher ground in the desultory, unending creation vs. evolution controversy. But where is higher ground to be found? The Theistic Evolutionist is essentially a parliamentarian. He seeks common ground (improperly) by merely retaking a poll of Uniformitarians and of Fiat Creationists, weighted in favor of the more numerous group. He is likely to decide to add Planetary Catastrophists as voters in his poll-taking. In this way, he attempts to arrive at a conclusion.

But the laws of nature are at issue. Also what is of concern is the history of our planet. Parliamentary voting has not, can not, and never will revoke or amend any of the laws of nature. Furthermore, in the 400-year history of science, majorities have a record of being frequently mistaken.

FROM COMMON GROUND TO HIGHER GROUND

HIGHER GROUND is to be reached by a re-examination of the basic assumptions for Earth history in the light of the abundance of evidence which has been photographed by Viking, Mariner, Voyager and other space missions to various planets. Higher ground is also to be reached by a reexamination of the prominent and sometimes shrill concerns of imminent catastrophism voiced in ancient literatures by the Assyrians, Greeks, Hebrews, Persians, Romans, Chinese, Indo-Aryans and others in literatures predating 700 B.C.

HIGHER GROUND, furthermore, is to be reached by a combination of a rigorous application of celestial mechanics, a perspective of cyclic catastrophism in ancient literatures, and a perceptive analysis of how catastrophic orbits behave. Many evidences for catastrophism have been seen but not recognized by astronomers, by geologists, by ancient historians, and by geographers.

Using this approach, uniformitarianism is seen in its true light. Uniformitarianism for the Earth is valid for two eras in our planet's solar system history, while Catastrophism is valid for only one era. Those three eras are as follows:

A. Uniformitarian Era I Circa 150,000 B.C. to 10,000 B.C. B. Catastrophic Era 9900 B.C. to 701 B.C., 9200 years C. Uniformitarian Era II 700 B.C. to Present

The great majority of the time accrues to the two uniformitarian eras, some 141,000 years. This is 94% of the time. HOWEVER, the great majority of the work done in reshaping the Earth's crust, such as oceanic tides creating successive layers of strata, or subcrustal tides creating zones of crustal deformation, or the development of a geomagnetic sheath, or a sudden cosmic ice dump causing an ice age, or crustal skidding (not continental drift), or spin axis shifts, or the triggering of paleomagnetic polarity reversals, was all achieved during the brief, 9200-year catastrophic era. This was only 6% of the time that the Earth has revolved around the Sun, but it represents 99% of the work in crustal deformation and reformation and in the creating of new land forms, new atmospheric mixes, new polar locations and new geomagnetic strength levels.

TRACING THE HISTORICAL ROOTS OF UNIFORMITARIANISM

The concept, now the dogma of geological uniformitarianism, was first popularized in the 1830's by a certain Englishman, Charles Lyell. Lyell, one of the pioneer geologists, maintained that the Earth's development came about by slow and gradual processes and not by sudden catastrophes. Lyell seems to have coined the catch phrase for Earth history "the present is the key to the past," although Huxley first popularized it. This describes an approach devoid of global upheavals and devoid of planetary catastrophism.

Lyell's conclusions were in sharp contrast to those of his predecessors and to many of his colleagues. The early pioneers of geology in Germany, in France and in England (Werner, Cuvier, Paley) were all catastrophists. In contrast to these, two themes dominated Lyell's approach to geology, These were an acceptance of gradualism in astronomy (from Kant's nebular hypothesis) and a hostility to the Bible, both Testaments.

Lyell's hostility to the Old Testament in general and to Christianity in particular is illustrated in the following. excerpt from *Hallam's Great Geological Controversies*. Hallam cites Lyell, in correspondence with Scrope, the editor of the *Quarterly Review* and the reviewer of Lyell's *Principles of Geology* in 1833. Lyell, the author of uniformitarianism, wrote:

If we don't irritate, which I fear that we may... we shall carry all with us. If you don't triumph over them, but compliment the liberality and candor of the present age, the bishops and enlightened saints will join us IN DESPISING BOTH THE ANCIENT AND MODERN PHYSIO-THEOLOGIANS. It is just the time to strike, so rejoice, that, sinner as you are, the Quarterly Review is open to you ... If Murray (the publisher) has to push my volumes, and you wield the geology of the Quarterly Review, we shall be able in a short while to work an entire change in public opinion. (Caps ours.)¹¹

Lyell's acceptance of gradualism in geology was encouraged by the influence of James Hutton, a Scottish geologist of the previous generation. Hutton's acceptance of gradualism in astronomy was due to his acceptance of Immanuel Kant, an 18th century German geographer turned philosopher and cosmologist. Lyell was indebted to Hutton, who in turn was indebted to Kant for introducing billions of years of serenity into both astronomical and geological history.

Kant published his work, *General History of Nature and Theory of the Heavens*, in 1755 in Germany. In this work, Kant theorized that some 4 billions of years ago, the Sun had ejected a tail, or a filament, or a gauze of material. That theoretical material cooled and collected (rather than dispersed). It formed rocks in space which in turn formed larger rocks which in turn formed planets. It could be added that those rocks, if they collided, did so at velocities of tens of thousands of miles

per hour, and in so doing, one would think, would fragment or ricochet. But they didn't in his theory; they accreted into ever larger clumps until planet-sized or satellite-sized clumps formed.

At that time, there were six planets that were known, plus the Moon, four satellites of Jupiter and five of Saturn. The discovery of more planets and of more satellites was expected. Except for a few craters due to meteorite hits, Kant saw nothing or perceived nothing particularly catastrophic in evidence in our solar system. Lyell, Hutton and Kant were each hostile to Christianity and were each sympathetic to masonic sects of that era such as the Illuminati and the Jacobins. This is a coincidence that bears noting.

Kant is generally credited as the originator of the Nebular Hypothesis, but he wasn't. The originator of the Nebular Hypothesis was another Emanuel, Emanuel Swedenborg (1688-1772). With respect to cosmology, Swedenborg was Kant's mentor. Swedenborg wrote his treatise on cosmology in 1734 in Sweden, in the Latin language. It was entitled *Prodromus Philosophiae Retiocinantis de Infinito et Cause Creationis*, a rather lengthy title by modern standards.

Some 21 years before Kant's publication, Swedenborg proposed that the planets were the result of condensations of a gauze, or a filament, or a "cometary type" tail ejected from out of the Sun. Swedenborg was a mining engineer and was interested in a wide range of scientific findings. In addition to his scientific interests, he engaged in psychic activities and claimed to have psychic powers. Historians and biographers of Swedenborg are reluctant to dismiss Swedenborg's psychic career. On a number of public occasions, his psychic powers seemed irrefutable to his fellow Swedes of Stockholm. Four of those occasions are cited herein.¹²

On July 19, 1759, when Swedenborg was visiting Goteborg, a coastal town some 250 miles from his home in Stockholm, he suddenly went into a trance, one Sunday afternoon. In his trance Swedenborg gasped as he saw Stockholm ablaze. Urban fires were dreaded events in that era. In Swedenborg's vision, fire devastated block after block in the city but was stopped just three houses from his own. Three days later, news arrived from Stockholm, confirming the vision Swedenborg saw in his trance, including the survival of his home on the edge of the incineration.

Three years later, while conducting a public seance, Swedenborg had a vision of the Russian nobleman, Emperor Peter II, grandson of Peter the Great. He was being strangled in his prison cell. He was strangled just before he was to be released from prison, and he had been betrothed to be married shortly. News arrived in Sweden about two weeks later confirming the event (the strangling), the person (Peter II), the location (the jail cell) and the date, which was the same day as Swedenborg's vision.

A third "confirmation" of Swedenborg's psychic powers occurred a year after the death of the Dutch ambassador to Stockholm, de Marteville by name. A goldsmith presented the ambassador's widow, Mm. de Marteville, with a bill for over 25,000 guilders for a silver service which the goldsmith claimed was bought by her late husband but no payment had been made. The widow de Marteville questioned the integrity of the goldsmith and went to Swedenborg for help. Swedenborg told her that her late husband appeared to him in a dream telling him that a receipt of payment for the silver service was in a secret drawer of the late husband's English bureau. In the presence of guests, Mm. de Marteville found the hidden compartment in the bureau with the receipt in it.

A fourth occurrence may confirm his psychic powers, or it might indicate the power of suggestion. Swedenborg's renowned psychic powers were a topic of humor in some circles, and a topic of widespread curiosity. This was well known. One evening, as Swedenborg was sharing with friends his views of the world of spirits and psychic powers, one of the group (perhaps a doubter) challenged Swedenborg to reveal who among them would be the next to die. "Olofsohn will die tomorrow morning at forty-five minutes past four;" replied Swedenborg, creating pandemonium. It is not recorded how Olofsohn felt about this.

The next morning when one of the group went to Olofsohn's home to inquire of his health, a servant reported that Olofsohn had died of a stroke at forty-five minutes past four that morning. Also, coincidentally, at the very same time Olofsohn's clock had mysteriously stopped, and the servant reported this also. (Perhaps this is the origin of the song about the grandfather's clock which stopped the moment the old man died.) The survivors of the group were thunderstruck. The event has been amply recorded. Perhaps the curious questioner of the previous night did not dare to ask another question.

Not all of Swedenborg's psychic visions were limited to Swedish or to Russian locations. He claimed confirmation of his nebular hypothesis from seances with men on Jupiter, Saturn and places more distant. When Kant republished Swedenborg's planetary theory under his own name, he (Kant) left out the seance materials, and he called the rest science.

But the search for the origin of the nebular hypothesis doesn't begin with Swedenborg in Sweden. Some 20 years earlier, in 1712, when Swedenborg was but 24 years old, he took one of his several trips abroad, to England on this occasion. There, he visited with the famous Edmund Halley at Cambridge. Halley was 58 at the time and was famous for having catalogued over 300 stars of the Southern Hemisphere during an 18-month stint on St Helena in 1687. Halley also was known for assisting in editing and helping to finance the publication of Isaac Newton's epochal *Principia*, wherein gravity was described mathematically for the first time.

Halley also had made a study of the reports of various medieval comets, their orbital trajectories, their dates (some of which he found cyclic), and the various descriptions of their tails. Using Newton's celestial mechanics, in 1682 Halley had declared that one particular comet (reported in 1456, 1531, 1607 and 1682) was cyclic and had a period of 75 to 76 years, a prominent comet of medieval times. Halley predicted its return around 1758, and he asked that when it did return, it be named after an Englishman. It was. (We know it as Halley's Comet.) Halley was a significant person of science, and such significant persons were the kind with which young Swedenborg wanted to interact.

COMETS, COMET TAILS AND FALLACIES (TALES)

Halley described to the youthful Swedenborg the various kinds of tails of the medieval comets. Comets have a variety of tails or gauzes or filaments because their orbits vary, their masses vary, and their velocities vary. Comets have tails because there is an evaporation of ices of the comet's head during close approaches to the Sun. The mass of the comet is miniscule, and the evaporated vapors form a flashy spectacle in the nocturnal skies, especially when there is no city light at night to dim the spectacle.

All comets lose mass by evaporation. All satellites also lose any atmosphere they might produce, because the specific gravity of the gaseous molecules exceeds the gravitational bonds of the satellite. The gases slowly float off into space. Not only do all satellites lack a significant atmosphere. So also do three planets, Mercury (1/20th the mass of the Earth), Mars (1/10th the mass of the Earth), and Pluto, which is 2% more massive than Mars.

At the surface of Mars, gravitational attraction is one-third that of the Earth. If other things were equal, an Earthling track star who could high-jump 6 feet could high-jump 18 feet on Mars. On Mars, the inferior gravity is able to retain only certain heavier gases such as argon or carbon dioxide. Mars cannot retain oxygen, nitrogen or water vapor.

Thus, as discussed earlier in our theory, Mars was sprayed with about 1 million cubic miles of icy fragments during the Noachian Flood flyby, as was the Earth, which received 12 million cubic miles of ice. About the ice fragments that hit Mars, their energies converted to heat instantly. The ices melted or evaporated and, in part, recondensed. Rivers flowed, 20 m.p.h and faster on a planet with an inferior gravity. The flowing waters formed lakes, which shortly froze over. Ice once was abundant on the surface of Mars. Figure 2 illustrates how an icy satellite of Mars could have fragmented during a close flyby, spraying both planets simultaneously. In this theory, for 1000 to 1500 years after Noah's Flood, the ices of Mars periodically melted and vaporized into a cometary wake when Mars approached its 75 million mile perihelion. Mars, for some 1500 years after the Flood, in short, was the most spectacular comet in our solar system, with a glistening tail that may have been 100 million miles long.

One can see indications of this in ancient literature. One case is in the Book of Exodus. The Exodus flyby was devastating to Egypt with earthquakes, but the flyby was at night. The Western Hemisphere suffered from the direct wrath of Mars. After the flyby (or passover), the Hebrews viewed the western sky, the celestial regions. They saw a "cloud by day, and a pillar of fire by night." Mars was belching gases from its massive volcanoes. Mars was also leaving a 50 to 100 million mile train of evaporated ice, a cometary tail. While the Hebrews described it as a pillar, it was compared to an Egyptian pillar, which was an obelisk or a sun dial, shaped similar to the Washington monument. A typical obelisk is a very long, narrow pyramid,

perhaps 100 feet in height and 20 or 22 feet at the base. At the top it comes to a long, narrow point. That "pillar" or cometary tail could not compete during daytime with the Sun, but at night its appearance was long, luminous and resplendent.

Dry River Beds and Icy Lakes on Mars

As mentioned previously, space missions have discovered and photographed many dry river beds on Mars. There are dry river beds of differing types of rivers. One outflow channel in the Capri Chasma region appears to have been a dammed up river, 40 miles wide. That dam broke, spilling thousands of cubic miles of water in a down hill direction. This is one of dozens of rivers, some of which are 300 and 400 miles long on so small a planet. This is on a planet that has no significant atmosphere and has insufficient gravitational force to retain water vapor, among other lighter gases including oxygen and nitrogen. Average temperatures on Mars are in the region of -150° Fahrenheit. Daytime temperatures may rise to +50° if it is summer and if the temperature is measured in tropical latitudes. At night time, the temperature falls 120° F. All of these rivers must have frozen over, but where is the ice? Obviously in the *Planetary Catastrophe Theory*, the ice evaporated when Mars made orbit after orbit through its perihelion, in the catastrophic era at 75 million miles, almost as close to the Sun as was Venus for a week or two. That evaporating water vapor must have been, next to the Sun and the Moon, the most splendid show Earth dwellers could watch, except during the dreaded flyby years. Thus, it is proposed that Mars in its catastrophic orbit was the greatest comet of the solar system, one with a two year period. Cometary tails indeed were seen and described by the ancients.

Comets thus seem to have been a topic for Moses. Comet tails were also a topic for discussion for Job and his friends, two centuries earlier. In God's speech to Job, one finds the following:

*"He maketh a path to shine after him; one would think the deep to be hoary."
Job. 41:32*

This shall be discussed in its wider context in the next chapter.

As we visualize, comets were also an important topic of discussion during those breakfasts and dinners in 1712 at Edmund Halley's home, where he described to young Swedenborg the different orbits of various medieval comets and the different shapes and lengths of their tails. During this time or shortly thereafter, we propose, the idea occurred to the young Swedenborg that if comets had dramatic, sweeping, extensive tails tens of millions of miles long, the Sun might also have had a tail, a gauze-like tail comprised of materials which, when cool, condensed and accreted into planetesimals and then into larger planets, if given enough time.

Comets are tiny by Earth standards. As noted earlier, Mars at one-tenth the mass of the Earth cannot retain lighter gases although it can retain heavier gases such as carbon dioxide and argon. On the other hand, Venus (at 80% of the mass of the Earth) retains a very thick atmosphere and retains it very effectively despite the high temperatures and the nearness of the Sun. The Sun is about 330,000 times as massive as the Earth, and it is about 3.1 million times as massive as Mars. The Sun has massive ejections all of the time. Huge prominences are ejected as far as 500,000 miles from the Sun's surface, but the Sun's massive gravity calls back all such ejecta. Thus, the solar tail theories of the two Emmanuels (Kant and Swedenborg) are simply not possible. Another way of stating the same principle is to say that their Nebular Hypothesis is not scientific, even though it is often presented as if it were.

The Family Tree of the Nebular Hypothesis

As people have family trees, so do ideas. The Nebular Hypothesis is the idea that some 4 to 42 billion years ago, there began a gradual evolution in a climate of astronomical quiescence for the solar system. This idea has a seven-generation family tree.

- Generation-1: 1712 The Halley-Swedenborg Breakfasts
- Generation-2: 1734 Swedenborg's *Prodromus Philosophiae*
- Generation-3: 1755 Kants *General History of the Heavens*
- Generation-4: 1784 Laplace's *Theorie du Mouvement de la Figure Elliptique des Planetes*
- Generation-5: 1795 Hutton's *Theory of the Earth*
- Generation-6: 1833 Lyell's *Principles of Geology*
- Generation-7: 1859 Darwin's *Origin of the Species*

After 1860, we are in the modern era of refinements and expansions of the hypothesis of the two Emmanuels. In our 20th century, virtually all approaches assume this system of thought unwittingly.

Reservations to the Nebular Hypothesis

One can summarize the major fallacies of the Swedenborgian-Kantian system of thought. Eight reasonable reservations to the system of the two Emmanuels are as follows.^{13 14}

RESERVATION-1: Extruded Ejecta. The Sun did and will continue to call back any extruded ejecta such as filaments and prominences through its immense surface gravity.

RESERVATION-2: The Shrinking Sun. As discussed previously, the Sun is shrinking at the rate of 5 feet per hour, or 125 feet per day, 8 miles per year and 860 miles per century. In 125,000 years, the Sun should have a diameter of 430,000 miles which is one half of its present diameter. It is losing mass by radiation and by solar wind blowoff. It has been shrinking, but not for millions of years. More likely, it was "cable-jumped" or ignited when it captured its family of planets, and began to experience massive and deep tides (and friction).

RESERVATION-3: Accretion Illogic. Were rocks to collide at velocities of many tens of thousands of m.p.h., those rocks would ricochet and would not accrete or stick together. Magical anti-logical theories may be spun but should not be under the endorsement of science. In science fiction, such a theory is entirely acceptable.

RESERVATION-4: Spin of the Planets. The massive Jupiter rotates in 591 minutes and the massive Saturn in 615, a 96% similarity. The smaller Earth rotates in 1436 minutes and Mars in a rather comparable 1477 minutes, again a 97% similarity. Under Nebular Hypothesis conditions, no spin rate would be generated even if accretion did occur. Neptune and Uranus have twin spins 98% similar. In *Aeon* we shall discuss the mechanism for these three sets of twin spins.^{15 16}

RESERVATION-5: The Distribution of Planetary Mass. Today, the Sun throws out ejecta all of the time up to ½ million miles and draws it back. In the Nebular Hypothesis, the Sun allegedly threw out only 0.5% of its ejecta within the nearest

400 million miles. This 0.5% formed Mercury, Venus, the Earth-Moon system, Mars and Astra, all small planets. Between 400 and 500 million miles was ejected 71% of its ejecta (into Jupiter and satellites). At 900 million miles was gathered another 21% of its ejecta (Saturn and satellites). Even farther, at distances of 2 and 3 billions of miles was distributed another 7% (Uranus, Neptune, Pluto and satellites). Distributionally speaking, it should have been the other way around. The regions beyond 1 billion miles should have received 0.5%. The regions between $\frac{1}{2}$ and 1 billion miles should have received 7%. And the regions within $\frac{1}{2}$ billion miles should have received 92%.

RESERVATION-6: The Ecliptic Plane. It is now known that a theoretical gaseous filament will disperse (like a comet's tail) rather than collect. The planets gathered on one single plane, the so-called "ecliptic plane." Pluto is the sole exception. This calls for a capture theory rather than for an extrusion theory.

RESERVATION-7: A Distribution of Elements. The composition of the Sun, so far as is known, is primarily of hydrogen (73%) and of helium (25%). Its most prominent metal is iron, at one-sixth of 1%. Iron comprises an estimated 5% of the Earth's mass. In the Sun's spectrum, silicon is even more rare, at one-fourteenth of 1%. But silicon is the Earth's second-most abundant element at 26% (next to oxygen) in the Earth's crust. Uranium may be the most common element in the core of the Earth, and it is not found at all in the spectrum of the Sun. Reasoning by simple mechanics, centrifugal force, why would the Sun eject its heavier elements and keep its lighter elements? It should be the other way around. Such is yet another contradiction or impossibility in the Nebular Hypothesis.

RESERVATION-8: The Spiral Arm. As mentioned earlier, the Sun's orbit around the Milky Way is 180 to 200 million years. In 4.6 billions of theoretical years, the Sun should have made 22 to 25 theoretical orbits. The Milky Way has spiral arms and the Sun is located, along with its neighboring stars, on the second-to-outermost spiral arm. Each of its neighboring stars has a different velocity and a different trajectory than the Sun. Why, then, is the spiral arm still in evidence, after some 25 orbits around the Milky Way?

Thus, this Nebular Hypothesis advocated by the two Emmanuels (Swedenborg and Kant) and advocated by a host of subsequent astronomers breaks down upon examination. It breaks down on the galactic dimension. It breaks down on the spin

axis requirement. It breaks down three times on the distributive dimension. It breaks down on the steady state versus shrinkage aspect, among others.

Based on the inconsistencies shown above, genuine uniformitarianism in Earth history has yet to be set into its proper place in the market of science. Its two eras occurred before planetary capture and after disentanglement with the orbit of Mars in 701 B.c. These two uniformitarian eras sandwich around the catastrophic era, 9900 B.c. to 701 B.C., as was discussed earlier in this chapter.

If the last great battle of the Mars-Earth Wars occurred as recently as 701 B.C., one would think that the surviving early literatures of ancient cultures would be full of the devastating effects and of the scintillating celestial spectacles of such cyclic or periodic flybys. They are.

However, at the initial glance, it seems that Mars is not found even once in the Old Testament. Furthermore, it is found only three times in the New Testament, and those three times are in Acts 17 when Paul interacted with the Areopagites (a sect named for Ares) on Mars Hill in Athens. Apart from this single chapter, Mars is also not found anywhere in the New Testament.

Contrary to the initial glance, it is our understanding that the planet Mars appears in the Old Testament over 200 times in a variety of no less than 10 forms. Furthermore, the devastating effects of Mars flybys such as earthquakes, celestial lightning, loud shock waves, "pestilences," "tumults," "indignations," "tempests," "flaming torches," and a considerable variety of similar terms occur in more than 1000 verses.

Is the story the same in the surviving literatures of ancient Greece? Indeed it is. In Greek literature of the Heroic Period, before 700 B.C. one finds Mars appearing in a variety of roles also. These roles include (1) Apollo, (2) Ares, (3) Gorgon and (4) Typhon among others. These celestial actors and calamities surrounding their comings and goings consume a great deal of the limited space in the surviving Greek literature.

Is the story similar in Rome, which was founded in 750 B.C. between the last two Mars flybys of 756 B.C. and of 701 B.C.. Mars[?Pioneer Rome?] was founded in 750 B.C., give or take one or two years. The leading deity in pioneer Rome was Mars.

The second and third leading deities were Jupiter and Saturn or Quirinus. Jupiter and Quirinus are derivatives of the Greek Zeus-pater and Chronos, also Jupiter and Saturn. Within 50 years, Romans had built temples to all three of these celestial deities.

In pioneer Rome there were two great, solemn celestial "feardays," not holidays in a festive sense. They were the *tubulustrium*, held on March 21 much like the Hebrew passover, and the *armilustrium*, held on October 24 much like the somber Hebrew feast of the atonement. In both Roman feasts, two horses were sacrificed on the altar of Mars. Those two horses may well have symbolized the two celestial steeds of Mars, Deimos and Phobos. From whence in Roman culture comes the ancient advice to beware the ides of March? It came from pioneer Rome, the most ancient era of Roman experience, when the Romans were still living in the catastrophic era, 750 B.C. to 701 B.c. It is to such issues as these in Greek and Hebrew literature that Chapter II is directed.

NOTES

1. Fiat Creationists. Those creationists who conclude that the Earth, its crustal deformations, its strata, its flora, its fauna, its satellite, the Sun and its family of planets and planetary satellites, the asteroids, the Milky Way and all other galaxies appeared with suddenness approximately 8,000 to 10,000 years ago, by God's Word.
2. Evolutionists. Those who conclude that gradualism in Earth history in quantities of hundreds of millions and up to 4.6 billions of years of time has been spent since the Sun ejected a filament of material which cooled and condensed into the planets. Most evolutionists accept the Lyellian geological time scale, which allows about 4 billion years for the Earth without biota, and about 0.5 billion years for the Earth with a slowly emerging biota.
3. Uniformitarianism. The idea accepted by most geologists for timing that layers of strata, containing simple life forms, began to develop 450 millions of years ago, and successive layers and eras of time required tens or hundreds of millions to be formed.
4. Humanism. A philosophy of life which is centered on man in a secular setting, and all values of civilization originate with man only. Humanism rejects the idea of a Creator and of divine purpose for mankind and supports chance.
5. Theistic Evolution. A blend of the evolutionary ideas of geological gradualism in Earth history coupled with the concept that gradual development of biota was directed by God during several hundreds of millions of years, with a theistic or God-conscious man as the apex of a guided evolution.
6. Planetary Catastrophism. This is a world view that one or more of the planets has made a series of close flybys of the Earth during the last 12,000 years. Such planet flybys have coincided with the era of developing biota and have caused most if not all of the strata sequences, plus much of the crustal deformation which the Earth displays. Some Planetary Catastrophists have concluded that a rainbow of planets such as Saturn, Venus and Mars in that order wrought catastrophes on the Earth during the last 12,000 years. Immanuel Velikovsky is

the leading example. Other Planetary Catastrophists have concluded that Mars was the sole planet to make close flybys and to cause Earth catastrophes during the last 12,000 years, although the orbit of Mars was significantly influenced by Jupiter and Saturn. This author is a "Mars" Planetary Catastrophist. Based on paleomagnetic data, it is concluded that there were about 170 planet flybys. Based on Old Testament analysis of the timing of catastrophes, it is concluded that Mars flybys were in 54-year cycles, and they alternated between mid-March flybys and late-October flybys for some 9200 years. Thus the catastrophes were cyclic and periodic, a trait of orbits. Some Planetary Catastrophists are humanists; Velikovsky for example was an atheist and a Freudian. Some Planetary Catastrophists are theists, concluding that the hand of God is seen in both the catastrophes and the biota created during the catastrophic era. Almost all Planetary Catastrophists conclude (a) that the last of the planet flybys was about the end of the 8th century B.C. and was seen by Hezekiah, Isaiah, Sennacherib and perhaps by Hesiod. Also they conclude (b) that the era of the appearance of biota on our planet coincides with the sequences of catastrophes and that appearance was sudden in terms of thousands of years, not millions or hundreds of millions.

7. There are a variety of grounds to object to the Nebular Hypothesis. They include the following. (1) Spitzer in 1939 showed that matter if pulled out from the Sun would expand and form a gaseous ring around the Sun and would not condense. (2) Russell demonstrated that a major stumbling block is the issue of angular momentum, of which 98% is possessed by the planets versus the Sun, while the planets have .015 of the total mass. (3) Other astronomers have shown that the number of stars in our galaxy is 200 billion, but due to the distances therein, the mathematical probability is that there have been at most 2 close star flybys during the last 5 billion years among the all the star bodies of our galaxy. There are other severe problems also.
8. Patrick Moore and Garry Hunt, *Atlas of the Solar System*. Chicago, Rand McNally, 1983. pp. 72-73. "In 1979 evidence was put forward indicating that the Sun was shrinking. From an analysis of solar diameter measurement made at the Royal Observatory, Greenwich, over a period of about 120 years from 1836 to 1954, it was suggested that the diameter was decreasing by about 0.1 percent per century. If this figure was correct, and represented a uniform rate of decrease, then the Sun would have been twice its present size about 100,000 years ago, and would shrink to a point in the next 10,000 years. SUCH A

CONCLUSION IS PATENTLY ABSURD..." (Caps ours, with disagreement). Moore and Hunt entitle this section "solar oscillations" for which oscillations there is not a shred of evidence, rather than a shrinking Sun for which there is logic and two lines of evidence. In mis-titling the section "solar oscillations", of which none are indicated, a non-scientific uniformitarian bias is detected. Also the employment of an arithmetic decay rate rather than an exponential decay rate similarly exhibits uniformitarian bias. Cooling, radiation and solar wind blow-off account for the Sun's shrinking, and of this, 99½% is cooling. Insistence on solar oscillations not in evidence reflects the tenacity by which some scientists hold on to the uniformitarian view of cosmology. To recognize solar shrinkage would lead to an abandonment or at least a substantial reservation to the Nebular Hypothesis approach. In fact, the shrinkage of the Sun over the last 150 years has been regular, and has been observed uniformly on both the latitudinal axis and on the longitudinal axis.

9. The tides from the oceans floating the Ark were in addition to subcrustal tides in the mantle, which were more massive and which were more concentrated. On the day of The Flood, there was no such thing as "mean sea level", a standard concept of our uniformitarian age. Eurasia contains 21 million square miles. If waters from the Indian Ocean, about 3 million cubic miles, swept across the southern and central 60% of Eurasia, that would be almost 13 million square miles which were inundated by tides from the Indian Ocean. Such would create an average tide of 1200 feet. Tides however do concentrate and 5000 to 7000 foot tides would be expected in regions where the tides would funnel or concentrate.
10. Saturn has three icy satellites with diameters of 900, 700 and 650 miles respectively. Uranus has three ice-ball satellites with diameters of 650, 720 and 810 miles respectively. Our theory is that Mars had an icy satellite of similar size and that ice-ball fragmented during the Noachian flyby.
11. A. Hallam, *Great Geological Controversies*. London: Oxford Univ Press, 1983, 0. 51.
12. Cyriel Odhner Sigstedt, *The Swedenborg Epic*. New York, Bookman Assoc., 1952, Pp. 269-286.
13. Sigstedt, op. cit., p. 22. See also p. 107 ff. "Swedenborg describes the effect of motion upon the nebulous mass surrounding the sun which now has an extremely dense crust or cloud revolving around the solar axis. BY CENTRIFUGAL FORCE the matter in this crust removed itself farther and farther

outward from the active center, occupied a larger space and became attenuated until finally it collapsed upon itself so that it enveloped the sun like a belt or broad circle. This belt eventually broke and formed into larger and smaller globes, corresponding to the number of the planets in the solar system." (p. 114). (Caps ours.)

14. Herein one can ascertain that Swedenborg had no idea of the temperature level or the degree of the gravitational attraction of the Sun. He ascribed centrifugal force as competing successfully with the Sun's gravitational force. It doesn't. The Sun's rotation, in fact, happens to be rather slow, averaging about 29 days, but varying by latitudinal zones. Thus, in its essence, Swedenborg's system was and is anti-gravitational, and this essence continues in Kant's system, in Laplace's, and in the echoes of astronomers of more recent vintage. Since it is anti-gravitational, ergo it is anti-scientific. Such presumption, it is pointed out, is at the heart of uniformitarian thought and assumption.
15. Mars flybys consumed about 5 or 6 hours of intense interaction, and during this time, Mars approached the Earth at about 27,000 m.p.h., and it diverged at the same velocity. If in an ancient galactic scene, Jupiter and Saturn approached within 100,000 miles, their flyby time would have been a very rapid 3 to 4 hours, and this even more rapid flyby time may explain the even more rapid pair of spin rates of these two planets if such flybys were repeated often enough.
16. For further information, see "The Organization of the Solar System," Parts I and II, Aeon, August 1988 and October 1988. (Portland, Oregon, David Talbott, editor:)

Chapter - II

Mars in the Bible and in Greek Mythology

Hesiod was an ancient Greek writer of the 8th century B.C. He was a contemporary of Isaiah, and just one generation after such "fire and brimstone" prophets as Amos, Joel and Jonah, all of whom we shall meet in Chapters VI and VII. In Greece Hesiod saw the same celestial events which Isaiah and Sennacherib saw in Palestine. Hesiod described Ares, the son of Zeus (or Jupiter, technically "Zeus-pater") in the following way.

So she spoke, but could not persuade the great heart in Ares, but he, SCREAMING LOUD, FLOURISHED HIS SPEAR LIKE A FLAME, RAPIDLY MADE A RUSH against the powerful Herakles, furious to kill him, and cast at him with the bronze spear in anger and resentment for his son who was fallen, and struck the great shield, but gray-eyed Athene, reaching out of the chariot, turned aside the shock of the spearhead. The bitter sorrow closed on Ares, and drawing his sharp sword HE SWEPT IN against Herakles the strong-hearted, but AS HE CAME IN AMPHITRYON'S SON, (Mars) insatiate of the terrible battle-cry, stabbed with full force into the thigh left bare under the elaborate shield, and twisting with the great spear tore a great hole in the flesh, and beat him to the ground between. Then Panic (Deimos) and Terror (Phobos) drove their smooth-running chariot and horses CLOSE TO HIM, and lifted him from the wide-wayed earth,... (Parenthesis and Caps ours.)¹

We believe that one of the names of Mars was "son of Amphitryon" even as Herakles (Hercules) was also an ARCHETYPE FOR MARS to the Greeks. On this particular occasion, probably during the final flyby, Mars made a rapid rush, indeed one at about 27,000 m.p.h., past the Earth. Mars, or Ares, swept in, in an orbit that no doubt had a slight arch or curve. If Mars was 30,000 miles away on this occasion, its two satellites (Deimos and Phobos) could have been as close as 20,000 and 25,000 miles respectively. Note that Venus (Athene) is perceived as observing the scene as a distant participant.

The Blazing, Celestial Steeds. In Greek mythology, the steeds of Mars were two in number, as they accompanied the raging Ares. Their ancient Greek names were Deimos and Phobos. Deimos means "great dread or awe,"² and from Phobos comes our English word, "phobia". A phobia is an uncontrollable, unextinguishable fear, much like what the ancients must have felt as they saw Mars approaching, night after night and hour by hour.

Through a freak of history, Deimos and Phobos (which were discovered in 1875 by astronomer Asaph Hall) were named by Hall in accord with ancient Greek mythology.³ Thus it is that the names of the ancient companions of Mars are identical with the current satellites of Mars. It is our conclusion that their journey across the solar system was altered radically following the nightside flyby of 701 B.C., when the ancient catastrophic orbit of Mars unravelled and rounded out.

Deimos and Phobos, the Satellites. Deimos is a small, potato-shaped body, a fragment 6x8x10 miles in dimensions. It is pocked up with hundreds of yet tinier craterlets. These craterlets were the product of tiny collisions of Deimos with ring system debris, when Mars had a ring system.

Phobos, somewhat larger, is 12x14x17 miles in size and is similarly marked with tiny craterlets. The largest crater is named Stickney after Hall's wife, who encouraged him to persist on the night he made the discovery of Phobos in August 1875. Stickney is 6¼ miles in diameter, a relatively massive crater on such a small fragment. There are hundreds of other craterlets on Phobos ranging all the way down to a few yards in diameter.

In the uniformitarian theory, one is forced into the position that these two tiny companions of Mars were captured on the fly, somehow. Mars is only 1/3100 as massive as Jupiter, but allegedly has done very well to capture two since the massive Jupiter has captured only twelve.

However, in the catastrophic theory, these two tiny companions of Mars are the only remaining bits of evidence of a former ring system which Mars once had. The pitlets and craterlets are also evidence of the ancient debris and hence of a ancient rocky ring system which impacted them.

In the theory of Planetary Catastrophism, there had to have been "a broom" to sweep out the debris in the ancient ring system of Mars. That broom existed; it was the Earth's gravitational field. There were about 85 sweeps forward (85 October case flybys) and there were about 85 sweeps backward (85 mid-March flybys). These two lonely, tiny satellites thus dramatize the dramatic difference between catastrophism and uniformitarianism. In the uniformitarian theory, there is no explanation for the craterlets, which are similarly numerous on both tiny trabants.

Viewing Deimos and Phobos. If the ancient Greeks discussed the two tiny steeds (or companions) of Mars, it follows that they must have seen them. Mars is 4200 miles in diameter, and its distance from the Earth averages about 120 million miles. Phobos has a diameter average of 14 miles. The diameter of Phobos is 1/300 that of Mars. In order for Phobos to be seen as dramatically as Mars is today, Phobos would have had to have been within 500,000 miles, or twice as far out as the Moon.

The diameter of Deimos averages 8 miles. Its diameter is 1/525th that of Mars. In order for Deimos to be seen as well as we normally see Mars, it would have had to have been less than 300,000 miles distant. But, there is every indication that during flybys, both steeds were seen much more easily than is the remote Mars of today.

APOLLO. The Greeks traded with the Phoenicians. They acquired timber, manufactures, and many other things, including the alphabet. In Punic, the Phoenician language, the word for Mars was Baal, sometimes represented as Ba'al. This word was a derivative from the Babylonian word, Bel. In Chaldean, Bel and Ishtar were Mars and Venus. In Phoenician they were Baal and Ashtarte. In Greek they were Apollo and Athena. The Greeks softened the "b" into a "p" and added the "a" at the front end.

In the Bible, when the Jews were in the Babylonian captivity, there were such names as Belteshazzar, a wise man, and Belshazzar, a king. For Neo-Babylonians to name kings and wise men after Mars indicates a substantial degree of fear, awe, dread or celestial respect. In Old Testament history, this same name, Baal, is seen in the name of Jezebel, a Phoenician princess, and Jerubbaal, a nickname for Gideon, a famous Hebrew judge. In Roman history, Baal is seen in the names of Hasdrubal and Hannibal, two famous Carthaginian generals whom the Romans fought. The Carthaginians were descendants of Phoenician colonists.

In the opening pages of Homer's *The Iliad*, the reader will meet two priests of Apollo/Baal. These were Greek priests who reportedly could conjure up the future and read the stars. They seem to have advised Achilles, Agamemnon and Menelaus that March of 809 B.C. would be another catastrophic occasion, and the celestial wrath of Ares-Apollo would once again fall on Troy in the form of celestial lightning. The metaphor they used to describe the arrival of the expected lightning was through the silver bowstring of Apollo Shootafar. More of the local scenery of this flyby will be examined in Chapter VI. Our momentary observation is that, if Homer were blind, what he recorded must have been the celestial observations of his advisors, his friends, who were "his eyes."

In Figure 1, Mars is depicted so that its orbit in the catastrophic era was 720 days. Jupiter's orbit was 4320 days, and Mars was in 6:1 resonance with Jupiter's orbit, even as Mars was in 1:2 resonance with the Earth's orbit. In the Old Testament, especially in the era of the Judges and the prophets, Baal and Asharte were constantly linked. Mars, the destroyer, was feared widely and was worshipped by the sacrifice of babies (usually the firstborn son) to its fury and in its oven-belly, a charnel house of pitiful infant screams amid pagan rituals. Ashtarte, who never threatened the Earth, was considered the goddess (or deity) of fertility, including agriculture and sex. It was worshipped with the sex act and its priestesses were temple prostitutes. Venus has an orbit of 225 days. In the catastrophic era, the Earth had an orbit of 360 days. By simple mathematics, one discovers or is led to suspect that Venus was in an 8:5 orbital resonance with the Earth. Hence it was also in a 16:5 orbital resonance with Mars. Furthermore, Mars approached the Sun as close as 75 million miles, just 8 million miles from the orbit of Venus (see figure 1.)

In the catastrophic era, prior to 700 B.C., when the Earth had a 360-day orbit, it seems that there was a "celestial choir" of planets. Venus revolved in 225 days; the Earth in 360 days, Mars in 720 days, Jupiter in 4320 days and Saturn in 10,800 days. In addition, the Moon revolved in 30 days. All of these six celestial bodies were orbiting in a timing harmony. With reference to the Earth's former orbit, that harmony was as follows: Moon 12:1, Venus 8:5, Mars 1:2, Jupiter 1:12 and Saturn 1:30.

GORGON. In ancient Greek literature, Gorgon was a fearful monster that appeared occasionally in the heavens. Gorgon always threatened destruction and distress. This is how Hesiod described Gorgon, the celestial monster.

The head of a dreadful monster, the Gorgon, covered the broad of his back, and a bag of silver – a marvel to see - contained it: ... Upon the head of the hero lay the dread cap of Hades which had the awful gloom of night. Perseus himself... was a full stretch, like one who hurries and shudders with horror. And after him rushed the Gorgons, unapproachable and unspeakable, longing to seize him: as they trod upon the pale adamant, the shield rang sharp and clear with loud clanging. Two serpents hung down at their girdles with heads curved forward; their tongues were flickering, and their teeth gnashing with fury, and their eyes glaring fiercely. And upon the awful heads of the Gorgons great Fear was quaking. ⁴

According to Hesiod, Gorgon was an awful, yet spectacular sight.

Gorgon seems to have had spiral coils of hair emanating from it; it was a hairy sight indeed. The coils or spirals of hair might have a correlation with charged particles, funneling down toward the Earth through the vortex (in the Northern Hemisphere over Greenland) of the Van Allen belts. A twisting, snake-like spiraling movement is described repeatedly in Greek mythology when describing the hairdo of Gorgon. (The Medusas is another similar description to Gorgon, describing the same aspects of Mars flybys.)

Homer also devoted some description to Gorgon during the flyby, whose dating we have discovered to be March 809 B.C. Homer's description is as follows in *The Iliad*.

Meanwhile Athene flung her richly embroidered vesture, made with her own hands, on to her father's threshold, and donned the shirt of Zeus, arming herself for battle. She threw her tasseled aegis about her shoulders, wreathed round with Rout (Deimos) as with a fringe, and on it were Strife and Strength, and Panic (Phobos) whose blood runs cold; moreover there was the HEAD OF THE DREAD MONSTER GORGON, grim and awful to behold, portent of aegis-bearing Zeus.

On her head she set her helmet of gold, with four plumes, and coming to a peak both in front and behind decked with the emblems of a hundred cities. Then she stepped into her flaming chariot and grasped the spear, so stout and sturdy and strong. Hera (Earth) lashed the horses on, and the gates of heaven

*bellowed as they flew open of their own accord -- gates over which the Hours
preside, in whose hands are Heaven and Olympus... (Parenthesis and Caps
ours) ⁵*

The picture of Gorgon by Hesiod and by Homer can be compared usefully to the scenario of Leviathan in the Book of Job (chapter 41). This scenario can also be compared usefully to the presentation of the celestial cherub as seen in II Samuel 22 and Psalm 18.

Gorgon, very fierce and hairy, was pictured by the Greeks as fierce with "eyes." If imagined as eyes," such would add a theoretical element of sight or intelligence to Gorgon. Mars has three particularly large craters, which are Hellas (diameter 990 miles on so small a planet), Isidis (diameter 600 miles) and Argyre (diameter 500 miles). These are all on a planet with a diameter of only 4200 miles. The Hellas Crater covers almost 40° of longitude in its Southern Hemisphere. It could have been identified as an "eye socket" when Mars was one million miles distant. Thus we have isolated two features of the frightful Gorgon, its "shining spiral hair" and its "eyes" of whom three were particularly prominent.

PHAETHON, sometimes known as Phaethon Apollo, appears in both Greek and Roman literature. Ovid in his *Metamorphoses* borrows extensively from Hesiod's *Shield of Herakles and his Theogony*.

*Then Phaethon climbing the steep ascent, entered his Father's (Zeus') palace
and made his way direct into the presence and there stood afar, unable to
approach the dazzling light. Enrobed in purple vestments Phoebus sat, high on
a throne of gleaming emeralds. Attending him on either side stood Day and
Month and Year and Century and Hours*

*Besides, in constant flux the sky streams by, sweeping in a dizzy whirl the stars
on high Against its rushing circuit make my way. Suppose my chariot yours;
what then? Could you confront the spinning poles and not be swept away by
the swift axis of the world ...*

*The Crab (Cancer) whose claws in counter-menace wave. My horses too, when
fire within their breast rages, from mouth and nostrils breathing flames....⁶*

Ovid, like Hesiod, pictured the Phaethon event as an occasion on which Phaethon (the son of Apollo) volunteered to give his father a vacation for one day. He, Phaethon, would take the reins of the celestial steeds, Deimos and Phobos. He would guide the chariot of Mars across its celestial trajectory or path. The story by Ovid continues that the celestial steeds felt a rookie's hand at the reins and bucked. The result was that the chariot of Mars careened across the aether. Getting it fixed before the next sunrise was a major all-night repair occasion for the Greek celestial deities.

Ovid lived from 43 B.C. (?) to 17 A.D. This is 700 years later than Hesiod. Observe that Ovid was a catastrophist even though he lived in the second uniformitarian era. Ovid perceived that the Earth had an axis and spinning poles, that is, that the Earth rotated once every 24 hours rather than having a revolving Sun. Later, certain Greeks considered Apollo to have been the sun deity, but that is a mistake. During the catastrophic era, the sun deity was Helios, and Apollo was Mars. Observe that Ovid drew attention for some reason to something positioned in the zone of the zodiac identified as Cancer, the Crab. Jupiter was in Cancer during every October flyby, as shall be demonstrated in a later Chapter. We speculate that it was Jupiter to which Ovid, or better Hesiod, had reference.

We cannot say at this point that the Phaethon story coincides with the timing of either the Elijah Catastrophe (864 B.C.) or the Jonah-Amos-Joel Catastrophe (756 B.C.) or even the Long Day of Joshua (1404 B.C.). It could be a composite, or a mosaic of several October flyby descriptions.

It could be an embellishment via a later flyby of an earlier one. Observe the phenomena. There is earthquake activity, a celestial path of Mars, the two steeds of Mars, the chariot of Mars with circular rotating wheels, a careening spin axis, celestial lightning falling from the aether, the whip of Phaethon, and the reference to Cancer and its menacing celestial claws. In addition there is fire breathing out of the nostrils of the two steeds.

TYPHON (A GRIM REAPER). Typhon was not the planet Mars itself, as was Gorgon. Rather it was a Hellenic representation of the silver bowstring of Apollo Shootafar. It was similar to the celestial Sword of the Lord seen in Biblical descriptions of flybys. It is best explained by a flux tube of charged particles, flowing between Mars

and the Earth at remarkably high voltages, amperages and wattages. This phenomenon and another similar electrical phenomenon in the arena of Jupiter today will be described in Chapter III.

As Mars rotated in addition to its flyby trajectory, it behaved like an electric generator. As Mars approached the Earth, it nicked the Earth's magneto-head" region of its geomagnetic field. One to three hours later, the magneto-tail" of Mars raked the side of the Earth facing Mars. Usually during the October flybys the hemisphere facing Mars was the Eastern Hemisphere. Usually in mid-March flybys the hemisphere facing Mars was the Western Hemisphere.

The aurora of current which flowed between Mars and the Earth was visible, both during the day and at night. It was shaped like a loop. A section of it was shaped like a scimitar, a curved sword. It glistened like a polished sword. Its length was Pi times the distance of Mars, whatever distance that was up to 125,000 miles at which distance the flux tube vanished. For reasons yet to be presented, it is known that the flux tube current measured in the million volt range. Its amperage was in the ten million ampere range, and its wattage was in the billion watt range as the Silver Bowstring of Apollo Shootafar swept the face of the Earth with electrical discharges (Thunderbolts.)

Based on a computer analysis and celestial mechanics, we found that Mars always would make a sunward side flyby, which, when viewed from Polaris, was a clockwise motion. Simultaneously, the Earth's spin was advancing in a counterclockwise direction. This led to the production of much friction between the Earth's crust and its underlying region, the mantle, and that friction was generated into a recharged planetary magnetic field. As mentioned earlier, the geometry of the arrangement dictates that Greece, at a latitude of 45° or so, was rotating from west to east at a rate of about 700 m.p.h. Simultaneously, Mars was moving clockwise, at a rate of about 1000 m.p.h. with respect to the subpoint on the Earth's surface directly under Mars. These two rates added to 1700 m.p.h. This was the velocity at which Mars (and its planetary magnetic tail) was sweeping across Eurasia.

Apollodorus described the Silver Bowstring of Apollo Shootafar or Typhon, as advancing on an east-to-west direction. This is correct. He described it as advancing in a marine environment. Its advance began in Phoenicia, and from there

it moved past Rhodes and on past Crete to Sicily, where Mt. Etna was erupting. In our model, this means that Typhon advanced in a westerly direction across the Mediterranean Sea at a rate of about 280 miles in 10 minutes. It advanced 1200 miles (from Phoenicia to Sicily) in a time span of about 45 minutes. Apollodorus described Typhon's appearance and progression in this manner:

But when the gods saw him rushing at heaven, they made for Egypt in flight, and being pursued they changed their forms into those of animals. However Zeus pelted Typhon at a distance with thunderbolts, and at close quarters struck him down with an adamantine sickle, and as he fled pursued him closely as far as Mount Casius, which overhangs Syria.

There, seeing the monster sore wounded, he grappled with him. But Typhon twined about him and gripped him in his coils, and wrestling the sickle (sic.) from him severed the sinews of his hands and feet and lifting him on his shoulders carried him through the sea to Cilicia... Likewise he put away the sinews there also... But Hermes and Aegipan stole the sinews and fitted them unobserved to Zeus.

And having recovered his strength, Zeus suddenly from heaven, riding in a chariot of winged horses, pelted Typhon with thunderbolts and pursued him to the mountain called Nysa, where the Fates beguiled the fugitive... So being again pursued he came to Thrace, and in fighting at Mount Haemus he heaved whole mountains. But when these recoiled on him through the force of the thunderbolt, a stream of blood gushed out on the mountain, and they say that from that circumstance the mountain was called Haemus.

And when he started to flee through the Sicilian sea, Zeus cast Mount Etna in Sicily upon him. That is a huge mountain, from which down to this day they say that blasts of fire issue from the thunderbolts that were thrown.⁷

The geographical progression is from Syria and Phoenicia westerly to Cilicia (Southern Turkey), past the Aegean Sea, to Thrace, and again westerly on toward and past Sicily. "Sicles" were identified with Typhon, even as they are with angels of judgment in Judeo-Christian thought. One can hardly imagine the degree of apprehension felt and the extent of celestial drama seen during those flyby occasions.

The length of Typhon can be estimated. If Mars were 40,000 miles distant, it was 40,000 miles times Pi, or 125,000 miles. If Mars were 80,000 miles, the Silver Bowstring of Apollo Shootafar was 250,000 miles long. Our analysis leads us to conclude that the electrical loop of ions and charged particles formed when incoming at a distance of about 125,000 miles from the Earth.

What was its width? This is only a guess; our guess is not wider than 8,000 miles, which is the diameter of the Earth. What was its thickness? This might be discerned by measuring the thickness of a similar loop of electricity flowing between Io and Jupiter. That loop or aurora of current is 800,000 miles long. We do not have data on its width or thickness at this point in time.

Apollodorus, like Ovid, was a catastrophist who lived in a uniformitarian century, the 6th uniformitarian century. His precise dates are unknown, but what is known is that he lived in the 2nd century B.C. He further described Typhon in this manner:

He has a hundred snaky heads, his eyes flash fire, and he emits strange noises ... "all kinds of voices," bellowings, yelpings and hissings. Earth, sea and sky resound with the din of battle. There is thunder, lightning, fire and burning hurricane; the whole earth seethes, and the sky and sea likewise. Great waves rage along the shore, and there is an endless quaking, so that even Hades and the Titans under Tartarus are reduced to trembling....⁸

It is appropriate here to share an insight concerning the noises, voices, yelpings, bellowings and hissings which Apollodorus mentions. One of our Seattle research team members, Leonard Schroedter (an aeronautical engineer), was at Fairbanks, Alaska, during the severe winter of 1949-1950. On Christmas eve, great manifestations of Northern Lights occurred. Magnetic storms spun galvanometers off their center pins. Electrons came down at temperatures below -300° F. and hit the Earth's upper atmosphere. Here they created vast red and green curtains, the Northern Lights, which spread out for thousands of miles. Schroedter saw the functioning of the Van Allen belts nine years before they were discovered in 1959.

At that time, a great, unearthly -80° F. cold mass of heavy air (unearthly even for Alaska) settled over the Yukon Valley and spread out hundreds of miles in a gigantic cold front. This cold front was triggered by astronomical phenomena, perhaps from magnetic storms on the Sun.

Simultaneous with the sighting of the massive red and green curtains, Schroedter heard massive noises which, he thinks, were vibrating at the same wave lengths on which the human brain thinks. No amount of ear-stopping or ear plugs could drown out those screechy, witchy noises. They were at subliminal levels. Note that Apollodorus continues in a similar vein.

And, angry in his heart, Zeus hurled him down to Tartarus, and from Typhoeus comes the fierce rain, blowing winds not Boreas or Notos or bright Zephyros, for these come from the gods, and they refresh mankind – but others, reckless gusts blow on the sea; some fall upon the misty sea and bring calamity to men; as evil storms they rage; each blows in season, scattering ships and killing sailors. Men who meet with them at sea have no defense against their power. And sometimes over the vast and blooming earth they blast the lovely fields of earthborn men and fill the land with dust and dreadful noise.

As far as the thighs, he was of human shape and of such prodigious bulk that he out-topped all of the mountains, and his head often brushed the stars. One of his hands reached out to the west and the other to the east., and from them projected a hundred dragons' heads. From the thighs downward he had huge coils of vipers, which when drawn out, reached to his very head and emitted a loud hissing. His body was all winged; unkempt hair streamed on the wind from his head and cheeks and fire flashed from his eyes. Such and so great was Typhon when hurling kindled rocks, he made for the very heaven with hissings and shouts, spouting a great jet of fire from his mouth. ^{9 10}

So it was that Apollodorus described Mars flybys which had ceased some 5 to 6 centuries earlier. He was a superb catastrophist even though he was a half millennium removed from the time of the last flyby event.

As some historians today specialize in the Age of Rome or early medieval times, so Apollodorus specialized in the history of the Heroic Age of Homer and Hesiod. Modern historians, literary critics and scientists have called his descriptions "myths," but it would seem that Apollodorus did not consider it "Santa Claus stuff." He considered it history of a bygone age which had bygone conditions.

Mars appears in a variety of forms in Greek literature of the Heroic Age. Among these forms are Ares, Apollo, Phaethon Apollo, Gorgon, Typhon and probably Medusa. There are 12 to 15 archetypes of Mars in ancient Greek literature according to David Talbott, editor of *Aeon*.

MARS IN THE NEW TESTAMENT

Mars appears only three times in the New Testament, and all three, incidentally, in a setting at Athens in the 17th chapter of the Book of Acts. Paul was interacting with the academia of ancient Athens on Mars Hill. (In the language of the Hellenes, it was Ares Hill, but the text was Latinized at some point.)

*Then Paul stood in the midst of Mars hill, and said, "Ye men of Athens, I perceive that in all things ye are too superstitious."
Acts 17:22*

In Athens, there was an institution dating back to the Heroic Age, at which time Mars (as Ares) was pictured as dispensing judgment or justice. A member of this ancient court sect was called an "Areopagite," also derived from Ares. Dionysius was such a sect member (see Acts 17:19 and 17:34).

MARS IN THE OLD TESTAMENT

Most people suppose that Mars does not appear in the Old Testament accounts. Perhaps this is because the words "Mars" and/or "Ares" are not to be found. However, in other forms, Mars the planet is discussed. So also are side effects of Mars flybys including such activities as tides in the oceans, earthquakes, renewed volcanism, widespread fires from celestial lightning strikes, celestial lightning discharges, shock waves emanating from celestial lightning strikes and "the magnetic typhoon." Mars the planet can be identified in the Old Testament in no less than ten different terms, as we shall see.

1 - MARS AS A DESTROYING ANGEL. In the Old Testament, angels take at least two forms, personal guardians and dispensers of divine judgement and justice. The latter is sometimes referred to as a "destroying angel." In the New Testament, angels are seen essentially in the guardian role, although that is not entirely true.

In the Old Testament, three major catastrophes, each occurring on or about March 20/21, are associated with "a passover" and with a "destroying angel" involved in that passing over.

One of the best-known is the catastrophe of 1447 B.C., the Exodus Catastrophe, when Moses led the children of Israel out of Egypt. This passover event involved the decimation of the Egyptian militia which followed the escaping Hebrews who were fleeing eastward and southward to the Sinai Peninsula.

And the ANGEL OF GOD, which went before the camp of Israel, removed and went behind them; and the pillar of the cloud went from before their face, and stood behind them: And it came between the camp of the Egyptians and the camp of Israel; and it was a cloud and darkness to them, but it gave light by night to these ...

Exodus 14:19-20

On this occasion, the angel was extremely destructive. Such is clear in Exodus 12:13, 12:23, 12:29 and Psalm 114.

Another well-illustrated case is during the catastrophe of 972 B.C., the Davidic Flyby. This was during the next-to-last year of David's illustrious reign. It is twice recorded in Scripture, in II Sam. 24:15-16 and in I Chronicles 21:14-17.

So the Lord sent a pestilence upon Israel from the morning even to the time appointed: and there died of the people from Dan even to Beersheba seventy thousand men.

And when THE ANGEL STRETCHED OUT HIS HAND upon Jerusalem to destroy it, the Lord repented him of the evil, and said to THE ANGEL THAT DESTROYED the people, It is enough: stay now thine hand. AND THE ANGEL OF THE LORD was by the threshing place of Araunah the Jebusite.

And God sent an angel unto Jerusalem to destroy it: and as he WAS DESTROYING, the Lord beheld, and he repented him of the evil, and said to the ANGEL THAT DESTROYED...

I Chron. 21:15 (Caps ours.)

Details of this destructive flyby will be analyzed extensively in Chapter V.

The third case from the Old Testament is the catastrophe of 701 B.C., also a mid-March passover. This was the last of an estimated 85 mid-March flybys dating back to 9900 B.C.

*And THE ANGEL OF THE LORD WENT FORTH, and smote in the camp of the Assyrians a hundred and four score and five thousand: and when they arose early in the morning, behold, they were all dead corpses.
Isaiah 37:38. (Caps ours.)*

If this was an electrical discharge of interplanetary dimensions, it indicates that the Angel had a planetary magnetic field. If, on the next day or two, it would be discovered that the shadow on a large, 80-foot high sundial shortened a significant amount, say ten spans or 6 feet, such would indicate that the same Angel of the Lord also had a gravitational field, one strong enough to readjust the Earth's spin axis location, the North Pole. This also happened. (See Isaiah 38:8.)

In addition to having a planetary magnetic field and a planetary gravitational field, to have been seen by Isaiah, or Hezekiah, or Sennacherib, it would have been seen by reflected sunlight; so it must have had reflection. If this was Mars, as seems to be the case, and if it made a nightside flyby as also seems to be the case, at a distance of 30,000 miles, that reflection can be estimated. It was a "full Mars" (like a full moon).

Mars has an albedo, or reflective ability of 15% of sunlight received, while the Moon's albedo is only 7%. Mars has a diameter of 4200 miles while the Moon has a diameter of 2200 miles. Mars at 30,000 miles would cover 230 times as much of the skyscape as would the Moon at 240,000 miles. By simple multiplication (230 times 15 divided by 7), the Mars shine that night is estimated at 492 times, nearly 500 times more moonglow than during a normal full moon with a clear nocturnal sky. This, apparently, was also reported as the imposing shield of Herakles by Hesiod, some 750 miles away near Athens and at the same time. This gives some idea of how frightful-appearing was the angel, which did destroy some 185,000 among the encampment of Assyrian soldiers in one, single discharge.

2 - MARS AS A PILLAR OF FIRE BY NIGHT AND A CLOUD BY DAY. The children of Israel fled Egypt and arrived in the vicinity of Mt. Sinai in about 40 days. Mt. Sinai, Moses informs us, was still in the process of volcanic eruption.

And mount Sinai was altogether on a smoke, because the Lord descended upon it in fire; and the smoke thereof ascended as the smoke of a furnace, and the whole mount quaked greatly.

Exodus 19:18

It was an active volcano at the time, some 7500 feet above sea level.

Mt. Sinai had been a dormant volcano, but it was activated, apparently due to stress during the recent flyby. If that passover was by the planet Mars, Mars would have created a subcrustal tide in the magma, just below the Earth's crust. This is the zone of the mantle, a 1700-mile thick zone of magma, or lava. Assuming that subcrustal tides were the triggers that renewed the volcanism, this is a yet second indication that the Angel of the Lord could possess a gravitational field. That gravitational field was not small; it was derived from a planet with over 10% of the mass of the Earth.

If the Earth was experiencing renewed volcanism, so was Mars, but even more so, because the Earth's invading gravitational field was an invasion from a planet ten times as massive. Gravitational attraction at the sea level of the Earth is three times as strong as is the gravitational attraction at the surface of Mars.

Mars has the largest volcano known in our solar system, the giant Olympus Mons. Olympus Mons has a base with a 200-mile diameter. This volcanic base covers more acreage than does the state of Illinois. Olympus Mons has a caldera, a blowhole 50 miles in diameter. This is large enough to stuff New York City into its blow-hole and have plenty of room left for many of the suburbs in Connecticut and New Jersey. This is only one of a dozen large volcanoes on tiny Mars. They are so large because Mars made so many flybys of the Earth, and the Earth being larger than Mars can produce great subcrustal tides.

During the flight of the children of Israel toward the Sinai Peninsula, the volcanoes of Mars were giving off masses of gases. They were bleeding or extruding massive lava flows. Mars was losing most of its volcanic gases. Mars cannot retain most

gases due to its limited gravity; gases just wander off into space. Volcanic gases were one component in 1447 B.C. of the cometary tail of Mars.

A second, and perhaps greater component was evaporated ices from the lakes of Mars, lakes that had been formed and frozen 1000 years earlier by the icy spray, turned into sudden rivers. Between the volcanic gases and the water vapor dispersion, Mars must have had a tail about 150 million miles long. Mars had a velocity of about 1.8 million miles per day. It travelled 100 million miles in about 55 days. This was seen, resplendently, as the pillar of fire by night, a spreading tail of Mars reflecting sunlight across some 150 million miles of space.

And THE ANGEL OF GOD, which went before the camp of Israel, removed and went behind them; and the pillar of the cloud went from before their face, and stood behind them: And it came between the camp of the Egyptians and the camp of Israel; and it was a cloud and darkness to them: but it gave light by night to these ... Exodus 14:19-20.

And the Lord went before them by day in a pillar of a cloud, to lead them in the way; and by night in a pillar of fire, to give them light; to go by day and night: He took not away the pillar of the cloud by day, nor the pillar of fire by night. Exodus 13:21-22 (Caps ours.)

The phrase "pillar of fire by night" is of interest.

In Greece, pillars (or columns) of Corinthian, Doric or Ionic types were tall and straight, with a height of 8 or 9 times the pillar diameter, with no tapering. In Egypt, however, architecture of pillars was different. The Egyptians had obelisks, which also served as sun dials.

As previously mentioned, the shape of an Egyptian obelisk, an Egyptian pillar, is very similar to the shape of a comet with its nucleus and its ever-widening cometary tail. A careful differentiation needs to be made between Egyptian pillars and Greek pillars in order to appreciate this remarkable cometary condition of Mars and its likeness to an Egyptian obelisk.

3 - MARS AS A FIGHTING STAR. There was another October flyby 108 years after the Long Day of Joshua. In Northern Palestine, the Hebrews were still contesting and skirmishing with the Canaanites for control of the land, which had been subdued only in part by Joshua's armies a century previously. The ancients in the Middle East were quick to join in military battle during a Mars flyby; perhaps their astrologers felt that the coming flyby would deal their enemies a defeating blow and would thus lighten the work of the military and lessen their casualties while increasing the casualties of the opponent. Such an occasion, we believe, was October 24 or 25, of 1296 B.C. One reads the following in the Book of Judges.

*They fought from heaven; the stars in their courses fought against Sisera.
Judges 5:20*

"They" it is suspected, were Mars and its satellites. Their "course" was the catastrophic orbit of Mars, depicted in Figure 1.

On the flyby of 1404 B.C., the Long Day of Joshua, the thunderbolts from the Lord were selective, hitting (a) the Canaanite concentration of iron armor and (b) the general locale of the Canaanite divisions. In this event 108 years later, in 1296 B.C., it should not be overlooked that Sisera (the Canaanite colonel) had 900 chariots, and those chariots were made of iron (Judges 4:3), much like lightning rods.

The following verse of Scripture suggests how Sisera was defeated, and it also suggests how badly the rabbis of our early uniformitarian era have bungled the translation and have diminished understanding.

*Then were the horsehoofs broken by the means of the pransings, the pransings
of their mighty ones.
Judges 5:22*

In Hebrew, "horsehoofs" is *iqqebah* or protuberances, as hooves might be viewed to a horse. "Pransings" is *dabarar*, which means to curve, to move irregularly, to move rapidly, and occasionally to gallop, which a pransing horse indeed does.

But in our theory, this usage of *dabarar* refers to the trajectory of Mars, its arc or orbit, and its rapid progress (27,000 m.p.h or 650,000 miles per day) in moving across the aether or cosmos. "Mighty ones" in Hebrew is *'abbiyr*, meaning angel,

bull, chief one or stout-hearted one. It was an angel of the destroying type, not a bull and not a horse. As it was in the case of the Long Day of Joshua, the celestial lightning was attracted to the iron lightning rods, in this case, the 900 chariots. When the lightning struck, its amperage was enormous, perhaps in the millions of amperes. A shock wave of lethal proportions could render Canaanite soldiers dead from concussion, without as much as a drop of spilt blood.

4 - MARS AS A CELESTIAL CHERUB. "Cherub in Hebrew is *keruwb*, from which the English word "cherub" is derived. In modern parlance, a cherub is a lovable baby or child. In ancient Hebrew parlance, it was an angel, once again of the destructive classification. The following is a psalm ascribed to David, and it may be descriptive of the flyby of 972 B.C., or it may be a description of a collage of earlier October flybys.

Then the Earth shook and trembled; the foundations of heaven moved and shook, because he was wrath.

There went up a smoke out of his nostrils, and fire out of his mouth devoured: coals were kindled by it.

He bowed the heavens also, and came down; and darkness was under his feet. (This is a cosmic hint.)

AND HE RODE UPON A CHERUB, AND DID FLY: and he was seen upon the wings of the wind.

And he made darkness pavilions round about him, dark waters, and thick clouds of the skies.

Through the brightness before him were coals of fire kindled. (This is a hint of electrical phenomena.)

The Lord thundered from heaven, and the most High uttered his voice. (This is a hint of celestial noise.)

And he sent out arrows, and scattered them; lightning, and discomfited them. (This is a hint of a flux tube.)

And the channels of the sea appeared, the foundations of the world were discovered, at the rebuking of the Lord, at the blast of the breath of his nostrils. (This is a hint of tidal wave activity in the Mediterranean Sea.)
2nd Samuel 22:8-16. (Parenthesis and Caps. ours.)

This description is twice recorded in Scripture, as this passage is also found virtually verbatim in Psalm 18. If by repetition, additional importance is signified, Psalm 18 is a particularly important psalm, with its portrayal of catastrophic scenes.

Themes very similar to Psalm 18 occur in Ovid's Metamorphoses and in Hesiod's Shield of Herakles. Themes very similar to Psalm 18 occur in Apollodorus and throughout the great book of Isaiah. Themes similar to this are also found in the Book of Amos and in Homer's The Iliad. We could pick out ten or twelve thematic similarities of Mars catastrophism in the psalm, but rather than do this, perhaps some of the readers will want to make their own independent analysis of such themes. We shall postpone further analysis of Psalm 18 until Chapter V, where the Davidic Flyby of 972 B.C. is analyzed at some length.

5 - MARS AS LEVIATHAN, THE CELESTIAL MONSTER. Leviathan was a celestial monster, not (as some have suggested) a hippopotamus, a rhinoceros or a crocodile. It was a monster of the celestial deep, not of the Jordan River. The following scenario will be found to be much like the Celestial Cherub just discussed. Indeed it is thought that both descriptions are of Mars flybys, one in 1620 B.C. and the other during 972 B.C. Both apparently were October flybys.

This scene is found in the Book of Job, chapter 41. This chapter is part of the speech of God, a speech containing the finest display or panorama of creation in the Bible.

*Canst thou draw out LEVIATHAN with an hook?
or his tongue with a cord which thou lettest down?*

*I will not conceal his parts,
nor his power, nor his comely proportion.*

Who can open the doors of his face?

His teeth are terrible round about.

*His scales are his pride,
shut up together as with a close seal.*

*One is so near to another,
that no air can come between them.*

*They are joined one to another,
they stick together, that they cannot be sundered.*

*By his NEESINGS a light doth shine,
and his eyes are like the eyelids of the morning.*

*Out of his mouth go burning lamps,
and sparks of fire leap out.*

*Out of his nostrils goeth smoke,
as out of a seething pot or cauldron.*

*His breath kindleth coals,
and a flame goeth out of his mouth.*

*In his neck remaineth strength,
and sorrow is turned into joy before him.*

*The flakes of his flesh are joined together:
they are firm in themselves; they cannot be moved.*

*His heart is as firm as a stone;
yea, as hard as a piece of the nether millstone.*

*When he raiseth up himself, the mighty are afraid:
by reason of breakings they purify themselves.*

*The sword of him that layeth at him cannot hold:
the spear, the dart, nor the habergeon.*

*He esteemeth iron as straw,
and brass as rotten wood.*

*The arrow cannot make him flee:
slingstones are turned with him into stubble.*

*Darts are counted as stubble:
he laugheth at the shaking of a spear.*

*Sharp stones are under him,
he spreadeth sharp pointed things upon the mire.*

*He maketh the deep to boil like a pot:
he maketh the sea like a pot of ointment.
HE MAKETH A PATH TO SHINE AFTER HIM:
ONE WOULD THINK THE DEEP TO BE HOARY.*

*He beholdeth all high things:
he is a king over all the children of pride.*

Job 41:1, 12, 14-32, 34 (Our caps.)

Once again, a series of specific phrases indicate aspects of Mars catastrophes.

The double "bridle" comes from a word which means halter or to curb. It may be a reference to the two orbits, or paths, of Deimos and Phobos, circling Mars. The "neesings" suggests a gusty expelling of perhaps volcanic lava eruptions. The "eyes" and "eyelids" may be a sighting of the major craters, Hellas, Isidis and Argyre. The "smoke" may be volcanic gases being expelled from the volcanic cones in the region of the Tharsis Bulge. The nether millstone" has connotations of movement, and it perhaps is a meteorite, part of the former ring system of Mars crashing through the Earth's atmosphere. Such meteorites were given religious significance by the Arabians and the ancient Romans, among others.

When "even the mighty are afraid," it is something like the king of Assyria, to whom Jonah delivered a sermon of coming destruction. The king listened among others, and all the city repented. The Hebrews scheduled their somber feast of atonement at this autumnal time of the year, apparently not certain whether or not the world

would be coming to an end. The Romans scheduled their comparable somber "feariday," the armilustrium, at the same time. The Celts scheduled their ancient "Halloween," replete with screeching witches riding on broomsticks across the aether. All, even the courageous men of war, were afraid.

"Sharp stones," like the nether (lower) millstones, may well represent debris from the ring system of Mars, meteoritic, stony materials. The ocean was "boiling like a pot," an indication of tidal waves and perhaps occasional submarine volcanism in the Eastern Mediterranean. The "shining path" is the cometary tail or wake of Mars, spreading its evaporating vapors into space. Describing the deep as "hoary" again indicates water vapor in the cometary tail of Mars but only in that era after the Noachian flood. A proper analysis of Leviathan, like the proper analysis of the cherub in Psalm 18, is an essential aspect of understanding Earth history. Any number of parallels between Leviathan and Greek cosmology can be made.

Sometime during this era of the 2nd millennium B.C., a meteorite from the ring system of Mars fell toward the Earth and landed in Western Central Arabia. It fell through the atmosphere, and burned due to atmospheric friction, but it was large enough that it did not burn up. It landed at what is now Mecca. The ancient Arabians considered this meteorite from Mars to have cosmic and religious importance for 2000 years preceding Mohammed and Islam. Islam absorbed the holy meteorite into its faith. Today the meteorite is known as the Kaaba, and it resides in the Islamic holy of holies. It has been kissed by uncounted hundreds of millions over the last 1400 years.

The composition of the Kaaba is of interest because catastrophists believe it is a brother to Deimos and Phobos. Furthermore, it is a brother to other ring system escapees which became Earth-region asteroids such as Amor, Eros, Icarus and Apollo. Furthermore, it is a little cousin to the general asteroids including Ceres, Juno, Pallas, Vesta and nearly 3,000 other known asteroids. There is no reason the Kaaba shouldn't be drilled for an assay from the bottom, while the top is maintained for the Muslim pilgrims. Being a sort of holy grail of Islam should not exempt it from reasonable scientific analysis. The Kaaba is probably no different in general composition from the asteroids Deimos and Phobos. Its difference is in its journey, first as part of the ancient ring system circling Mars and secondly in its journey into the Earth's atmosphere, as it was swept out by the Earth's gravitational field from the former Martian ring system.

Who knows what an assay might find? Perhaps traces of iridium will be found, to further tie it into the matrix of ancient catastrophism.

6 - MARS AND VENUS AS BAAL AND ASHTAROTH. Baal and Ashtaroth are derived from the Chaldean Bel and Ishtar, the planets Mars and Venus. The Phoenicians also named their month of October "Bul" after Baal. The Hebrews named the same month "Marchesvan" for Mars' month.

In its catastrophic orbit (see Figure 1), Mars approached the Sun to about 75 million miles, which was within 8 million miles of the orbit of Venus. As previously mentioned, it seems that there was a resonance ratio of 16:5 between the two planetary orbits, and 3:1 between the Venusian spin rate and the orbit of Mars. Baal and Ashtaroth worship formed the core of the cosmic pantheism of the Phoenicians and of the Canaanites.

The Hebrews who settled the northern provinces of Palestine did so amid the partly defeated Canaanites. It seems the Hebrews held the countryside and the Canaanites held the cities, but in due time, the populations mixed in ties of all kinds, religious, economic, educational, transportation, etc.

*And they forsook the Lord, and served Baal and Ashtaroth.
Judges 2:13*

With an understanding of the catastrophic orbit of Mars, suddenly it becomes easy to understand such a tendency for worship of Mars and by extension, for worship of Venus or for Jupiter also. The Hebrew legacy from Abraham and Moses was to worship the Creator who created, among other things, the planets, and not to worship the planets themselves.

Baal appears in a variety of forms in the Bible. Some are names already mentioned such as Jezebel and Belshazzar. Some are geographic places where Baal images were worshipped, such as the "high places," frequently where lightning was more apt to strike, in groves of trees on hilltops. Sometimes Baal appears in some form of hardware or statuary. In its variety of forms, "Ba'al" appears at least 180 times in the Old Testament and probably more than 200 times. By contrast, Ashtarte in

various forms occurs about 18 times, only one-tenth as often. This is one measurement of the greater significance of Mars in the Mars versus Venus pantheon in ancient cultures.

In our time, cities and ladies are almost never named after planets, and if so, it is Venus as a feminine idea, not as a planetary idea. In the 2nd millennium B.C., kings, queens, wise men and common folk as well often had some form of Baal incorporated in their names in the Levant, as did some cities (like Baalbek). Further still, Baal usages indicate a keen degree of attention directed toward the celestial regions.

7 - MARS AS NERGAL, THE ASSYRIAN MARS. During the 8th century B.C., the Assyrian Wars were a series of tragic disasters for the Northern Kingdom as well as for Judea. The Assyrian deity "Nergal" was Mars to them. This form occurs occasionally in the Bible when recounting the Assyrian Wars. In addition, for general interest, Nirgal Valles is the name of a valley on Mars which contains a prominent dry river bed. Whoever fixed this name may have known of this ancient name association.

8 - MARS AS A ROLLING THING BEFORE THE WHIRLWIND. This term is used by Isaiah. The reference is Isaiah 17:13.

...and like a rolling thing before the whirlwind.

Isaiah was living in the shadow of the forthcoming flyby of 701 B.C. and as a youth had witnessed the flyby of 756 B.C.

The word for "whirlwind" in Hebrew is *cuwphah*. It is a tempest, a storm, and it seems to be a description of ions fluxing down in a spiral motion through the vortices of the radiation belts, the Van Allen belts. The "rolling thing" in Hebrew is *galgal*. It is perhaps not stretching things to interpret this word as a "rotating wheel in the heavens." It would be a clarification had it been translated "like a rotating thing before the whirlwind." Mars, a gyroscope (a rotating sphere), rotates in 24 hours, 40 minutes. "Gyroscope" may be the best of all translations.

9 - MARS AS ARCTURUS. The term "Arcturus," is found twice in the Book of Job. In each case, "Arcturus" in Hebrew is 'ayish. This, coupled with "Ma" (the great), is one form of the ancient Hebrew term for Mars. In each of the two citations in the Book of Job, 'Arcturus" or ayish is associated with *kheycil* and *khima*. *Kheycil* is Jupiter (and the month in the Jewish calendar of Chislieu or Kislev is thus named after Jupiter). *Khima* is the planet Saturn. Thus, in the Book of Job, these three are the triad of planets that were once in orbital resonance with the Earth and with each other. Rabbis of the uniformitarian era mistranslated these three as constellations, Arcturus, Orion and Pleiades. Christian scholars to date have followed suit.

In Job 9, the beleaguered Job is found with his commiserating friends, Eliphaz, Bildad and Zophar. Poor comforters that they were, they discussed Earth history. None of them objected to Job's analysis, which suggests assent. Job's analysis was as follows.

*(God)... which removeth the mountains, and they know not:
which overturneth them in his anger.*

*Which shaketh the earth out of her place,
and the pillars thereof tremble.*

*Which commandeth the Sun, and it riseth not,
and sealeth up the stars.*

*Which maketh ARCTURUS, ORION AND PLEIADES,
and the chambers of the south.*

*Which doeth great things past finding out;
yea, and wonders without number.*

Job 9:5-7, 9-10

Fiat Creationists are on record as considering this to be poetic material, totally unrelated to the Earth's orbit, spin axis or crustal deformation for any planet.

In reality, Fiat Creationists (supposed defenders of orthodoxy) understand, as Christ once put it, "neither the Scriptures nor the power of God." Such was a critique by Christ when he faced the extra-orthodox of his time. Thus, when evolutionists or humanists of one kind or another concede in debate conditions that Fiat Creationists understand the Bible, they concede too much.

The second occasion where *'ash* or *'ayish* is found in the Book of Job is in the majestic speech of God, where the subject of creation (astronomical, biological and climatological) is discussed. That part which relates to Mars, Jupiter and Saturn is as follows.

*Canst thou bind the sweet influences of khima (Saturn),
or loose the bands of kheciyl (Jupiter).*

*Canst thou bring forth Mazzaroth in his season?
or canst thou guide 'ayish (Mars) WITH HIS SONS.*

*Knowest thou the ordinances of heaven?
canst thou set the dominion thereof in the earth?*

Job 38:31-33 (Pars ours and caps ours).

The phrase "the sweet influences of khima-Saturn" deserves some attention. This is particularly so since we have stated that every October catastrophe featured Jupiter in Cancer, at 12:00 with respect to Figure 1. Every fifth occasion of an October flyby, Saturn was in Capricorn at 6:00 with respect to Figure 1 and 180° opposite to Jupiter. Both planets in such a position lengthened the "a" axis and narrowed the b axis of the Martian orbit, and their effects added. Thus, on mega-catastrophic days such as in October of 2484 B.C., 1944 B.C., 1404 B.C. and 864 B.C., the gravitational influences of khima-Saturn were the opposite of sweet, very bitter. The word translated as "sweet influences" in this case is *ma'adannah* which means great "influence" or "bonds," and comes from the primary verb meaning "to tie or bind." How the translators deduced sweetness from this word is unclear. *Ma'adannah* is the single Hebrew word translated as both "sweet" and "influences." In our opinion, the *ma* should have been translated "powerful" influences rather than "sweet" influences.

The phrase for "loose the bands of kheciyl-Jupiter" is also of interest. "Loose" in Hebrew is *pathach* and is well-translated. It means to unstop, to ungird, or to loosen. "Bands" in Hebrew is *mowshekah*, which means something like pulling or drawing, and it comes from a primary verb meaning to draw, as to draw water from a well. It is pulling as with a cord or as with a band. It also has a timing aspect, meaning to delay or to prolong.

That Mars ordered its orbit according to Jupiter's position was testimony to the drawing power, or controlling power of Jupiter. In this post-Newtonian era, this controlling power is known as gravity. Jupiter's mass happens to be 32 times that of Saturn, and 3100 times that of Mars. Ancient star gazers did not understand gravity, but it appears that indeed some of them were trying, with some limited success, to achieve an understanding of orbits. Both "sweet influences" and "bands" speak of attraction, and that attraction we understand would have to be gravitational.

10 - MARS AS MAZZAROTH. Following the discussion about Mars (*ayish*), Jupiter (*kheciyl*) and Saturn (*khima*), and binding, bands, loosened bands, and sweet influences, there is a discussion of Mazzaroth, and its arrival, and whether that arrival is or is not on schedule. Both *mazzarah*, and its related word *mazzalah* refer to a planet in a zone of the zodiac. It is possible that one of these words refers to Mars in a mid-March flyby and the other refers to Mars in an October flyby, but this is speculative.

It is to be noted that *mazzarah* is associated in the same verse with *ayish*. In our age, Jove and Jupiter are the same. In that age, *mazzarah* and "ma" *ayish* may have been the same. It is to be noted that *ayish*, or Mars, is under discussion WITH ITS, OR HIS SONS. The Hebrew word is *ben*. Perhaps it has reference to *Mars ben Deimos* and *Mars ben Phobos*. If not, to what other pair of planetary sons or satellites might it have reference?

After discussing Mars, Jupiter and Saturn (not Arcturus, Orion and Pleiades), the Creator's discussion turns to even more far-reaching issues. "Knowest thou the ordinances of heaven?" "Ordinances" in Hebrew is *chuggah* and means appointment, custom, ordinance or statue. We have laws in science and some of them such as

Kepler's laws pertain to orbits. The prime root *chug* means appointment boundary, decree, measure, law, time or statute. "Dominion" in Hebrew is *mishtar*, which can also mean jurisdiction.

The questions of the Creator in Job 38 are precisely the underlying questions of the book in hand. It pertains to the understanding of the workings (past and present) of the solar system and how they have applied to the Earth in all three ages, the primordial, the catastrophic and the present uniformitarian. Job's suffering and the great sermon he received from the Lord (concerning creation) occurred in or about the 17th century B.C. This was about 162 years, or 3 half cycles preceding the account of creation penned by Moses.

The same three planets, Mars, Jupiter and Saturn, that are grouped together amid catastrophic and cosmological questions in the Book of Job are the same three that were of supreme interest to the populace of pioneer Rome and their flamens, or priests of Mars. The Hebrews named the month of the October case flybys for Mars, *Marchesvan*. The Romans, for whatever reason, did it differently. They named the month of the spring flybys or passovers for Mars, our month of March. The notes may have been in a different key, but the tune was the same.

COUNTING CITATIONS OF MARS

Most students of the Bible such as pastors or rabbis will say that Mars is not in the Old Testament and occurs on only one occasion in the New Testament. On the contrary, words occur in the Bible for Mars derived from languages such as Assyrian, Chaldean, Egyptian, Neo-Babylonian, and Punic as well as from Hebrew. A rough count can be made to quantify the number of times Mars appears as a planet in one form or another.

A.	Mars as Baal or Bel	181
B.	Mars as a Destroying Angel	16
C.	Mars as a Pillar of Fire	14
D.	Mars as Leviathan	5
E.	Mars as Nergal	4
F.	Mars as Arcturus	2

G.	Mars as a Celestial Cherub	1
H.	Mars as a Fighting Star	1
I.	Mars as a Rotating Wheel	1
J.	Mars as Mazzaroth	1
Total	In Old Testament	227

Furthermore, there were a wide variety of side effects from Mars flybys, especially the closer ones and especially the October ones when Palestine in the daytime faced the wrath of Mars directly.

There were all kinds of words which the King James translators used in attempting to describe conditions, fearful conditions, of which they had no experience or knowledge. The Jewish rabbis of the post-exilic (early uniformitarian) era had the same problem. A variety of examples have already been given including "pransings" and "like horses hoofs" for curved paths and for the astronomical motion of Mars.

The following is a partial list, an incomplete list, but it is indicative of some of the kinds of English words used by translators to try to interpret catastrophic scenes. The word for "pestilence" for instance occurs 47 times. The word for "tumult" or shock wave occurs 21 times. Some of these vague and ambiguous words and phrases are as follows.

1. Arrows, Celestial
2. Besom of Destruction
3. Brimstone
4. Calamity
5. Crooked Serpents
6. Desolations
7. The Destroyer
8. Devouring Fire
9. Earth Shaking
10. Earth Trembling
11. Ensign of Destruction
12. Fire Falling from Heaven
13. Flaming Torches, Like
14. Hailstones, Falling

15. Hosts, Lord of
16. Indignations
17. Lamp, Burning
18. Lightnings
19. Mildew
20. Murrain
21. Noisome Pestilence
22. Perplexity
23. Pestilence
24. Roaring Lion, Like a
25. Streams of Brimstone
26. Smoke from the North
27. Tempest
28. Terrible Shakings
29. Thunderings
30. Tumults
31. Vexations
32. Whirlwinds
33. Woman in Travail, Like a

This list of 33 terms is abbreviated. When the count of these terms is totaled and when the list is expanded to include such terms as "prancing" and "like horses hoofs," the total will doubtless exceed 800. Add to this the 227 terms for the planet Mars itself, and the list of catastrophic words and phrases in the Old Testament balloons to over 1000 instances. This is frequency. Indeed, such themes of catastrophism (which we know to have been cyclic) dominate certain books including Amos, Exodus, Jonah, Joshua, Judges, Nahum, Job and especially including the majestic Book of Isaiah.

With these first two chapters, the groundwork is laid for an abbreviated, non-technical discussion of the catastrophic scenes themselves, often as reported by ancient eye-witness observers. Such a non-technical discussion ensues. A technical discussion, designed more for scientific analysis, is scheduled for our sequel volume. (See Chapter VIII)

NOTES

1. *Hesiod*. Ann Arbor, Univ. of Mich. Press, 1959. Shield of Herakles, lines 450 - 464. Translator- Richmond Lattimore.
2. Personal correspondence, Lynn Rose of University of Buffalo, N.Y., to Donald W. Patten.
3. The names of Greek celestial players from literature of the heroic age is often used for the names of planets, satellites and asteroids. Hall had the honor of naming the two satellites he had just discovered. At the suggestion of one Mr. Madan of England, Hall chose the same names, Deimos and Phobos, which were the legendary companions of Mars, or Ares, in ancient Greek literature.
4. *Hesiod*. Shield of Herakles, lines 223 - 236.
5. Homer, *The Iliad*. Roslyn, N.Y., Walter J. Black, 1942, p. 84. Book V paragraph 57. Translator - Samuel Butler.
6. Ovid, *Metamorphoses*. Book II (The Story of Phaethon,) selections. Bloomington: Indiana Univ. Press, 1958, p. 48 f. Translator - Rolfe Humphries.
7. Apollodorus, *The Library*, vi-3. Translator - Sir James G. Frazer.
8. Loc. cit.
9. Loc. cit.
10. Loc. cit.

Chapter - III

The Fire of the Planets Catastrophes in the Era 2500 B.C. to 1440 B.C.

In Chapter II, ten categories of words for Mars in the Old Testament were cited, plus an additional four in ancient Greek literature. This is a total of fourteen terms in two languages. In the next five chapters, a long series of thirteen catastrophes, largely from Hebrew literature, will be cited and discussed. The discussion will focus on the topic of "the fire of the planets," which was electricity flowing between Mars and the Earth as described in various ancient sources amid flyby scenes.

Pliny the Elder (A.D. 23 - 79) of Rome was among the foremost historians and natural scientists of the ancient world. So intense was his interest in natural phenomena, he died while observing the eruption of Mt. Vesuvius at too close a range; he was engulfed in sulfurous fumes. Pliny wrote 79 volumes entitled *Historia Naturalis*. Pliny's works were the closest thing in the Roman Empire to an encyclopedia of science. For instance, Pliny was aware of the sphericity of the Earth, and he observed that men on the opposite side must stand with their feet pointed toward Rome.

Pliny differentiated between two different kinds of lightning. One kind, seen during his era, was associated with clouds, thunder and rain, with which all were familiar. The other kind occurred only (for him) in ancient times, and that lightning was associated with the planets. He wrote as follows.

Most men are not acquainted with a truth known to the students of science from their arduous study of the heavens, that thunderbolts are the fires of the three upper planets. ¹

The three upper planets were Mars, Jupiter and Saturn. He added:

Heavenly fire is spit forth by the planet as crackling charcoal flies from a burning log. If such a discharge falls on the Earth, it is accompanied by a very great disturbance in the air. ²

The great disturbance in the air no doubt was a shock wave, produced at the site of a celestial lightning strike where, for a fraction of a second, temperatures may have risen to a million degrees. The ensuing shock wave would have been very loud, capable of being heard for thousands of miles. It is with the greatest respect for Pliny's arduous research and study that we have entitled this 3rd chapter, "The Fire of the Planets."

Seneca of Rome (B.C. 54 -39 A.D.) added that during the ancient times (to him), there was a difference between the "lesser bolts, which struck houses and the lightning bolts of Jupiter:"^{3,4} Like Seneca, Pliny wrote that when a cosmic discharge fell from a planet to the Earth,

*... it was accompanied by a very great disturbance of the air...by birth-pangs, so to speak, of the planet in travail.*⁵

Birth-pangs, as a figure of speech, was used by more than one ancient writer to describe catastrophic crises. Birth pangs are very painful. During them, the belly heaves (like the Earth's crust) with pulsations or rhythm, and they are over in 1 or 2 days, again paralleling catastrophic experiences. Isaiah, writing just before the flyby of 701 B.C., used the same descriptive phrase.

*Howl ye; for the day of the Lord is at hand;
it shall come as a destruction from the Almighty.
Therefore shall all hands be faint,
and every man's heart shall melt:
And they shall be afraid:
PANGS AND SORROWS SHALL TAKE HOLD OF THEM;
THEY SHALL BE IN PAIN AS A WOMAN THAT TRAVAILETH:
they shall be amazed one at another;
their faces shall be as flames...
Isaiah 13:6-8 (Caps ours)*

During a celestial discharge, like during a nuclear explosion, there is a flash of light.

The Psalmist wrote in a similar vein:

*The voice of the Lord divideth the flames of fire.
The voice of the Lord shaketh the wilderness;
the Lord shaketh the wilderness of Kadesh.
The voice of the Lord maketh the hinds to calve
Psalm 29:7-9a*

It is conceivable that, during the extra gravitational and magnetic activity, a rash of births coincided with the havoc wrought by flybys.

ELECTRICITY, IO and JUPITER

Having cited Seneca's discussion of lightning bolts of Jupiter, it may be that he confused Jupiter with Mars for certain understandable reasons. Seneca wrote some 700 years after the last catastrophe, and if he got the planetary father (Zeus-pater to the Greeks) and the planetary son (Ares to the Greeks) confused, such would not be particularly surprising. He was not alone in an occasional confusion of planetary identifications.

Zeus-pater in Greek converted into Latin and became Jupiter; its "nickname" was Jove. Some brief attention needs to be paid to certain electrical aspects of Jupiter in order to better understand Earth history. We shall survey Jupiter not like the ancient star-gazers with their eyes and not like the modern astronomers with their telescopes. Rather we shall view Jove and its satellite Io in some detail as did the cameras of Voyager during its flyby in 1979.

Jupiter is the largest of the planets. It is 320 times as massive as the Earth. However it is of light consistency; its density is 1.32 compared to water which is 1.0 and to the Earth's density which is 5.52. Thus, Jove requires about 1300 times as much volume as the Earth. Jupiter is probably comprised of a super-heated metallic liquid core with a radius of perhaps 15,000 miles. Overriding that hot, metallic core is some 30,000 to 35,000 MILES (not feet) of atmosphere. Jupiter's hot and deep atmosphere is perhaps 100 million times as massive as the Earth's relatively thin and cool atmosphere. This perspective is important because it is essential to understand how much atmosphere there is on Jupiter which can be stirred by tides generated by Jupiter's four satellites. Its planetary magnetic field may be generated from the friction in its atmosphere, as will be discussed in a later chapter.

Our own moon creates minute tides in our atmosphere plus some significant oceanic tides, as well as some tides under the crust in the region known as the "mantle." The crustal tides caused by the Moon are about 3.1 inches high. Our Moon happens to be almost an identical sister to Io, Jupiter's inner-most moon, in size as well as in distance from the home planet. In fact, Io is 2270 miles in diameter compared to the Moon's diameter of 2170 miles, a difference of only 100 miles. In addition, Io orbits Jupiter at a distance 10% farther away, at 261,000 miles. Io is 21% more massive than the Moon. If Io orbited around the Earth rather than around Jupiter, at that distance the tide Io would cause on the Earth would be within 2% of the same amount as the Moon causes.

Jupiter has 4 moons, (1) Io at 261,000 miles, (2) Europa, somewhat smaller at 415,000 miles, (3) the giant Ganymede at 665,000 miles and another giant, (4) Callisto, at 1.17 million miles. Each of these satellites creates tides in Jupiter's massive atmosphere. Tides vary with the mass of the satellite but also with the inverse of the distance to the cube power. When calculated out, Jupiter's inner moon, Io, generates 80% of all of the Jovian tides, while the other three satellites, due to their farther distances, generate a combined total of 20% of those tides. Thus, tides in Jupiter's giant atmosphere are primarily due to Io, a virtual duplicate of our Moon in density, in diameter and in distance from the home planet. It must be realized that the Io-created tides in such a deep atmosphere as Jupiter has must be immense atmospheric tides indeed. So is the immense resultant friction created therein.

When Voyager made its flyby of the gigantic Jupiter (in 1979), it recorded much data concerning Jupiter's electrical field. Jupiter's field is shaped much like that of the Earth's. Jupiter's planetary magnetic field has two poles (not four or eight), a north magnetic pole and a south magnetic pole just like the Earth. Jupiter's magnetic field strength was greater than the Earth's magnetic field strength by a factor of fourteen times. Jupiter's field was found to be 4.2 Gauss compared to the Earth's field strength of .3 Gauss and to Saturn's field strength of .2 Gauss. Our initial observation is that the Earth's geomagnetic field strength ranks right up there with the giants, Jupiter and Saturn. Jupiter's mass is 320 times the Earth's, and Saturn's mass is 92 times.

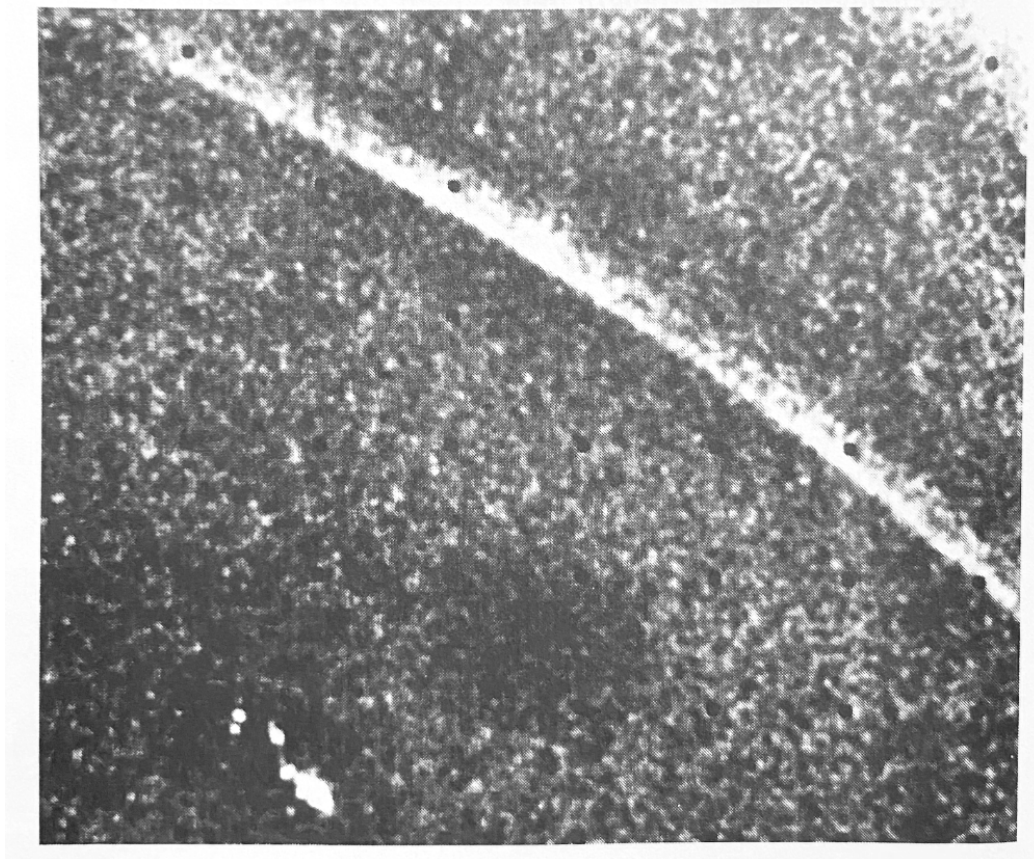
The biggest surprise (which was totally unexpected) was that there is a constant loop of photographable electricity flowing between Io and Jupiter. In technical terms, it is known as a "flux tube of ions and charged particles." Its shape is not a

bee line; its shape is a 360° loop with electricity flowing outward to Io on one side of the loop and with electricity flowing back to Jupiter (looping across a vacuum 260,000 miles long as the bee flies). A vacuum happens to be an extremely poor conductor of electricity, which makes the presence of such a lengthy, immense current flow all the more "shocking." See Figure 4 for the "local scene" and then Figure 5 for the over all picture.

The following are features of the aurora or flux tube of current flowing between Io and Jupiter. Its length is about 800,000 miles, which is 260,000 miles times Pi. It is photographically visible, and a section 13,000 miles long of this current of flowing electrons and ions was photographed by cameras on Voyager: Its brightness was found to be about 40,000 Rayleighs in the visible range and 60,000 Rayleighs in the ultra-violet range. This compares to our own planet's northern lights, auroras which are barely visible when at 1,000 Rayleighs.⁶

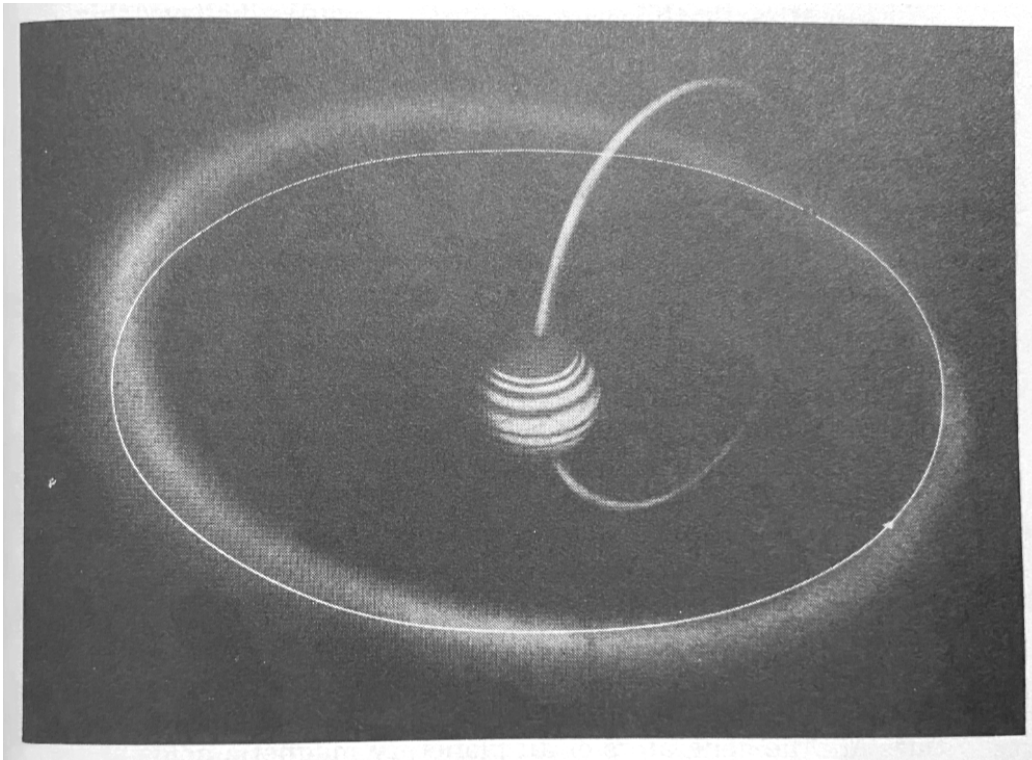
The voltage of this flux tube or aurora has been estimated at 400,000 volts.⁷ The amperage has been estimated at 5 million amps.⁸ And its wattage has been estimated at 2 quadrillion watts.⁹ All of the man-made generators of electricity on the Earth, including hydroelectric, natural gas, oil, coal, nuclear, steam, wind and what not, total less than 30 trillion watts. This single loop of Ionian-Jovian electricity is 70 times greater in power than all of the man-engineered generators combined. Man-made electricity flows in wires, usually in copper or aluminum wires. The Io-Jupiter electricity flows in no wires at all and across a terrible conductor, the vacuum of space.¹⁰

THE FLUX TUBE OF ELECTRONS AND CHARGED PARTICLES
FLOWING BETWEEN JUPITER AND ITS INNERMOST MOON "IO"



This aurora of electricity discharges on Io's crust. Its discharges are associated with vaporized silicon, sodium and sulfur. Sands containing silicas melt at about 3100 E, and the sand grains vaporize at about 4700° F. Temperatures of this range occur outside of the laboratory, in nature, only in nuclear explosions and in celestial lightning discharges. These extreme temperatures, melting and vaporizing silicons and sulfurs, are achieved from Jupiter at a distance of 260,000 miles.

IO'S TORUS AND ITS FLUX TUBE OF ELECTRONS
FLOWING TO JUPITER AND BACK



Therefore, wherever vitrified sands (glass in nature) are found on the Earth (except at Hiroshima and Nagasaki), that location is a prime suspect as having been the site of an ancient electrical discharge, one of Seneca's "bolts of Jupiter;" which was really a bolt from Mars. Perhaps Seneca reviewed the writings of Apollodorus when Apollodorus pictured bolts from "Jupiter" chasing Typhon, as has previously been cited.

We have reason to believe that there were approximately 170 close flybys of Mars in ancient times between 9900 B.C. and 701 B.C.. In addition, those flybys occurred in cycles of 54 years, like clockwork in timing. Furthermore, since there is no similar flux tube of electricity from Jupiter to Europa at 415,000 miles, our analysis is that during the Mars-Earth catastrophes, a similar flux tube of charged particles formed at a distance of 85,000 miles, the minimum, but more likely at a distance of about 125,000 miles as Mars approached the Earth. The ancient Mars flux tube, in our theory, also lasted until Mars diverged a similar 125,000 miles. Our calculations indicate Mars advanced at 27,000 m.p.h. Therefore, the flux tube (also known as

the Silver Bowstring of Apollo Shootafar in Greek and the Sword of the Lord in Hebrew literatures), formed and persisted for a time period of up to 7 or 8 hours, once or twice per century.

The astronomical world was astounded at this flux tube discovery by Voyager. (See Figures 4 and 5.) The astronomical world has not been reading Apollodorus or Hesiod, Isaiah or Amos, and it has not been perceiving the electrical aspect of ancient Mars catastrophes. Most, if not all astronomers, now think the Ionian-Jovian flux tube is the only one that exists, or has ever existed in our solar system. We suggest there have been two other flux tubes to consider. Secondly, there was the ancient Mars-Earth series of flux tubes. We believe this phenomenon occurred about 170 times across nine millennia, ending in the 8th century B.C.

Thirdly, there is the scene of Neptune and its innermost satellite, Triton. Voyager will photograph this scenery in February, 1989. The planet Neptune is 17 times as massive as the Earth, and therefore it has more material wherein tides might be caused. Its inner satellite, Triton, is the largest in the solar system. Triton is clearly bigger than Mercury. It probably has a diameter of 4,000 miles, which compares to the Moon's 2,200 miles and the Martian diameter of 4,200 miles. (The Earth's is 7,900 miles.) Triton could be even bigger than Mars. Even as Io is the twin sister to the Moon in terms of dimensions, so Triton can be considered the twin brother of Mars in size and in mass, although it is not a planet.

The Moon orbits at 239,000 miles. Io orbits at 261,000 miles. The giant satellite, Triton, orbits at a distance of only 220,000 miles from Neptune. Triton has 20 times the tide-raising ability as compared to Io or the Moon. Neptune is $17\frac{1}{4}$ times as massive as the Earth. Thus, Triton should cause massive tides within the large planet, Neptune. We believe that tides are the generators of all planetary magnetic fields and those of the Sun (the sunspots) in addition. Our calculations, if correct, predict that the Neptune-Triton scene will furnish a third flux tube of planetary electricity, and furthermore, its strength will be found in the range of 2.8 to 2.9 Gauss, about 65% as strong as the Ionian-Jovian flux tube. Predictability is one trait of solid scientific theory. Our Mars-Earth catastrophic theory, and its accompanying geomagnetic theory, makes such a prediction. Verification or contradiction will occur within a half year as Voyager will pass over Neptune and Triton in February, 1989.

We are now mentally prepared to understand and to recognize in ancient literature occasions when celestial lightning discharged on the Earth's crust, amid mankind, amid frightful geomagnetic conditions when one planetary field passed through that of the other planet. Celestial blasts or discharges occurred, creating momentary temperatures perhaps ranging up to 1 million degrees, which in turn created lethal shock waves, capable of being heard half way around the Earth.

Mars flybys apparently tortured the Earth (and vice versa) from about 9900 B.C. to 701 B.C. We have no significant historical records from the pre-flood era. Noah's Flood can be dated by catastrophic cyclicism at October 24, 2484 B.C., and it can be dated by Biblical literature and Josephus at the 24th or more likely the 25th century B.C. In 2484 B.C., Saturn was supporting and adding to the Jovian influence in narrowing the orbit of Mars and thus narrowing the gap and intensifying the flyby cataclysm. Noah's Flood will be the first of 13 examples to be cited and analyzed in the next four and a half chapters.

Just before beginning our discussion of a series of 13 Mars-Earth catastrophes, we are presenting Table I which will categorize and classify various specifics of each flyby. In Table I, names have been given to each of the 13 catastrophes, twelve from the Old Testament and one from Greek literature of the Heroic Age. From our cyclic analysis, dates are also given and are to be considered as firm and as faithful as are orbits in our era.

**TABLE I
COMPARISON OF CATASTROPHES**

CATASTROPHE DISCUSSED	DATE B.C.	HEMISPHERE MOST AFFECTED	POSITION OF JUPITER	POSITION OF SATURN
1. Noachian Flood	Oct. 2484	Eastern	Cancer #	Capricorn
2. Tower of Babel	Oct. 1944	Eastern	Cancer #	Capricorn
3. Sodom-Gomorrah	Mar. 1889	Western	Capricorn	
4. Exodus Catastr.	Mar. 1447	Western	Capricorn	
5. Long D. Joshua	Oct. 1404	Eastern	Cancer#	Capricorn
6. Siser's Cel. Cent.C.	Oct. 1296	Eastern	Cancer	
7. Gideon's M. Bash	Mar. 1241	Western	Capricorn*	Cancer
8. Philistine Phalanx	Oct. 1080	Eastern	Cancer	
9. Davidic Catas.	Oct. 972	Eastern	Cancer	
10. M.C. Barbecue	Oct. 864	Eastern	Cancer#	Capricorn
11. Trojan Shores	Mar. 809	Western	Capricorn	
12. Jonah-Amos-Joel	Oct. 756	Eastern	Cancer	
13. L.N. Sennacherib	Mar. 701	Eastern	Capricorn*	Cancer

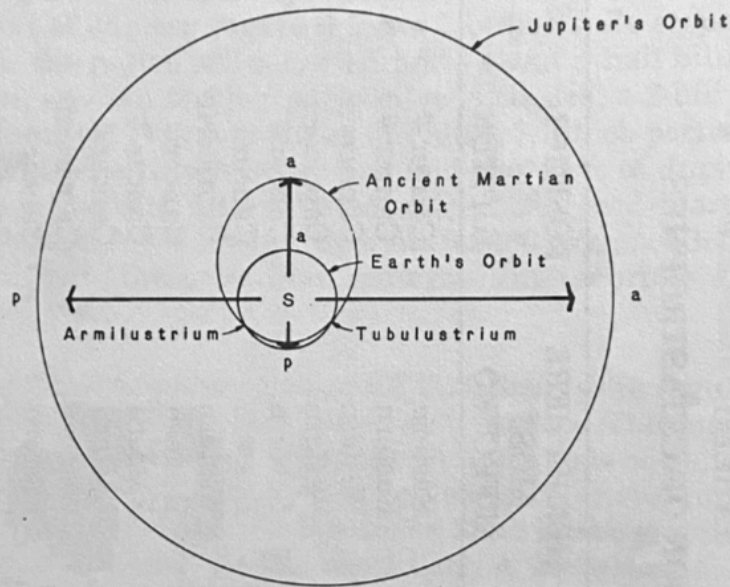
Denotes October Case Mega-catastrophes, * Denotes March Case Mega-catastrophes

Table-1

The first 169 of the 170 flybys in each case was a sunward side flyby. This has been learned from a computer program where the endurance and behavior of a variety of orbits were assessed. The final flyby, the 170th, was a night-side or nocturnal flyby, when Mars was actually passing over the Earth on the outside, not between the Sun and the Earth.

The position of Jupiter was always significant; "Jove" was the leader of the celestial ensemble. It maintained Mars in the catastrophic orbit until the last flyby. Figure 1 in the first chapter gave the general relationship of the catastrophic orbits of Mars and the Earth to each other. But, a broader view is needed. Figure 6 illustrates how the Mars-Earth system related to the orbit of Jupiter. Figure 6 has a 1-billion mile scope of view since the radius of Jupiter's orbit is about a half billion miles. But, an even broader perspective is needed, a 2 billion mile perspective. This is provided in Figure 7, which portrays how the Mars-Earth orbital system and the orbit of Jupiter related to the orbit of Saturn. These orbits, like a good quartet, were all in harmony. Thirty earth orbits (of 360 days, not 365¼) equalled fifteen Mars orbits, two and a half Jupiter orbits, and one Saturn orbit.

ZONE OF CANCER



a - Orbital Aphelion
 p - Orbital Perihelion
 ←→ Orbital Semi-major Axis
 (Line of Apsides)
 S - Sun

THE ANCIENT RESONANCE SYSTEM OF MARS AND THE EARTH IN RELATIONSHIP TO THE ORBIT OF JUPITER

The Lines of Apsides of the orbits of Mars and Earth Were Parallel
 The Lines of Apsides of Mars and Earth Both Were Perpendicular to Jupiter's Orbital Line of Apsides
 Jupiter Was the Orchestral Leader of the Celestial Symphony

Figure-6

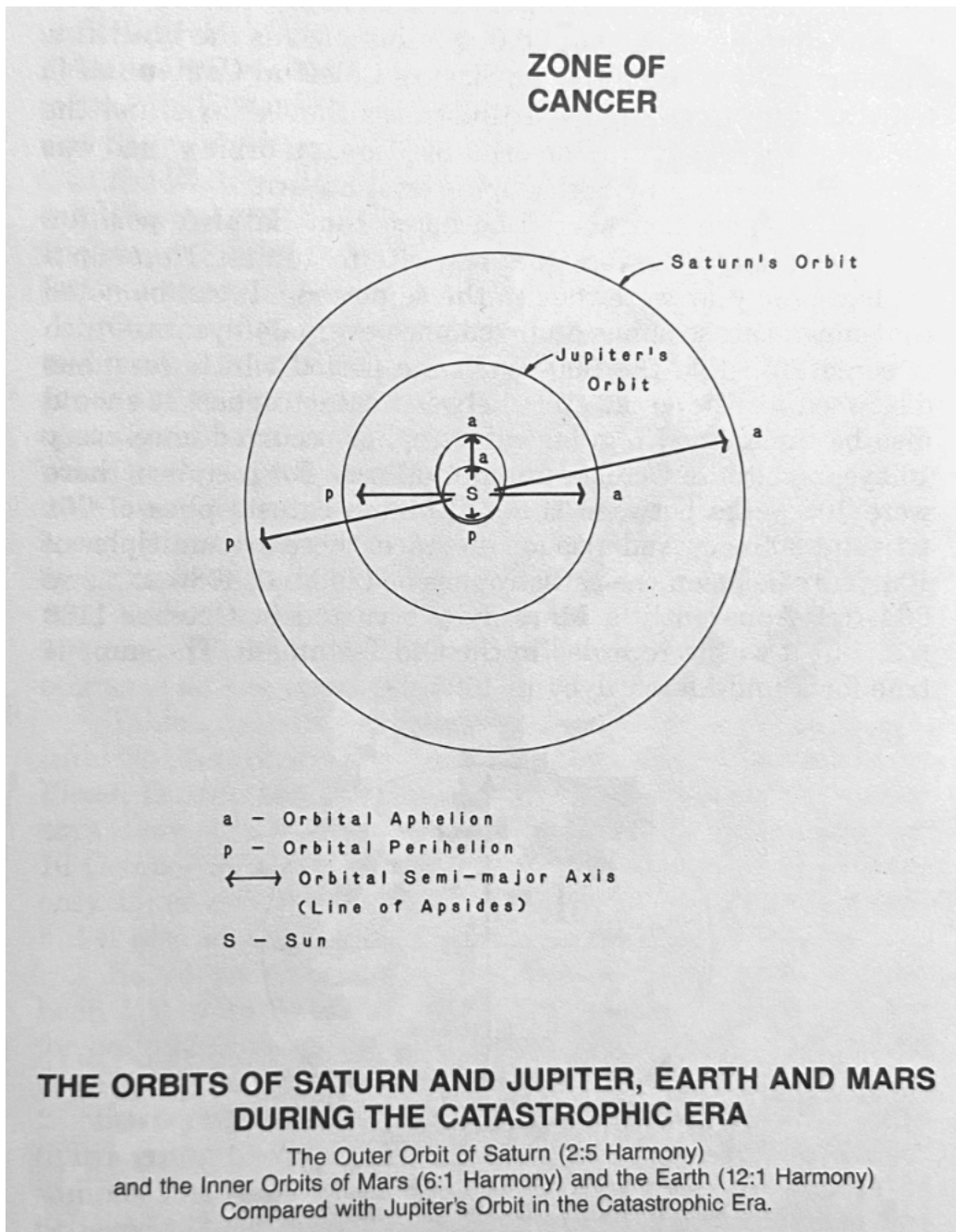


Figure-7

From Table I, it should be noted that there were regular catastrophes and there were mega-catastrophes. The mega-catastrophes occurred when Jupiter was in the zone of Cancer and when Saturn was 180° opposite, in Capricorn, or vice versa.

What was the proportion of influence on Mars by the gravities of Jupiter and Saturn? As discussed later, it was about 4½:1 in favor of Jupiter.

Saturn in either Cancer or Capricorn was 800 million miles distant from the Earth, and it was 700 million miles distant from Mars. How is it possible that Saturn could be a factor? Figure 8 illustrates the "a" axis, the long axis of an ellipse, and the "b" axis, the short axis. The short axis was about 15,000 miles at the closest to our estimate of 60,000 or perhaps 70,000 miles at the most distant. The difference, while mathematically subtle, was also of enormous effect. If Saturn could narrow the orbit of Mars by 25,000 miles, which was one part in ten thousand, it would be the difference between a flyby at 25,000 miles versus 50,000. See Figure 13. Since we know that the intensities of electromagnetic induction and tides on spheres both vary with the cube of the distance, a flyby at 25,000 miles was 8 times intense as one at 50,000 miles. More specifically, a flyby at 15,000 miles (like our estimate for Noah's Flood) was 8 times as intense as a flyby at 30,000 miles (like the Long Day of Joshua), and it was 64 times as intense as one at 60,000 miles such as the Philistine Phalanx flyby of 1080 B.C. or Sisera's Celestial Centennial (a flyby of 1296 B.C.). Figure 8 illustrates the "a" axis and the "B" axis of the catastrophic orbit of Mars, an orbit which was subject to warping by both Jupiter and Saturn.

From Table I, it should be noted that Saturn's position was noted only if it were 180° opposite to Jupiter. Never in a catastrophic year were they in the same zone. It can be noted that mega-catastrophes occurred once every 540 years, which is something like the 500-year time period which Josephus discussed for the great cycle between catastrophes. It should also be understood regular catastrophes occurred once every 108 years, both in October and mid-March. For instance, there were 108 years between the mid-March catastrophes of 701 B.C. and 809 B.C. And also for instance, there are multiples of 108 years between the catastrophes of 1296 B.C, 1080 B.C. and 864 B.C. Apparently a Mars flyby occurred in October 1188 B.C., but it wasn't recorded in the Old Testament. The same is true for a mid-March flyby in 1025 B.C.

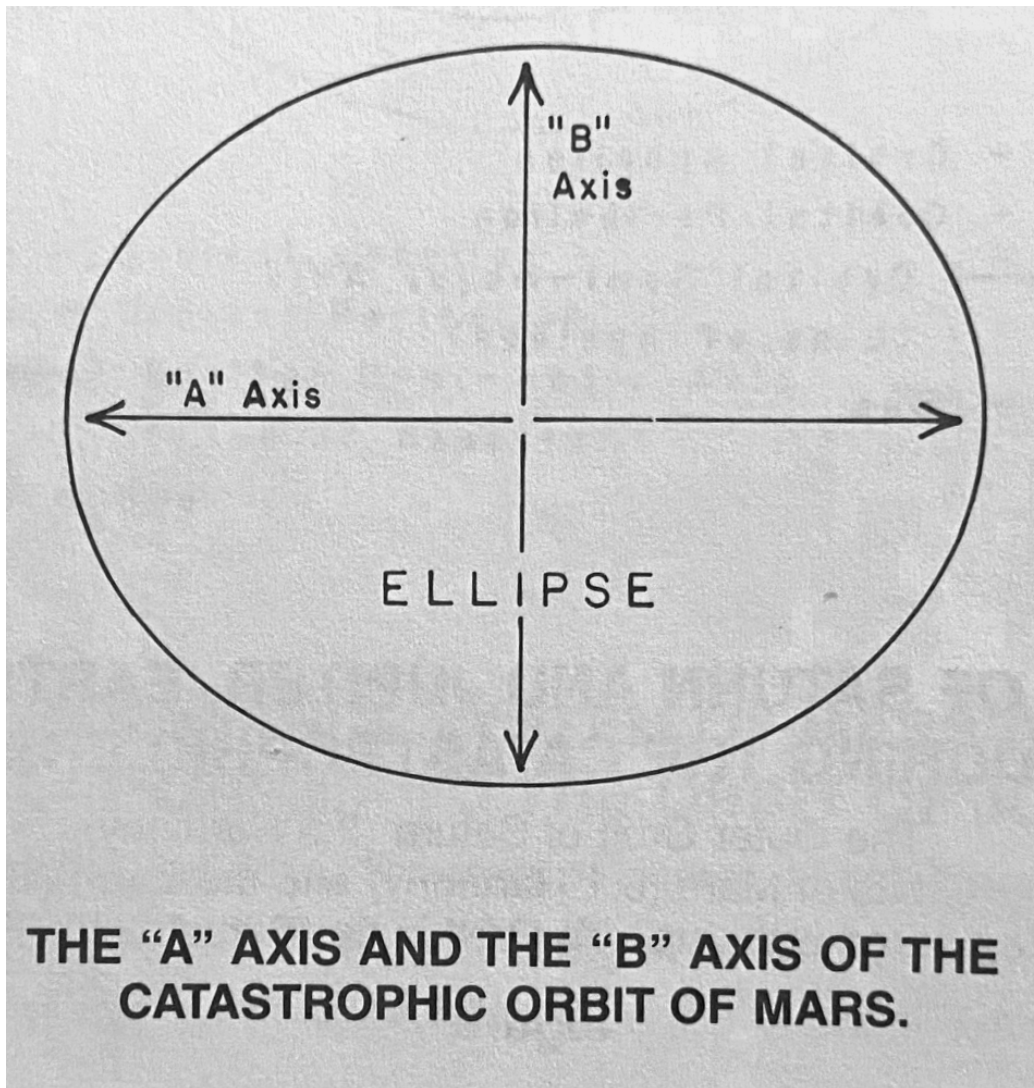


Figure-8

There is another perspective. Both the flux tube of electrons and charged particles and the magneto-tail of the magnetic field of Mars raked the sunward side of the Earth on each flyby but did not rake the opposite or dark side. In every case in the Old Testament where an October flyby is mentioned, it was in the daytime and usually in late morning. This means that the Eastern Hemisphere suffered far worse than the Western Hemisphere. However, in the mid-March flybys, it was the opposite situation; the Western Hemisphere suffered particularly on those occasions.

One more perspective needs to be portrayed before we go to a specific analysis of Noah's Flood. Based on paleomagnetic reversals, there seem to have been about 170 of them, creating 85 magnetic north poles in Canada and 85 magnetic north poles in the region of Antarctica. We believe each Mars flyby, once every 54 years (counting both October and mid-March cases), created a paleomagnetic polarity reversal. This means by extrapolation that the Mars-Earth Wars" began about 9881 B.C., since they ended in 701 B.C. (54 times 170 is 9180 plus 701 produces 9881 B.C.) Accordingly, around 10,000 B.C. is our estimate for the onset of the Mars-Earth catastrophes.

Table I describes catastrophes based only on extant literature. No literature exists describing catastrophes before Noah's Flood. During the 1783 years sketched on Table I, our model says there should have been 16 mid-March flybys and another 16 October flybys, a total of 32. We find literature describing only 13, or about 40%. This includes only one of the first ten, but it also includes the final four and five of the last six.

Based on paleomagnetic reversals, there seem to have been 170 or so flybys, of which the time in Table I accounts for only 1783 years out of a total of 9200 years. This is less than 20%. And 20% of 40% is only 8 %. The thirteen catastrophes about to be described represent about 8% of all of those flybys going back to 9900 B.C. Yet, they are a representative sample. The Noah Flood flyby at 15,000 miles (core to core) is believed to have been the closest, but there were probably five or six that were nearly as close in the pre-historical era.

Our combination of astronomical analysis and literary analysis indicates that Mars varied up to 3 or 4 hours in its flyby timing from orbit to orbit and from cycle to cycle. The great majority of the mid-March flybys are noted to have occurred during the middle of the night, roughly the midnight hour, as reported in Old Testament eye witness cases. By the same token, the great majority of the late-October flybys will be noted to have occurred during the mid-morning, Palestine time, plus or minus a very few hours. This perspective suggests that the mid-March flybys raked (electrically) the Western Hemisphere, the Americas, while the late-October flybys raked the Eastern Hemisphere, including Eurasia.

Our dating of The Noachian Flood is October 24 (the 17th day of the 2nd month of the Hebrew civil calendar). This was close to "Halloween Time" for the ancient Celts of Northwestern Europe, who also had traditions of astronomical catastrophism. The year of The Noachian Flood is considered to be 2484 B.C. This is based on analysis from the Book of Genesis, from the Works of Josephus, and from cyclic analysis. The flyby of 2484 B.C. was, as we shall see, a mega-catastrophe, with Saturn appearing ominously in Capricorn, further shrinking the "b" axis of the Martian orbit.

EXAMPLE #1 - October 24, 2484 B.C. UT-NAPISHTIM'S FLOOD

Accounts of the Flood of Noah occur in many ancient cultures across Eurasia. In Sanskrit, the ark landed in the Himalaya Mountains, and its builder was one "Manu." If "ma" is a Sanskrit adjective for great" or "large" as it is in Latin and in Hebrew, "Manu" breaks down into "the great Noah."

In the latter part of the 19th century, excavations were made at various sites throughout the Middle East by German and English archaeologists. At Nineveh was found a library of clay tables, known as Assurbanipal's library. The tablet script was first deciphered and read by George Smith, an archeological amateur, a banknote engraver by profession, who was self-taught in Assyriology and in cuneiform characters. In his translating of the clay tablets, Smith came upon and translated a story in the Assyrian language recounting the flood, the ark and one Ut-Napishtim who built the ark and who (with his family) survived the watery inundation of that ancient world. The "Na" in Ut-Napishtim once again may be the core word for Noah, after the prefixes and suffixes are factored out. This is conjecture.

In the Genesis or Biblical account of Noah's Flood, we find an occasion of a massive rain, coupled with an occasion of immense tides, the "The same day were all the fountains of the great deep broken up." See Genesis 7:11. These were massive tides of oceanic dimension, sweeping inland (and northward) from the Indian Ocean. The calendric dating is given according to the old Hebrew civil calendar, on the 17th day of the 2nd month. That calendar had its New Years day on September 7, and thus the day of The Flood was October 24.

In the Genesis account, there is no mention about approaching stars. However, such celestial discussion does exist in Talmudic material. This material may have been incorporated into Judaica during the period of their Babylonian exile, and if so,

this description may have Neo-Babylonian roots.

*The flood was produced by the union of the male waters, which are above the firmament, and the female waters issuing from the earth. The upper waters rushed through the space left when GOD REMOVED TWO STARS out of the constellation Pleiades ... There were other changes among the celestial spheres during the year of the flood.
(Our caps.)¹¹*

As previously mentioned, the second month in the ancient Hebrew civil calendar was known as "Marcheswan" or the month of Mars.

When one views Noah's Flood as an astronomical catastrophe, additional information, very interesting in detail, occurs in the clay tablets from Assurbanipal's library, translated by Smith. This part is known as the *Epic of Gilgamesh*. Gilgamesh seems to have been one of the earliest monarchs of the land, of a city state known as Erech. As the story is told, Gilgamesh is brought in contact with Ut-Napishtim, who was saved along with his family from a destructive flood by his miraculous escape by boat. We suppose that Gilgamesh was a fifth to seventh generation descendent of Noah. It is to be noted that the story of The Flood in the Book of Genesis is in the third person singular; however, in the Epic of Gilgamesh the story is told in the first person singular, as if it were from the diary or from the lips of Noah himself.

Several things should be noted in the Epic of Gilgamesh in addition to the information given in the Genesis account.

The account is as follows.

*Whatever I had put aboard it.
Whatever silver I had put aboard it.
Whatever gold I had put aboard it.
Whatever living creatures I had put aboard it.
I made all my family and relatives board the ship.
The domesticated animals and the wild.
THE FIXED TIME ARRIVED...
With the first glow of dawn, a black cloud rose*

up from the horizon. (Note from the east)
Inside it the storm-god thunders...
The god of the underworld tears out the posts of the dam.
The warrior-god leads the waters on. (Perhaps the rain)
The gods raise THE TORCHES,
SETTING THE LAND ON FIRE WITH THEIR BLAZE.
(Perhaps the flux tube and electricity)
The fearful silence of the storm-god reached the heavens,
And turned everything bright to darkness.
[...] of the land shattered like a pot.
FOR ONE DAY THE TEMPEST [raged]. It blew hard...
Like a battle the divine might overtook the people.

([...] designates obliterated section of the clay tablet)
(Parentheses and Caps ours) ¹²

One thing to note is that the catastrophe arrived on schedule. "The fixed time arrived." It is our perception that the fixed time was October 24, on the 108th anniversary of the previous flyby. It is our additional perception that Noah knew something of the cyclicism of catastrophes. After all, (1) the large boat was well-built and it was complete, (2) the large boat was stocked with sufficient provisions for a long, hard journey, and (3) the fixed time arrived. Noah apparently was not taken by surprise.

A second thing to note is that the "warrior god" (Mars) approached from the east, from the horizon at the hour of dawn. Previously it was mentioned that Apollodorus had the picture geographically correct. Typhon swooped from east to west, and such is entirely logical since the Earth's spin direction is from west to east. And after first being sighted, it (the planetary warrior god) arrived quickly. As previously mentioned, our geographical/astronomical analysis is that the subpoint directly under Mars advanced 1700 m.p.h., partly due to the Earth's speed of rotation and partly due to the velocity of Mars.

A third thing to note is that the land was set ablaze, as if there were widespread lightning strikes. It was achieved by the celestial torches of the warrior-god. If there were no understanding of the Ionian-Jovian flux tube, this portrait would be difficult to understand. However, in the light of that flux tube, this picture of the region being set on fire is consistent. Usually ice and fire do not mix; however on

October 24, 2484 B.C., they did mix, and on a hemispheric scale. Thus, it would seem that "the present is the key to the past" is a geological motto containing truth limited only to the last 2700 years of Earth history.

Fourthly, observe that the "god of the underworld" tore out the posts of the dam. We know that there was gravitational conflict. Sea level suddenly was no longer stable. Our theory is that the Indian Ocean, presently containing 75 million cubic miles of water, rose up in tides 1 to 1½ miles deep broadly across Southern Eurasia. Perhaps 4% to 6% of that water temporarily rushed in and over the landforms. "The warrior god leads the waters on." This is precisely the picture of a passover planet uplifting the oceans.

Fifthly, note that the action all occurred in a one-day tempest. In a Mars flyby diagram to be presented in Chapter V, it will be seen that Mars advanced some 500,000 miles between 1 a.m. and 9 p.m. according to our analysis of celestial mechanics and of this particular case. One day was more than enough for Mars to make a flyby from out beyond the Moon's orbit, past the Earth, and out again beyond the Moon's orbit.

Sixthly, note that the land shattered "like a pot." Our analysis of subcrustal tides indicates that if Mars were as close as 14,500 miles, there would be subcrustal tides in the mantle, uplifting and deforming the crust in the range of 10,500 feet or two miles. Mountain systems (in a swath-like arrangement or in a flyby pattern) were uplifted that day, including the entire Alpine-Himalayan cycle, some 12,500 miles long. This cycle of deformation shall be discussed in geographical detail in a future chapter. See also Chapter VII.

Seventhly, note the general observation that there was little time to lose, once the black cloud (of Mars) was seen in the first glow of dawn. The frightening sight of Mars occurred, we sense, at around dawn. There had been a sleepless night, the animals having earlier boarded the Ark in whatever numbers. At least by 9:00 and perhaps by 8:30 a.m., the Ark was afloat. There were 2 or 2½ hours for all final activities, including loading the gold, silver, and other family valuables and bolting and sealing the door tight. There was no time available for seeking out or persuading the doubting, the reluctant, or the slow.

Eighthly, note that the account says the wind suddenly began blowing hard. The Genesis account says the same thing. Strong winds usually are a result of a sudden and sharp change in temperature. In climatology, temperature differentials (on a global scale in our age) cause the planetary wind systems. We think that late in this day, a deep subzero freeze began to descend over the magnetic polar regions. Ice particles the size of flour, at temperatures of -300°E and -250°F began sifting down the spiral vortex over each magnetic pole.

For a parallel account on this theory of cold, we cite Ginzberg and Talmudic material.

According to BR 32.11, and the parallels cited by Theodor, Noah suffered very much from the cold, while the same source, 9 and Tehillim 1, 11, state that the ark, despite the mass of water, rested quietly as a ship in port.¹³

A sudden hot rain seems to have been followed by a deep cold front. Mars also received a sudden spray of juvenile ice on this day, as was discussed in Chapter I. Thus were formed the dry river beds on that planet, now so distant.

It is our conclusion that this was the closest of some 170 cyclic flybys. The oceanic tides were the highest and deepest. Silts, sands, debris and other precipitates were gathered.

Strata is seldom found over the ocean bottoms, but is often found across the continents. Also, as flowing water doubles in its velocity, its silt-carrying capacity increases to the power of 6; it carries 64 times as much silt. By the same token, when those oceanic silt-laden tides began to slow down over the continents, they began to drop their contaminants and precipitates very rapidly, as in hours, less often in days.

Many other kinds of things occurred during the day of The Flood or during its aftermath. A glacial ice dump over the two magnetic poles is one affect. Crustal deformation is another. The formation of strata, often rich in fossils, is a third aspect. A recharge of the geomagnetic field is a fourth aspect. A fifth change was a change in the location of the two spin axis poles, including a relocating of the equator, possibly as much as 3,000 miles. The Earth's spin axis precessed as Mars put a torque on it. Sixthly, there is indication that there was a crustal slippage, when

the thin crust wanted briefly to follow Mars in an easterly direction in direct conflict to the normal rotational direction of the underlying mantle. Seventhly, there is abundant indication that there was a magnetic polarity reversal on this day, leaving the Magnetic North Pole on the ledge of Antarctica, not in Canada. To develop these aspects of The Flood Catastrophe is important, but they shall be discussed in more detail in later chapters.

Our general points on Noah's Flood bear reiterating. First, as recorded by the author of Gilgamesh and according to our theory of cycles, The Flood event happened on schedule. Hence, Noah, his boat, his family, the animals and the food provisions were ready. Mars approached from space, but also from an easterly direction as seen by an Earth viewer. Usually, fire and ice don't mix; on that day they did. The fire was by celestial lightning. The ice was from the icy satellite of Mars which fragmented and sprayed both planets simultaneously. Loud shock waves were heard, and the Indian Ocean overflowed the building site of the Ark.

After that destructive day, very few people were left on the Earth. The few survivors gathered and related stories of the day of the flood and their survival. Versions began to change slightly. Pictographic scripts were developed, which eventually gave way to the more efficient alphabetic scripts. The Flood Story survived more often in folklore than in written form. Third, fourth and fifth generation descendants of Noah began to worship the planets, Mars above all, but that also extended to Jupiter, Saturn, Venus and even to Mercury.

Some of the ancients may have noted that Jupiter was in Cancer every time there was an October flyby. Later, others calculated that there was a Mars flyby every 9th occasion that Jupiter passed through Cancer or every 108 years. Some believed they saw "eyes" and eyelids" of Mars. Others saw spiral hair. Yet others saw flaming tongues. And others saw two celestial steeds, faster than horses, as the celestial mode of transportation. Those who saw eyes and hair as part of the Mars scenery also began to attribute some measure of intelligence to the red planet. Thus opened the era of astrologers, stargazers, zodiacs, ziggurats, planet deities, celestial horses, mathematicians, prophets and seers. This culture (interested in the movements of the planets) was well along in development by the 540th anniversary of The Flood. Talmudic information indicates that astrology was rampant by 2000 B.C., and the zodiac, the 12-zoned map of the fixed stars, was among the most ancient of cultural ideas.

Example #2 - October 24, 1944 B.c. THE TOWER OF BABEL DISCHARGE

As just mentioned, it was the day of star gazers and seers. Zodiacs were in vogue, as was the 360° circle and the 360-day year. Planets were being feared, revered, studied and worshipped. It was Nimrod's heyday. In modern terms, Nimrod had become the dictator of the central Mesopotamian Valley. He appreciated astrological charts and fortune tellers, it would seem. He also was fond of ziggurats, temples which were massive buildings that were circular but had a spiral, terraced walkway to the top. Some of these were 200 feet in diameter, and over 200 feet high.

Nimrod established a state construction project requiring some 20 or 30 years, including forced or drafted labor in large volumes. The building project has since become known as the Tower of Babel. It is treated very briefly in Genesis. However, in other literature, the Tower of Babel and its subsequent fate is a topic for more dramatic discussion.

The Sibyl also makes mention of this tower, and the confusion of the language, when she says thus: "When all men were of one language, some of them built a high tower, as if they would thereby ascend up to heaven; but the gods SENT STORMS OF WIND AND OVERTHREW THE TOWER.

*(Our caps.)*¹⁴

Louis Ginzberg, an editor of rabbinical source materials, adds some further information, possibly of Neo-Babylonian origin.

*As for the unfinished tower, a part sank into the Earth, and another part was consumed by fire; only one-third of it remained standing.*¹⁵

The Tower of Babel was a "circular pyramid" of a certain sort. How high was it? According to C. W. Ceram, it was over 290 feet high, towering above the flat Tigris-Euphrates plain in its latter stages.¹⁶ By the time the catastrophe arrived, it was yet unfinished. Perhaps the blueprints of the job were too optimistic. Perhaps there were bottlenecks in supplies or labor.

But when the year 1944 B.C. arrived, things were not exactly the same as on the previous flyby. Jupiter was once again in Cancer. Mars was once again coming in. But this time, Saturn was 180° opposite to Jupiter, in Capricorn, and it also was

extending the ends and compressing the sides of the orbit of Mars, adding perhaps 20% to 25% to the influence of Jupiter. That was not sweet news. Mars approached this time perhaps as close as 25,000 or 30,000 miles.

The Tower of Babel was an elevated promontory arising amid a flat, wide floodplain. It was perhaps between 280 and 290 feet high at that point in time. There may have been a rush among the construction crews to complete it before the fixed time arrived. But they couldn't. Possibly they left some iron bracing laying around. Perhaps they were using large numbers of iron ladders and scaffolding. The higher the Tower rose, the more likely it was to attract a celestial discharge. We do know that it was nearly complete according to ancient accounts.

ZAP. One million volt zap. Ten million ampere zap. The celestial lightning struck. It produced enough power to vaporize a part of the Tower. The explosion produced massive shock waves which worked in consort with earthquakes to topple part of the structure. With Mars at 30,000 miles, subcrustal tides, shook the crust like a blanket, such shakings would have been 1300 feet (not inches) high, at least in the central zone directly under the subpoint of Mars. Earthquakes of this dimension would spin a marker on the Richter scale around two or three times. Certainly, the Tower of Nimrod had been a breath-taking architectural project from its inception. Its silhouette began to slice the evening sky line a sparkling gem. As it turned out, a celestial bomb shelter would have been a better architectural project and far simpler.

EXAMPLE # 3 - March 20/21, 1877 B.C. THE SODOM - GOMORRAH CATASTROPHE ¹⁷

Very little is said about this catastrophe in the Book of Genesis. However these two cities were located in a geological rift valley which extends from Syria in the north, through the Jordan Valley, the Red Sea, the Ethiopian highlands, through Kenya, Tanganyika (Tanzania) and Malawi, and into Mozambique. The Great Rift Valley extends on a north-south axis for 50° latitude, a distance of 3300 miles.

Our understanding of the origin of this Great Rift Valley relates to The Flood. We suspect that the location of the North Pole to the South Pole spin axis was relocated about 3,000 miles. If so, the equatorial bulge was also necessarily

relocated, as were the two polar flat spots. Today the equatorial diameter of the Earth is 27 miles longer than the polar diameter. This greater distance is due to centrifugal force derived from the Earth's rotation.

One logical response of the Earth to a new bulge zone would be two or three rifts, or tears, perpendicular to the new equator. This would allow for expansion for the new bulge location. Two such tears, or rifts, are The Great Rift Valley just described and the Mid-Atlantic Rift, which is also perpendicular to the equator and straddles the equator much like The Great Rift Valley.

According to our model, there were October flybys in 2376 B.C., 2264 B., 2156 B.C. and 2048 B., each preceding the Tower of Babel Discharge. The Genesis account cites an apparent rifting during that early post-flood era.

And unto Eber were born two sons: the name of one was Peleg; for in his days was the earth divided...
Genesis 10:25.

Peleg is recorded in Genesis as one of those among the fifth generation after The Flood. Our estimate for this splitting of the crust, or rifting, is 2264 B.C., two cycles after The Flood. Once formed, like a small rip in a garment, the rift widened and lengthened with the next several close, stressful flybys, including the Tower of Babel Discharge of 1944 B.C. There is evidence on the sides of the Dead Sea that, formerly, its ancient shoreline had several higher levels than the current level, almost 1300 feet below sea level.

This geological setting is important because the cities of Sodom and Gomorrah are recorded as having been founded 52 years before their destruction, which implies also 2 years after the Tower of Babel Discharge. It would seem that the rift valley was widened and deepened on that occasion, among others.

CALENDARIC TIMING. The timing of the catastrophe is given by Ginzberg in his compendium of Talmudic material.

*The destruction of the cities of the plain took place at dawn of the 16th day of Nisan ...*¹⁸

This is close enough to the date of Nisan 13/14 (March 20/21) to qualify as being the same place in the orbit where other catastrophes overtook the Earth.

CYCLIC TIMING. With respect to cyclicism, it is of interest to note that there is recorded a 52-year span of time between the Tower of Babel Discharge and the Sodom-Gomorrah Catastrophe. We think that the time span of 52 years is exclusive of the 2 years of the catastrophes themselves. When writing about the ill-fated cities, the material Ginzberg cites points out that,

For fifty-two years God had warned the godless; He had made mountains to quake and tremble...¹⁹

ANGELIC TIMING. Angels (of the destructive type), it was pointed out earlier, were associated with three other mid-March catastrophes. Those were The Exodus Catastrophe (1447 B.C.), the Gideon Midnight Bash (1241 B.C.), and the Sennacherib-Isaiah Catastrophe (701 B.C.). This is yet a fourth case where destructive angels are perceived among chaotic, celestial and crustal crises.

As a rule, angels proclaim their errand with the swiftness of lightning, but these were angels of mercy, and they hesitated to execute their work of destruction. ... With nightfall, the fate of Sodom was sealed irrevocably, and the angels arrived there.²⁰

At the same time the rain that was streaming down upon the two cities was changed into brimstone.²¹

Whether the brimstone was volcanic ash or whether it was meteoritic is not mentioned, but we surmise it was volcanic. There are numerous indications of basaltic outflows on the edges and ledges of The Great Rift Valley, both in Palestine and elsewhere. Though irrigation water for agricultural purposes had been abundant and the warm, frost-free climate in the valley was also outstanding, but the geological instability of the region was a greater negative than were the total of the two positive aspects of that location.

EXAMPLE # 4 - March 20/21 1447 B.C. THE EXODUS CATASTROPHE

This catastrophe occurred to the Earth, and to Egypt during the midnight hour, approximately. According to our model, Mars made one of some 169 sequential sunward side flybys. The part of the Earth which faced Mars and experienced the bulk of the gravitational and geomagnetic chaos was, in this case, the Western Hemisphere, the Americas and the Pacific Ocean.

It so happens that when any planetary body experiences tides, whether oceanic or subcrustal, that body becomes "egg-shaped." A geometrical adjective is "oblate." There are two bulges. One faces the Moon, or in this case Mars. The other is 180° directly opposite, and it is a smaller bulge (since it is farther away.) This night, the lesser of the two bulges of the Earth contained the Middle East. In fact, most of the March flybys were timed like this one, even as most of the October flybys were mid-morning events. This rather intense flyby included various features.

1 - CALENDARIC REFORM. Up to this time, the Hebrews had a calendar, a civil calendar, in which September 7 was the New Year Day and the new moon. September 21, the vernal equinox, was the middle day of the first month. The October flyby was the 17th day of the second month, just as it was recorded for the timing of The Noachian Flood. However, on an occasion following this flyby, Moses reorganized the calendar. The reorganized calendar is called the "religious" calendar.

*This month shall be unto you the beginning of months: it shall be the first month of the year to you.
Exodus 12:2*

Calendaric reform was enacted following the Exodus flyby.

2 - EARTHQUAKES. Earthquakes were devastating to the land of Egypt on this night. The casualty list must have been appalling. The Book of Exodus indicates that "the first born" of every family perished. This was the tenth and most lethal of all of the plagues. Velikovsky, a Jewish catastrophist, interpreted the text as follows.

In Ages in Chaos (my reconstruction of ancient history), I shall show that "first-born" (bkhor) in the text of the plague is a corruption of "chosen" (bchor). All the flower of Egypt succumbed in the catastrophe. ²²

The flexing of the Earth's crust is also reported in one of the Exodus psalms, Psalm 114.

*The sea saw it, and fled: Jordan was driven back. THE MOUNTAINS SKIPPED
LIKE RAMS, and the little hills like lambs.
Psalm 114:3-4 (Our caps.)*

Most evolutionists and fiat creationists will consider this language to be poetic and figurative. If Mars were on a flyby 30,000 miles distant from Egypt, the tides in the mantle, upthrusting onto the bottom of the crust, would have been around 600 feet. The crust is considered to have flexibility similar in degree to a leather belt.

3 - THE APT TERM "PASSOVER." This occasion in mid-March of 1447 B.C. was the origin of the term "passover." What passed over? It was midnight in Egypt. The issue is not what passed over Egypt. The issue is what passed over the Earth. It was Mars on the opposite side, the sunward side. Mars (and its satellites) was not seen until late the next afternoon, toward dusk.

4 - THE PILLAR OF FIRE BY NIGHT AND THE CLOUD BY DAY.

*And the angel of God, which went before the camp of Israel, removed and went behind them; and the pillar of the cloud went from before their face, and stood behind them.
Ex. 14:19*

In the geometry of a mid-March flyby, sunward side case, the approaching Mars is best viewed in the early evening hours, between 5 o'clock p.m. and 9 o'clock p.m. On the other hand, when retreating from the Earth after March 21, the diverging Mars was best observed in the hours 5 o'clock a.m. to 8 or 9 o'clock a.m. The angel of God and the pillar or cloud of course moved together, for they were one. The shift in position from the evening sighting to early morning sighting of Mars is what this passage concerns. Such an observation presupposes a person must have been facing westerly.

5 - RENEWED VOLCANISM. In chapter II, the renewed volcanism of Mt. Sinai was reviewed. Another aspect of renewed volcanism needs to be mentioned. About 60 miles north of Crete is an island by the name of Thera, also called Santorin. This

island is the remains of a collapsed volcano. Certain scholars such as Mavor, Luce and others have shown that that volcano erupted in the 15th century B.C.^{23, 24} As it erupted, its cavity emptied out. That cavity was mostly below sea level. The sides of the volcano collapsed, producing an immense tidal wave. That tidal wave is cited by Mavor to have been almost 700 feet high on nearby Anaphi Island.

That tidal wave, created by the collapse of the walls of the volcano on Thera, was an estimated 200 feet high when it hit the beaches on the north side of Crete. The Minoan Civilization of Crete was destroyed suddenly in one hour. By the time the tidal wave arrived at the Suez Isthmus, it had traveled 600 miles in about 5 hours. The height of that tidal wave was perhaps 70 or 80 feet above mean sea level. It swept across the flat isthmus after the fleeing Hebrews had crossed hours before. It caught the pursuing Egyptian militia.

There is no good reason to doubt the history which Moses wrote about the Hebrews' flight out of Egypt to the Sinai Peninsula. It is more than good history; it is excellent history. The research on the Thera Volcano is supportive while it is also consistent. In addition to the point of being excellent history, the primary point is that the Thera Volcano, like the Mount of Lawgiving, must have ended its dormancy with this close Mars flyby. That it had erupted previously is in evidence, the volcanic cone. That it re-erupted is supported by our theory of Mars flyby cyclicism and by the relatively new data on the Thera eruption. If Mars was on a flyby as close as 25,000 miles, the flexing of the Earth's crust might have been as much as 1000 feet. Whatever the intensity was, it was sufficient to renew the volcanism of both volcanoes.

6 - THE ANNIVERSARY OF THE SODOM-GOMORRAH CATASTROPHE. If the Exodus catastrophe happened to coincide with the anniversary of the Sodom-Gomorrah Catastrophe, such would help establish cyclicism. The Earth was being assaulted periodically at the same place in its orbit, the March 20-21 location. (See Figure 1.) Furthermore, if the Exodus catastrophe coincided with the anniversary of the Sodom-Gomorrah Catastrophe, it should be on the 108th, the 216th, the 324th or the 432nd anniversary if our model of cyclicism is correct.

The citation comparing the Exodus Catastrophe to the Sodom-Gomorrah Catastrophe is as follows.

And it came to pass at the end of the four hundred and thirty years, EVEN THE SELFSAME DAY it came to pass, that all the hosts of the Lord went out from the land of Egypt.

Ex. 12:41 (Caps ours)

The Traditional Evolutionist and the Fiat Creationist both will scan this verse and will perhaps miss the significance of the phrase "even to the selfsame day." If such an anniversary term is noted, it would be as another outworking of chance. It was not by chance. It was by periodic orbits.

However, the text indicates that the flyby was on the 430th, not the 432nd anniversary of the flyby. This is close, but it is not precisely correct. There is the possibility that some Hebrew historian of the 15th or 16th century miscounted two years. There is a second possibility also. The second possibility is that the first and the last years of catastrophism were purposely not counted. Thus there were 430 serene noncatastrophic years between these two flyby events. The 430 year time span recounted in this text is close enough to the model that it is viewed as supportive, though not perfectly so.

7 - INDEPENDENCE DAY. As the 4th of July is Independence Day in the United States, so the 14th of Nisan (March 21) was the ancient independence day for Israel. It was remembered in the Psalms. Psalms 105, 106 and 114 are examples of the works of God, miraculous and very great, during this Exodus catastrophic occasion. There was widespread death and destruction of buildings and crops throughout the delta of the Nile. The Egyptian cabinet was of a mind not to let the Hebrews go. The Egyptian army was the primary deterrent. Potential hunger and thirst were other deterrents.

Of interest to us is, first, that March 21 (Nisan 14) is the historic Hebrew Independence Day, commemorating the flight out of Egypt. Secondly, March 21 is the ancient date of the Roman tubulustrum, when Mars was feared and watched in Italy with its steeds. Thirdly, March 21 is the first day of spring or (in astronomical terms) the vernal equinox. The tilt of the Earth's spin axis is such that on this day and on only one other day in the year (the autumnal equinox) does the Sun shine equally on both hemispheres. It is as if March 21 had something to do with the

tilting of the Earth's spin axis. Fourthly, March 21 is the point in the skyscape where the ancient zodiac began, the "First Point of Aries." All of these suggest some kind of a relationship with the tilt of the Earth's spin axis.

Fifthly, the Earth's closest point in its orbit to the Sun, its "perihelion" (at 91.5 million miles), is almost precisely half way between the two ancient dates of catastrophism, October 24 and March 21, on January 3. January 6th is the precise midpoint, but during the final flyby in 701 B.C., the perihelion was pushed back 2 or 3 days even as the perihelion of Mars was pushed forward 30 or 35 days. See Chapter VII, Figure I8.

The comfort zone for the trio, the Evolutionary Uniformitarians, the Fiat Creationists and the Theistic Evolutionists, is maintained when they are unaware or remain oblivious to such correspondences as these. Thus, whether these coincidences are viewed as by chance or not depends essentially whether one is a functional uniformitarian or whether he is a Planetary Catastrophist.

There are two axes of the Earth of which cosmologists need to be aware. One axis is the "line of apsides," which is the line drawn in the Earth's orbit between its closest position to the Sun and its furthest. This line always bisects the Sun, one of the two focuses (or foci) of the ellipse. The other axis is the spin axis. This chapter III, and more particularly the portion dealing with the March 21 and the October 24 catastrophic intersections, was concerned largely with the Earth's orbital axis. In Chapter IV, more attention will be given to the Earth's spin axis and what was involved in the Long Day of Joshua, a day which has been a puzzle for the aforementioned trio.

NOTES

1. *Pliny, Natural History*, ii 45.
2. *Op. cit.*, ii 18.
3. *Seneca, Thyestes*.

4. Immanuel Velikovsky, *Worlds in Collision*. New York, Doubleday, 1950, 0. 272.
In Chapter I, two Emmanuels were noted who were prominent in developing the Nebular Hypothesis, Emanuel Swedenborg and Immanuel Kant. A third important Emmanuel is Immanuel Velikovsky, who has been a pioneer in planetary catastrophism. These three Emmanuels all happen to come from lands bordering on the Baltic Sea. Swedenborg was from Sweden. Kant was from Prussia. Velikovsky was from White Russia, bordering Latvia and Lithuania. Their cities were Stockholm, Konigsberg and Vitebsk, all located within 500 miles of each other.
5. Pliny, *loc. cit.*
6. Patrick Moore and Garry Hunt, *Atlas of the Solar System*. Chicago: Rand McNally, 1983, pp. 256-257.
7. Moore, *loc. cit.*
8. Moore, *loc. cit.*
9. Moore, *loc. cit.*
10. See also, Donald w. Patten, "The Origin and Decay of the Earth's Geomagnetic Field," *Catastrophism & Ancient History*, IX part 2, July, 1987, pp. 91-107.
11. Louis Ginzberg, *Legends of the Jews*. Philadelphia: Jewish Publication Society of America, 1920, Vol. I, p. 180.
12. Alan Millard, *Treasures from Bible Times*. Tring, Herts, England Lion Publishing. "The Babylonian Story of the Flood", p. 42-43.
13. Ginzberg, *op. cit.*, Vol. V, p. 182.
14. Josephus, *The Antiquities of the Jews*. Book V, Ch. 1, pp. 17.
15. Ginzberg, *op. cit.* Vol. I, p. 180.
16. C. W. Ceram, *Gods, Graves and Scholars*. New York: Knopf, 1951, p. 290.

The second Tower of Babel was constructed on the site of the first. Herodotus described that second Tower. Koldewey excavated the great base of the Tower. Ceram continues,

"The original Tower rose up in a series of enormous terraces. Herodotus describes a series of eight superimposed stages, each one somewhat smaller than the one below it. The uppermost terrace formed the base of a temple that looked out far over the land. ...

The base of the Tower was 288 feet on a side, the total height of the Tower and

the temple also 288 feet. The first stage was 105.6 feet in height; the second 57.6 feet, the third, fourth, fifth and sixth, 19.2 feet each, and the Temple of Marduk 48 feet in height."

Our observations are twofold. First, it was symmetrical, being equally as high as was the side of each of the 4 bases. Secondly, something Ceram apparently failed to perceive is that these measurements are in strict proportions or ratios.

As previously mentioned, the orbits of the Earth, Mars, Jupiter and Saturn were in various resonances or proportions, just like the stages of the Tower of Babel. We observe:

(a) The 1st stage and the 2nd stage were in 2:1 ratio, just like the ancient orbits of the Earth and Mars.

(b) The 1st stage and the 7th stage were in 6:1 ratio, just like the ancient orbits of Mars and Jupiter.

(c) The 7th stage (at 48 feet) was in 5:2 proportion with the four stages that were 19.2 feet, the 3rd, the 4th, the 5th and the 6th. This is just like the orbits of Jupiter and Saturn which were then and are now in a 5:2 resonance.

(d) The 2nd stage at 57.6 feet was in 3:1 proportion with the 3rd, 4th, 5th and 6th stages, each of which was 19.2 feet. There were no planets in 3:1 orbital resonance.

(e) The height and length of each of the 4 bases, at 288 feet, were in 15:1 proportion with each of the stages 3 thru 6, at 19.2 feet. The orbits of Mars and Saturn in the catastrophic era were in 15:1 resonance.

The identification of "Marduk" is uncertain. Some scholars think Marduk was Jupiter. Others identified Marduk with Bel, which we have identified with Mars. Our opinion is that the Temple of Marduk was associated with the worship of the entire planetary pantheon, including Mars, Jupiter, Saturn and Venus. Also it is

our opinion that the proportions of the stages of the Tower reflect the periods of the planets in the catastrophic era. Thus at the apex of the Temple was to be an astronomical/astrological shrine.

17. Josephus, *op. cit.*, Book I, Chap. III, pp. 9. Josephus wrote an intriguing passage concerning ancient celestial science and cycles.

"... and besides, God afforded them a longer time of life on account of their virtue, and the good use they made of it in astronomical and geometrical discoveries, which would not have afforded the time for foretelling (sic) [the periods of the stars] unless they had lived six hundred years, FOR THE GREAT YEAR IS COMPLETED IN THAT INTERVAL.(Caps ours)

We have found the grand cycle of mega-catastrophes to be 540 years, which is 90% of the "great year" considered by Josephus. Later, in Chapter VI, Josephus gives other interesting information about the perspective of Abraham on the motions of the planets.

18. Ginzberg, *op. cit.*, Vol. I, p. 256.
19. *Op. cit.*, Vol. I, p. 253.
20. *Loc. cit.* aaa
21. *Op. cit.*, Vol. I, p. 255.
22. Velikovsky, *op.cit.*, p. 63.
23. James W. Mavor Jr. *Voyage to Atlantis*. New York: Putnam & Sons, 1969.
(By way of incidental interest, "mavor" is one of the forms in Latin for Mars, Martis.)
24. J. V. Luce, *Lost Atlantis*. New York, McGraw-Hill, 1969.

Chapter IV

The Day of 28 Hours Catastrophes Between 1440 B.C. and 1000 B.C.

As the era of time comes closer to our modern age, the surviving literature of catastrophism noticeably becomes more voluminous, and also becomes somewhat more precise. In the previous three chapters, we noted that the cyclic phenomenon that the Hebrew writers call the Angel of the Lord possessed a gravitational field which produced extraordinary tides of both the oceanic and the subcrustal varieties. The subcrustal tides produced strong earthquakes and renewed volcanism.

The Angel of the Lord also possessed reflection in the noteworthy case of the pillar of fire by night (and the cloud by day.) Thirdly, the Angel of the Lord possessed electricity, evidenced in the celestial discharges of terrific power and effect. Electrically speaking, the Angel of the Lord also would have had to possess a reasonably rapid rotation in order to generate electricity. These three features, an electrical field, a gravitational field and reflection, will be characteristic of most flybys if the literature is comprehensive, and if it is not comprehensive, two of the three should be expected in flyby scenarios, conservatively speaking.

EXAMPLE #5 – October 24, 1404 B.c. THE LONG DAY OF JOSHUA

Once again, the "fixed time" arrived. The ancients were aware of its imminence. One indication of this is that in Palestine, the Canaanites and the Hebrews met for battle on this day. Throughout the Middle East, the timing of military campaigns on Earth reflected a recognition of the imminence of celestial warfare in the heavens. Seers, star-gazers and prognosticators often advised their military that Mars (or Baal or Nergal or Ares) would render a cosmic assist and would do much of the killing for them.

Palestine in 1404 B.C., known more widely in our age as Israel, was under contest by two armies. The aggressors, the desert nomads, were the invading Hebrews. These nomads were migrating back into their ancestral homeland with a religious fervor. It is conjectured that they were outnumbered about 4 or 5 to 1. Also, the invading Hebrews were less well equipped, since the dominant Canaanites had prohibited commerce in iron and bronze to the interior peoples for any reason.

Thus, we surmise, the Hebrews were armed primarily with weapons made of leather, bone, wood, rock and some bronze. The Canaanites had the superior iron armor.

The Canaanites, like their Phoenician cousins to the north in Lebanon, had developed regular commercial routes to ports far and wide, with access to mines in many regions. They had access to copper, iron, tin and other materials inaccessible to the Hebrew nomads. Iron being harder, iron weapons were best. On this particular day, the Canaanite armies were well prepared for combat. Their armor included iron helmets, iron shields, iron spears, iron battle axes and lances, all honed to military sharpness. The Canaanite celestial priesthood very possibly encouraged combat on this day of cosmic visitation, and what military man could argue with the celestial seers? Some time just about dawn of October 24, Canaanite time, the electrical flux tube materialized, perhaps around 5:00 A.M. It materialized at an estimated 120,000 miles from the Earth (on the sunward side) and Mars was closing rapidly. Mars was closing at a velocity of 25,000, or perhaps 27,000 m.p.h. By 5:00 A.M. the Sword of the Lord (the flux tube) formed as Polynesia faced Mars. By 7:00 a.m. the magneto-head of Mars entered the Earth's magneto-tail (as Japan faced Mars). By 9:15 a.m., Mars had crossed the Earth's orbit, some 30 minutes behind the Earth (as India was under Mars). By 10:00 in our model, the two planets were at their closest, 27,000 miles. by 11:00 a.m., Persia (Iran) was directly under Mars.

Also by 11:00, the magneto-tail of Mars began to sweep through the Earth's magnetic field, and to sweep across the Earth's face as Babylonians watched agape. By noon, the magneto-tail of Mars was sweeping Lebanon and Palestine, looking to strike high hills or concentrations of iron. Canaanite concentrations qualified and were struck, perhaps with multiple bolts. By 1:00 p.m. Italy was being struck and by 2:00 Spain as the flux tube began to vanish for another 108 years.

The Noachian Flood flyby is estimated at 15,000 miles, and possibly even 1,000 miles closer. Both the forces causing tidal upheaval and the forces causing electromagnetic induction behave as the mass over the inverse of the cube of the distance. This means in both cases that The Noachian Flood was about eight times or ten times as intense. If one understands this lesser catastrophe, he is well-prepared to understand the more ancient and the more intense flybys.

Just as there was gravitational interaction, so there was magnetic interaction. Figure 10 illustrates the interaction of the two planetary magnetic fields. The distance scale is identical to the scale in Figure 9. For certain reasons to be discussed later, in a sequel book, more technical, it can be deduced that the Earth's geomagnetic field strength was greater than the current .307 Gauss. Its field strength was in the range of 1.0 Gauss, minimum. Nobody knows how big or how strong the planetary magnetic field of Mars was at that time. Our estimate is that the Martian field was in the range of 1.0 Gauss.

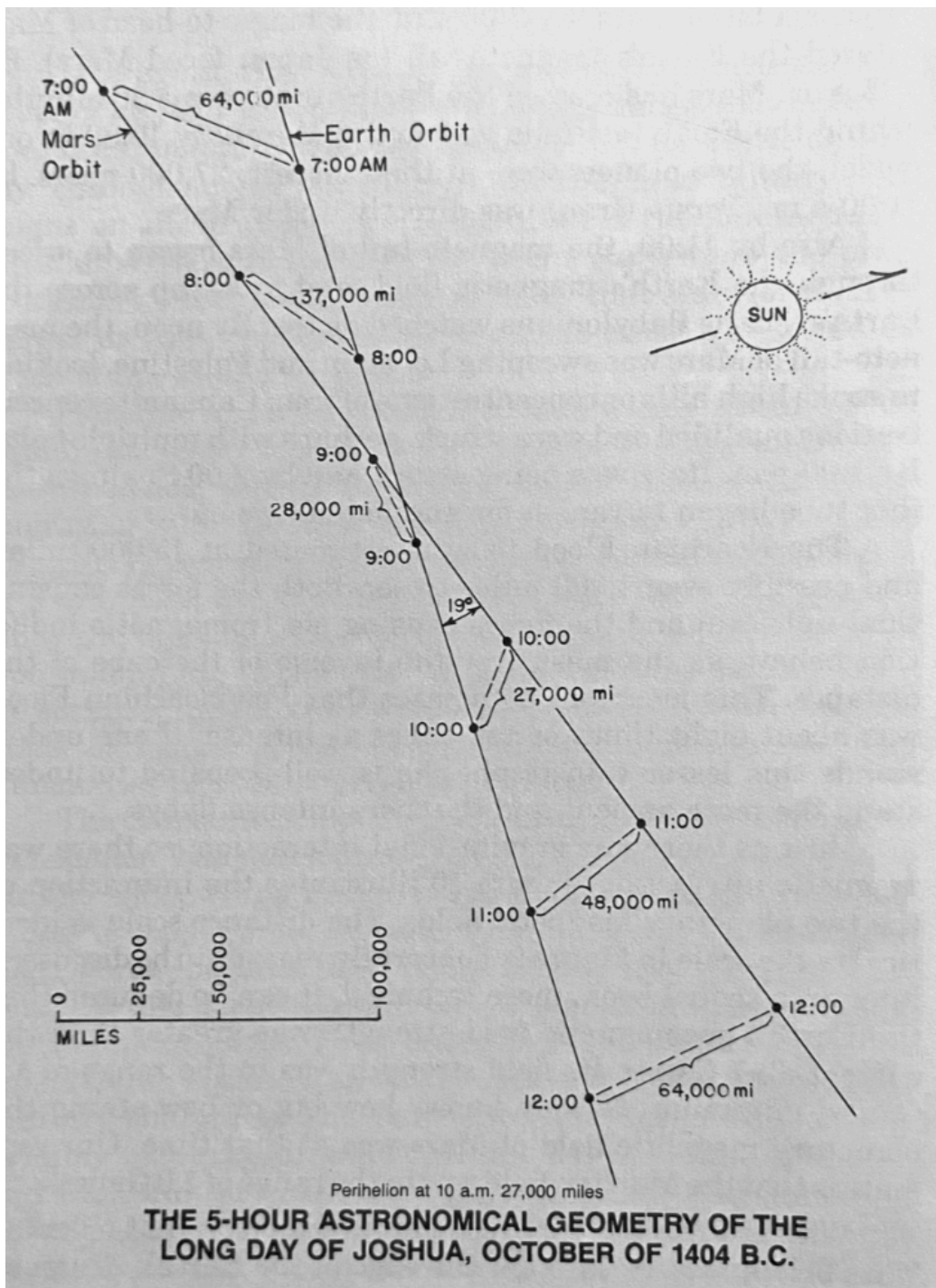


Figure-9

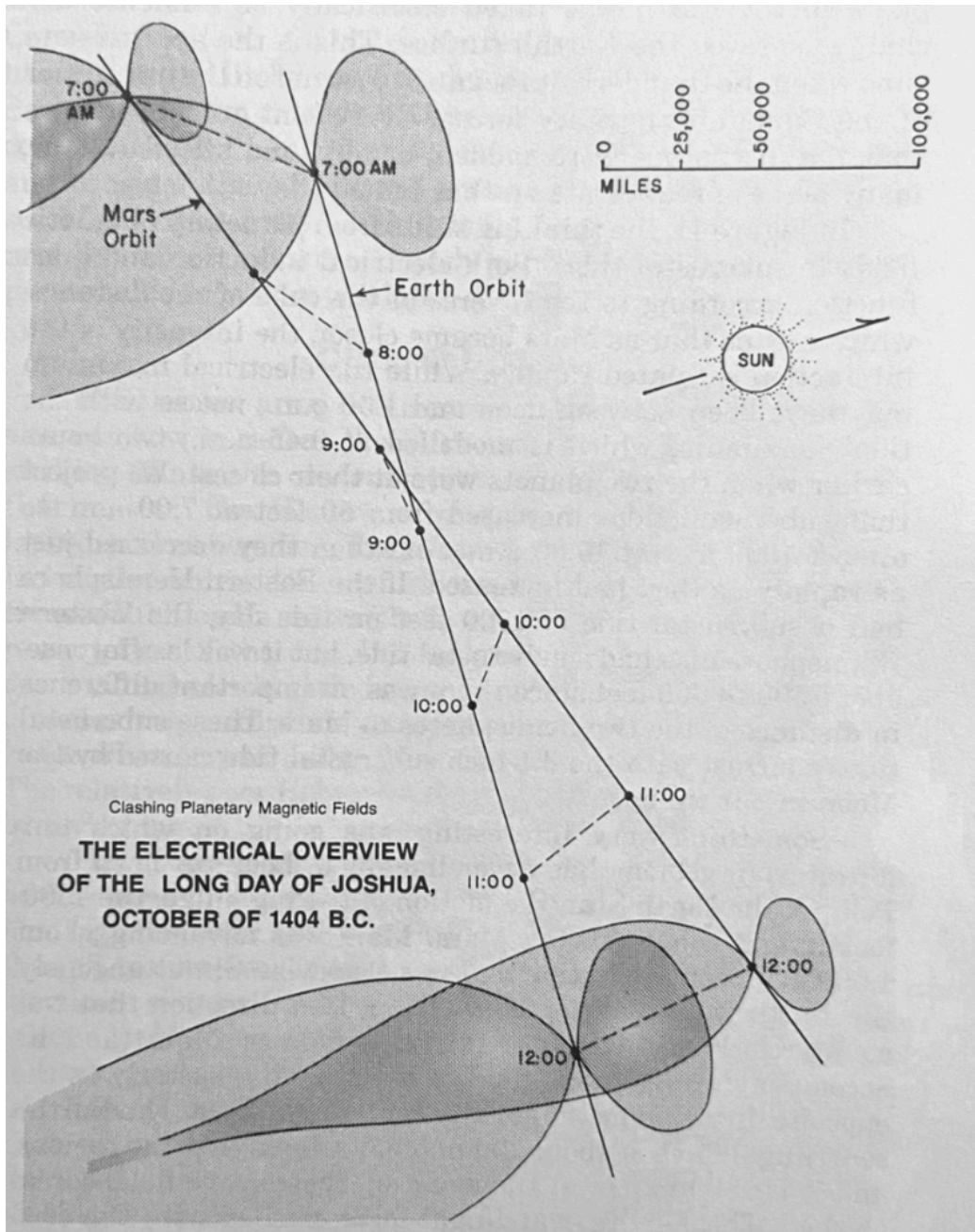


Figure-10

With reference to Figure 10, around 9:00 on that morning Mars briefly passed through the edge of the Earth's magneto-head. The spiral hair of Gorgon (or Medusa) must have been spectacular. Even more spectacular was its spiral hair, charged particles swirling in a pair of vortices, when at noon the Earth passed

through the magneto-tail of Mars. The Eastern Hemisphere of the Earth was raked electrically as immense discharges sprayed the Earth's surface. This is the approximate time when the thunderbolts began to descend on the iron armor of the Canaanite military forces. Every hint or indication is that the discharges were sudden, deadly, and affected many, many acres of real estate on that famous day.

In Figure 11, the thinking shifts from planetary magnetic fields to subcrustal tides. Both electrical induction and tides function according to the inverse of the cube of the distance, which means that as Mars became closer, the intensity of the interaction escalated rapidly. While the electrical maximum may have been between noon and 1:00 p.m., not so with the tidal maximum, which is modeled at 9:45 a.m., two hours earlier when the two planets were at their closest. We project that subcrustal tides increased from 50 feet at 7:00 a.m. to almost 1500 feet at 10:00 a.m. And then they decreased just as rapidly as they had increased. If the Eastern Hemisphere had a subcrustal tide of 1500 feet on this day, the Western Hemisphere also had a subcrustal tide, but it was less intense, about 500 to 600 feet since there was an important difference in distance of the two hemispheres to Mars. These subcrustal tides contrast with the 3.1-inch subcrustal tide caused by the Moon in our time.

Something very interesting was going on which uniformitarian geology has never imagined. Looking down from Polaris, the North Star, the motion of the big bulge, the 1500-foot bulge, was following Mars. Mars was advancing about 1,000 m.p.h. on a direction that was clockwise. Simultaneously, the Earth was spinning, or rotating, in a direction that was counterclockwise. The gravitational field of Mars (and its accompanying magnetic field) was advancing easterly in the opposite direction as the Earth's centrifugal force. The Earth's centrifugal force is about 100 m.p.h. in the high polar regions, and it is 1000 m.p.h. at the equator. These three fields/forces clashed. The Earth's centrifugal force clashed with the combined gravitational and magnetic fields of Mars. (The Earth's crust was thus briefly pulled both directions simultaneously.)

If one views these three forces as two (with the two forces of Mars combined), an interesting if confusing image occurs. Consider the face of a watch having two hands. Usually both hands (big and little) move clockwise albeit at different speeds. Such is the normal mode with which we are all familiar. Now consider the big hand to move like the centrifugal (spin) force and consider the little hand to move like

Mars (both forces combined.) The little hand, briefly, for perhaps 6 or 7 hours, moved counterclockwise. If such a watch were thrust upon a person suddenly, how would he tell time?

CRUSTAL SKID

The Hebrew army had a problem that day. Their problem was not how to defeat the Canaanite militia. The flux tube, striking Canaanite concentrations of iron (armor) took care of that matter. The Hebrew army lacked wrist watches. They lacked pocket watches. They lacked grandfather clocks. They lacked the water clocks which the Egyptians had. The Egyptians would load a water clock, not full, but according to the prescription of the day. It was loaded at dawn. The time of dawn varied a little each day, and so did the prescribed amount of water vary accordingly. By this instrument, the Egyptians knew when it was midnight, or how soon dawn would come. The relatively poor Hebrew army had no way to tell time except by reckoning.

The geophysical scenario which we perceive can in part be described by an example, a metaphor. First consider a raft, floating on a calm lake. It takes a substantial quick shove on the raft to overcome inertia, and to start it "sailing." Once the inertia is overcome, and no additional shoves are applied, it takes a lot of water resistance to damp its velocity, and to slow it down, gradually, to a stop, in a new position on the lake.

Second, consider a new theory for the origin of hydrocarbons, petroleum. Is petroleum scarce or is it plentiful? Thomas Gold, an Austrian engineer, thinks it is plentiful, but deep. He thinks petroleum is not a result of decaying swamp vegetation, pterodactyls and brontosaurus. He thinks that heavy, unstable elements in the Earth's core region give off atoms of helium, carbon and hydrogen. They rise, or bubble up to the surface of the mantle, which is also the bottom of the crust. Here, at the bottom of the crust, the rising atoms are polymerized into methanes, propanes, ethanes and a long list of heavier hydrocarbons at temperatures in the range of 5,000° F. and at immense pressures, 10 and 15 miles below the crust's surface.

The deeper an oil prospector drills, the more likely he is to find helium and methane, (3 and 4 miles down.) This is indicative of the probability that, at the interface between the mantle and the bottom of the crust (known as the "Moho,"

the Mohorovicic Discontinuity) vast pools of hydrocarbons in fact occur. Thus, in Gold's theory, petroleum is not scarce (as it is in the evolutionary theory); it is plentiful, but it is hard to get at, except where it has seeped up, or where it may have spurted out during ancient crustal rifts and flexes.

The core issue of this chapter concerns the nature of the interface between the bottom of the crust and the mantle, at the Moho. Viscosity is a measure of stickiness. It is natural to think of this region as sticky, because lava flows (at 700° F. or so) from a volcano are slow and sticky. But this area does not have temperatures of 700° F. They are 5,000° or 6,000° F., or more, like the temperatures of the gases expelled when Mount St. Helens erupted.

Furthermore, there may be a thin layer of very hot hydrocarbons, essentially a fluid, trapped there on which the crust, like a raft, could "sail." The better question is, "How lubricous is it at the Moho?" The more traditional question is, "How viscous is it at the Moho?" Lubricity is a measure of slipperiness; viscosity is a measure of stickiness. Conditions at the Moho, probably, are a mixture of the two, but a mixture proportioned in which direction? Our suspicion, in agreement with Gold's theory, is that the mixture is proportioned in favor of lubricity. It is slippery between the crust and the hot mantle.

It has already been established that if Mars were at 27,000 miles distant, the Earth's subcrustal tide would be in the range of 1500 feet. Such flexing would assist greatly in separating the crust from the mantle, preparing it for "sailing." First, in our theory, the flexing of the Earth's crust separated the crust from the mantle. Second, that portion of the crust facing Mars tended to move toward Mars and to move in the easterly direction Mars was moving, clockwise.

Normally, the crust is locked on to the mantle, and the two spin together in lock step. On this day, the lock was broken due to crustal flexing. The Earth's crust, and especially the face containing Eurasia, wanted to follow Mars instead of following the mantle. It compromised. It slowed down. In the latitude of Greece and Palestine of that era, about 40° N. latitude, normally the crust rotated at a velocity of 700 m.p.h. On this day, between the hours of 2:00 p.m. and midnight, the crust (and Eurasia) sailed eastward, following the planet. How much did it sail eastward? We do not know. We know that, like a raft on a serene lake, once the crust separated from the mantle and begins to sail eastward, like a raft's inertia, it is

damped slowly, and it decelerates slowly, coming to a halt perhaps 8 or 10 hours later. During this time, Eurasia may have sailed eastward 2,000 miles, perhaps 2,500 miles. Four hours would be the equivalent of 2,800 miles. This is what we call "Crustal Skid." It is nothing like the well-publicized term of recent decades, that of Continental Drift.

Precisely how far the Earth's crust skidded east, in our theory is unknown. However, one aspect of crustal skid can be determined from tangent tables. It has to do with the position of Mars in its trajectory, its flyby path. The following presumes Mars made a passover to the north of the Earth's orbital plane. Presuming this, the following can be defended.

1. If Mars were 5° north, there was 1 mile of shift north for every $11\frac{1}{2}$ miles east.
2. If Mars were 10° north of the orbital plane, there was a shift of 1 mile north for every 5.5 miles east.
3. If Mars were 15° north of the ecliptic plane, there was a shift northerly of 1 mile for every 3.7 miles east.

The probability is that the Earth's crust shifted northerly about 260 miles, and it shifted easterly about 2800 miles. This is our guess. Crustal skid (easterly by northeasterly) helps to explain why Jerusalem had a net loss of 10° or 12° of latitude during the October catastrophes, 1500 B.C. to 701 B.C., as was suggested in Chapter I.

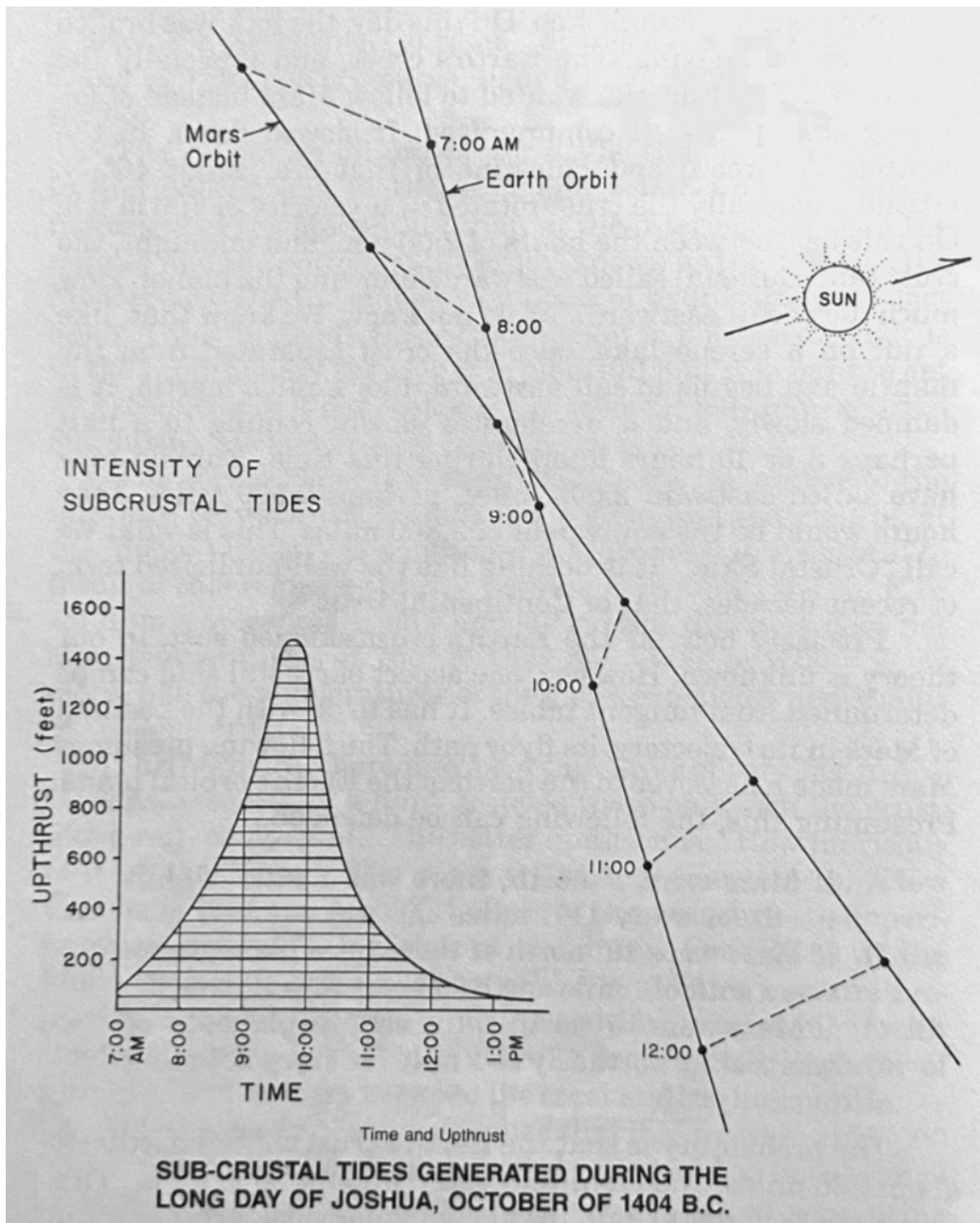


Figure-11

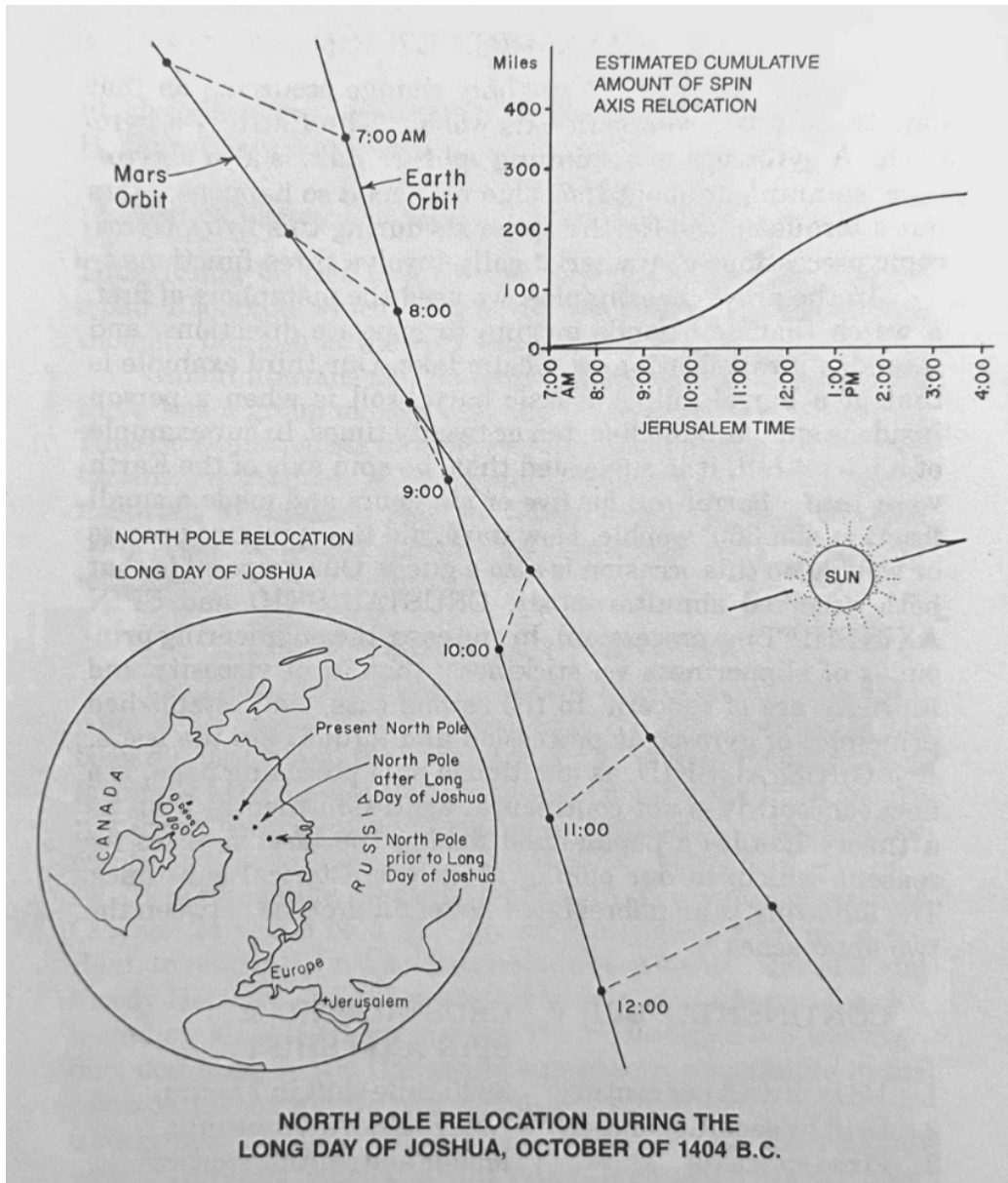


Figure-12

SPIN AXIS PRECESSION

Crustal skid was not the only change occurring on that day. There was also a spin axis wobble. The Earth is a gyroscope. A gyroscope is a spinning sphere. Mars is also a gyroscope, spinning at about the same rate, as it so happens. Mars put a torque on the Earth's spin axis during this flyby. Gyroscopic precessions characteristically involve three functions.¹

In the previous examples, we used the metaphors of first, a watch that had hands moving in opposite directions, and secondly, a raft floating on a calm lake. Our third example is that of a barrel-roll. A classic barrel-roll is when a person inside is spun around five, ten or twenty times. In our example of a barrel-roll, it is suggested that the spin axis of the Earth went into a barrel-roll for five or six hours and made a small fraction of a 360° wobble. How much did the spin axis precess or wobble on this occasion is also a guess. Our proposal is that both occurred simultaneously, CRUSTAL SKID and SPIN AXIS SHIFT (or precession). In one case, the engineering principles of slipperiness vs. stickiness, that is, of viscosity and lubricity are of concern. In the second case, well-established principles of gyroscopic precession and torques are the issue. CRUSTAL SKID, as mentioned on a preceding page, is a new concept. It is not continental drift. Continental Drift as a theory has been popularized during the last 25 years for reasons which, in our opinion, lack geo-historical substance. The following is an abbreviated list of differences between the two approaches.

CONTINENTAL DRIFT	CRUSTAL SKID & SPIN AXIS SHIFT
1. 1/8inch drift per century ²	2800-mile shift in 7 hours
2. Drift by separate blocks	Crust skidded as one unit
3. Fixed spin axis	Mobile and shifting spin axis
4. Geomagnetic steady state	Geomagnetic field recharge
5. No polarity reversal	Mag. field polarity reversal
6. Tides of Moon and Sun	Immense tides caused by Mars
7. Gyroscopic theory ignored	Gyroscopic theory incorporated
8. High viscosity at Moho	High lubricity at Moho
9. No significant friction	Sudden, colossal friction increase
10. Horizontal forces were prime	Vertical forces were controlling
11. Spin axis rate unchanged	Spin axis rate minutely increased
12. Ancient history dismissed	Ancient history reconsidered

Thus, it may be seen that Crustal Skid and Spin Axis Shift are a pair of concepts which strike at the very heart of uniformitarian thought, but also at the very heart of fiat creation.

Uniformitarians can no longer claim with confidence that there was a group mirage that day of the Long Day of Joshua. Theistic Evolutionists have no basis to agree with the Uniformitarians. Furthermore, Fiat Creationists have no need of a cosmic magician to suddenly stop the Earth's rotation, and some 24 hours later, to restart it, same tilt, same spin rate, same polar locations.

THE PALESTINIAN VIEWPOINT

The Long Day of Joshua has been discussed from the viewpoint of an engineer and a physicist of the 20th century. It has been discussed from the viewpoint of a Planetary Catastrophist. It has yet to be discussed from the point of view of a 15th century B.C. eye-witness soldier, whether of the Canaanite or the Hebrew camp.

The Canaanite colonels agreed with their sooth-sayers that October 24 would be a fine day for their favorite cosmic deity, Baal, to render them a substantial assist. After all, the wild and bloody Hebrews had just destroyed such cities as Ai and Jericho, including all of their population. Their comeuppance was overdue, according to the Canaanite star-gazers, consultants to the colonels. So the militia was called into action, along with their iron armor. The iron armor was honed, right out there in full view of Mars and its celestial flux tube of high-powered electricity. For the ordinary Canaanite soldier, it was a frightening spectacle. In early 1404 B.c. he had watched Mars grow from a distant reddish pinpoint in the nighttime sky to an ever-larger reddish sphere. In the most recent six months, it had traversed several zones of the zodiac as it grew in size. The celestial scuttlebutt was that this was the "appointed year" because Jupiter was in Cancer for the ninth time. Even more ominous was Saturn, in the zone of Capricorn, 180° opposite.

As the summer nights turned into autumn, the reddish planet grew in size, night after night. By the night of October 21 (at a distance of 1½ million miles), its sparkling, circling satellites were prominent. On the next night, the three large craters appeared like eye sockets as they slowly rotated on by. On the night of October 23 (when Mars was 300,000 miles distant), its numerous crater scars appeared littered as thick as smallpox (on one face only). By dawn the next morning, the coiling, spiral hair was weaving across the cosmos. Baal in its celestial chariot was beginning to veer across the sky and its celestial steeds seemed out of control. And there was the flux tube, hidden during the night, but threatening like

perhaps a glistening, approaching tornado. Its approach was fast (1700 m.p.h.) and getting faster, bright with snake-like coils, its head brushing the heavens. Its fearsome lightning was ... FLASH! ... ZAP! ... CABOOM!

The Biblical account discusses that day in the following terms.

*And it came to pass, as they fled from before Israel, and were in the going down to Bethhoron, that the Lord cast down great stones from heaven upon them unto Azekah, and they died: THEY WERE MORE WHICH DIED WITH HAILSTONES than they whom the children of Israel slew with the sword.
Joshua 10:11 (Caps ours)*

"Hailstones" in Hebrew is *barad*, which seems to be inadequately translated. Planetary Catastrophists believe *barad* means thunderbolts of electricity, not hail or ice balls. The electrical charges would have involved millions, or if not that, hundreds of thousands of amperes.³ Some of the Canaanite soldiers were vaporized at the site of the strike. Others, more numerous, were killed by the lethal shock waves which spread out radially; they were killed by concussion, with no wound, no blood (except perhaps some coming out the ears).

The text indicates that there were three categories of Canaanite soldiers that afternoon:

1. Those who were killed by celestial lightning and shock waves, the most numerous group.
2. Those who were killed by Hebrew arms, the next most numerous group.
3. Those who survived. They fled to any available place of refuge, a city or perhaps a cave. This group was the least in number of the three groups.

William Whiston

William Whiston translated Josephus works in the 1730's, nearly a century before Faraday, Gauss and Clerk-Maxwell, pioneers of electricity. In this Whiston translation of Josephus, the great historian of the Jews, Whiston conveys a more graphic account of the event. The following is drawn from his landmark work.

The place is called Bethhoron; where he also understood that God assisted him, which he declared BY THUNDER AND THUNDERBOLTS, as also by the FALLING OF HAIL, larger than usual. Moreover, it happened that the day was lengthened ⁴

The falling thunderbolts, or "the fire of the planets," to use Pliny's phraseology, did occur and it was devastating. This electrical phenomenon was one of several features of The Long Day of Joshua, a truly remarkable day in natural history.

If our estimate of the distance of Mars (28,000 miles) is reasonably accurate, in addition to the celestial lightning, there were great oceanic tides, and subcrustal tides of 1500 feet, flexing the crust of the Earth, producing massive earthquakes and renewing dormant volcanoes. Neither Josephus nor the writer of the Book of Joshua discusses earthquakes as a part of this flyby event; nevertheless the quaking can be presumed to have been intense.

Whiston was an astronomer, a mathematician and a theologian as well as an expert in ancient languages. (He succeeded Newton to the Lucasian chair in the department of mathematics at Cambridge.) Whiston was very interested in Earth history, so much so that in 1696 he wrote a book entitled *A New Theory of the Earth*. It went through several printings. Whiston's theory of The Noachian Flood was that there had been a comet, coming in from beyond Saturn, with a period of 650 or 700 years, which swept in close to the Earth. Its tail drenched the Earth with rain.

By way of interest, if indeed Mars received a vast dump of ice chunks at the time of The Flood, those ices would have suddenly melted upon impact, vaporized recondensed and flowed into rivers, filling lakes which would soon have been frozen solid. Then during the next successive flybys, near perihelion, the strong solar radiation would have melted and vaporized those ices, providing Mars with an icy tail, like a comet, a very handsome one. This perspective of Mars, its ancient orbit and its ancient tail, suggests that while Whiston was mistaken, nevertheless he had some correct elements in his theory.

Even as Whiston, and to a lesser extent, Newton, were writing in favor of catastrophism, Swedenborg and later Kant were producing their uniformitarian cosmologies. The academic communities of England, France and Germany opted against considering or looking to the Bible for clues. Supposedly "enlightened"

philosophers recommended against reading the Bible, or listening "to those unenlightened ancient physio-theologians" such as Isaiah or Moses, to cite Lyell's phraseology.⁵ Science makes no mistakes, but it is entirely possible that scientists of that day made a major error in underestimating Biblical history, including the repeated (and our research indicates cyclic) stories of catastrophism.

However, Whiston faced a specific problem in his translating of Josephus. The problem concerned how to handle the Long Day of Joshua account. The Biblical counterpart is the Book of Joshua, chapter 10. In *The Antiquities of the Jews*, it is found in Book V, Ch. 1, pp. 66. It was not until the 1810's in Germany and the 1830's in England that Bohnenberger and Lang were developing gyroscopic theory. Gyroscopic theory concerns what happens when a torque is placed on the spin axis of a rotating sphere, which the Earth is. So Whiston knew nothing of gyroscopic theory or torques.

Therefore, Whiston added the following translator's footnote to his translation of the Long Day of Joshua scenario.

*Whether this lengthening of the day were physical and real, or whether only apparent, cannot now be determined; Philosophers and astronomers will naturally incline to this latter opinion. The fact itself was mentioned in the book of Jasher, now lost, (Josh. x 13), and is confirmed by Isaiah (xxvii 21,) Habakkuk (iii, 11) and by the son of Sirach (Ecclus. xlvi, 4.)*⁶

As historians are well aware, the era 1750 to 1790 was one of rising anti-clericalism throughout Northern Europe. Many academic persons were friendly to certain Masonic groups such as the Jacobins and the Illuminati, secret societies also highly hostile to the church. Those hostile to the clergy and Christianity were hostile to both Biblical history and to Biblical theology, no difference being made between the two.

In this climate, Werner in Germany and Cuvier in France advocated catastrophism in geology, as did many others. Paley and Whewell did so in England, as did Louis Agassiz, the budding Swiss genius in geology. But, the academic leadership at Cambridge, Oxford, Harvard, and Yale paid less and less attention to these perceptive catastrophists.

During Whiston's era in London, in the 1720's and 1730's, students were wondering whether or not the Long Day of Joshua was a massive, collective hallucination. That has problems inherently; hallucinations are always specific to individuals rather than groups. Whiston had difficulty reconciling the passage with "progressive" scientific perspective. On the one hand, he was too wise to disregard the Bible. On the other hand, he was ignorant of gyroscopic theory and spin axis shifts and our more recent catastrophic theory of crustal skids. Therefore, he concluded that the matter "cannot now be determined." "Now" for Whiston was 1730.

These pages are being written in the 1980's, some two and a half centuries later. Spin axis precession and torques are thoroughly understood, even though their behavior is a little strange. One aspect of our understanding is that the spin axis went into a brief, functional barrel-roll. The second aspect of our understanding is that it is essentially slippery between the crust and the mantle. The crust as a unit, riding on a cushion of hot hydrocarbons, skidded a relatively vast distance before it came to a stop. It skidded in an easterly direction, opposite to the Earth's spin and centrifugal force. Minute changes in spin axis tilt and in spin rate are also suspected.

Mordecai M. Noah (1785-1851) appeared in New York with a translation into English of an allegedly ancient source, dubbed *The Book of Jasher*. It is considered spurious; we do not know the nature of his source. Saying this, his translation of the Long Day of Joshua passage is of considerable interest.

And the Lord hearkened to the voice of Joshua, and the sun stood still in the midst of the heavens, and it stood still SIX AND THIRTY MOMENTS[], and the moon also stood still and hastened not to go down a whole day. (Chapter 88:64).*

[](Hebrew word), literally times; what portion of time I cannot understand by this term, never used in scripture to express any division of time, so I have translated it "moments." ⁷*

In Hebrew, the word for "day" in Joshua 10:13 is *yowm*. It can be used to describe several divisions of time, not just 24 hours. One of them is 12 hours, the sunlight part of the rotational period. That the Sun reportedly stood still "for about a day"

thus cannot be assumed to have been for 24 hours. We do not know how long it was, but we have an educated guess. Our guess is that, in combination, the barrel-roll and the crustal skid, that day was lengthened 4 hours, and no more than 6.

Is it too presumptuous to conclude that those natural historians who succeeded William Whiston should have paid more attention to the Werners, the Cuviers, the Conybeares, the Whewells and the Agassiz? Perhaps, less attention should have been paid to the Swedenborgs, the Kants, the Lyells and the La Places. It is recommended for cosmology and geology that the serious student go back 180 and 200 years to where the crossroads in Earth history occurred. The less-traveled road deserves thorough reconsideration.

A scholarly re-examination of the catastrophist theories will require a review of Greek literature of the Heroic Period as well as of the Old Testament. It is further recommended that the serious modern student should study astronomy, while simultaneously surveying the findings of Voyager, Pioneer, Mariner and of other space missions.

EXAMPLE #6 - October 24, 1296 SISERA AND THE CELESTIAL CENTENNIAL

The term "centennial" is being used here in the anniversary sense, but not in the precise 100-year sense. More precisely, this date is estimated (by cyclic theory) to be the 108th rather than the 100th anniversary of the Long Day of Joshua. One of the principal characters was Sisera, a Canaanite colonel. Sisera was a title (rather than a person) as kaiser is a title, king is title and in former times, tsar was a title. In a sense, "Sisera" could be spelled with a small "s."

This was the era in Biblical history of the judges, a 350-year span of history before the monarchy. In this period of tribal rather than national government, Israel wavered back and forth between following the Lord of hosts, and following the planet deities such as Baal and Ashtoreth, the Phoenician terms for Mars and Venus.

Often, almost in historic cycles, the Israelites faltered in dedication to their Creator. They fell into moral compromise, into political vassalage, into economic hurt and into spiritual malaise. Under dire circumstances, a Yahweh-centered "judge" or patriot arose periodically, and under his leadership, Israel returned to the religion of Yahweh, as taught by Moses.

After the wars of Joshua, Southern Palestine was purged of the Canaanites, and to a lesser extent, so was Central Palestine. The Hebrews never did really conquer Northern Palestine; for a time they controlled the countryside while the Canaanites controlled the cities. Under these conditions, Phoenicians and Canaanites made a strong cultural impact on especially the northernmost of the 12 tribes.

Under this circumstance of periodic vassalage to foreign powers including the Canaanites, Israel was reduced to poverty, to disorganization and to near hopelessness. Under these conditions, in the 108th year after Joshua's Long Day, a new patriotic leader arose, Barak by name, with his aide, Deborah. The following scene can be gleaned from the Book of Judges, chapters 4, 5 and 6. Several details shall be pointed out, some of which might escape the casual reader.

1) COSMIC WARFARE COINCIDING WITH MILITARY WARFARE. Nearing this day, we surmised that the seers and stargazers, priests and prognosticators of Baal recommended to their military that it would be a good season for fighting. They may not have understood the 108-year cycle, mathematically, but we surmise that they did understand the 9th cycle of Jupiter in Cancer (which is the equivalent). October 24th of the 108th anniversary of the Long Day of Joshua catastrophe was approaching. And, no doubt, Baal would get his revenge. The Hebrews were also willing to give battle on this historic anniversary of Joshua's triumph.

2) AN EXPECTED DAY OF EARTHQUAKES AND VOLCANISM. Some 108 years later, the Hebrews in Northern Palestine had expectations for the coming day of cosmic crisis that reminded them of the stories of their ancestors as those ancestors fled Egypt in 1447 B.C. The Song of Deborah recalled those catastrophic times.

*Lord, when thou wentest out of Seir,
when thou marchest out of the field of Edom,
the earth trembled, and the heavens dropped,
the clouds also dropped water.*

*The mountains melted from before the Lord,
even that Sinai from before the Lord God of Israel.*

Judges 5:4- 5

As the time of the lawgiving had been one of volcanism and tremors or earthquakes, so would be the expected day of cosmic crisis.

3) ANOTHER LOCAL CONCENTRATION OF IRON. The Northern Canaanite Confederacy was once again wealthy in armor, in shields, in spears, in battle axes, and especially in chariots. Furthermore, they liked mobile warfare in the valleys.

*And Sisera gathered together all his chariots,
even nine hundred chariots of iron...
Judges 4:13a*

Such a concentration of iron armor was ominous during a time of scheduled electric catastrophism.

4) FIGHTING STARS. One Hebrew word for "stars" is the plural of *kowkab*. This word means planets in the sense of rolling planets or rotating planets.

*They fought from heaven;
the stars in their courses fought against Sisera.
Judges 5:20*

According to our theory, these stars were three in number, none other than Mars, Deimos and Phobos. It is suggested that the craters of Mars, like eyes, were seen as Mars rotated, a spinning which happens to be once per 24 hours, 37 minutes, just 41 minutes slower than the Earth's rotation. Also, if tilts could have been measured for both planets, which they weren't, those tilts would have been about $23\frac{1}{2}^\circ$ and 24° , like the Earth and Mars today. Is this pair of similarities a result of uniformitarian chance or might it be that there is a better explanation?

5) THE MOTION OF THE FIGHTING STARS. In Hebrew, there is a seldom-used word, *cuc*, having a variety of meanings. For a horse, its meaning could be to leap or to gallop. For a crane or a swallow, it could mean to swoop or to fly.

*Then were the horsehoofs broken by the means of the pransings, the pransings
of their mighty ones.
Judges 5:22*

In the early uniformitarian era, rabbinical translators (followed by Christian translators) have followed the horse concept; after all, chariots need horses and horses gallop and prance. In our view a better understanding would have been achieved if they had followed the crane or swallow concept and translated in favor of "swooped." The best concept is the celestial concept, and perhaps *cuc* should have been translated "path in the sky" or "orbit."

"Mighty ones" in Hebrew is *'abbiyr* and its meanings can be various, including champion, chief, giant one, powerful one, warrior, bull, and a strong one. Another meaning is "angel," and we suggest a destroying angel rather than a guardian angel. If this word is associated with astronomy, it means the chief planet with its satellites, as we know from the account of the fighting stars examined earlier in Chapter I. In Judges 5:23, a clarification is given for "mighty ones," and in that case the translator did choose the word "angel," correctly in our view.

On this celestial occasion, the lightning struck the chariots in a location known then as Meroz in Northern Israel, in the lowlands. It may well have been within 5 or 10 miles of the modern city of Afula. If archaeologists can discover this site, the probability is that they will find traces of vitrified sand or glass. They may find some discarded iron also, but such is less likely as battlefields in those days were scavenged for scrap also.

The translators were thinking "chariots," "cavalry," "horses," and such whereas on this occasion the ancients were thinking about the "steeds" of Mars, Deimos and Phobos. This is a dramatic case wherein the perspective of the translators makes a vast difference.

EXAMPLE # 7 March 20/21, 1241 B.C. GIDEON'S MIDNIGHT BASH.

The dating of the Celestial Centennial of Sisera is approximate and speculative; approximate in the Bible and speculative since it is based on our discovery of the cyclicism and the timing of those cycles. Our sequel will present the background process and the research which went in to our discovery of cyclicism. One and one half cycles later came the mid-March catastrophe of 1241 B.C. Once again, the dating from the Book of Judges is approximate; this is the middle of the 13th century B.C. and nothing more precise than that can be said. We shall present the military-political background first, and the cosmic background second in discussing this event.

The political-military background of the scene in Palestine in 1241 B.C. was not good for the Hebrews. Once again they suffered from military disorganization, from political disunity, from economic duress, and according to the prophets, from spiritual malaise. (See Judges 2:13 and 10:6). Many had turned to the worship of Baal and Ashtoreth. They became immoral with respect to certain of the ten Commandments. They became compromising ethically, and there was a general social deterioration.

Under such conditions, Palestine was ripe for invasion and pillage or conquest by any one of several neighboring states. Sometimes the oppressing nation had been a neighboring state like Moab. On other occasions, the problem was roving pillagers, like the Amalekites or the Midianites. On this occasion it was the Midianites (who may have been a branch of the Hittites) who were ravaging the Palestinian countryside.

Gideon was a rising Hebrew patriot, an inspired man. He sought to put an end to the pillaging and the plundering. He had a dream. He had an idea. Normally under similar conditions, the Hebrews had put together a ragtag militia of 10,000 or 20,000 untrained soldiers for a major battle, and in so doing, they lacked military success during this century. Inspired, instead of gathering 10,000 poorly-trained troops, many just off the farm, his idea was to gather 300 elite soldiers, select and well-disciplined. Instead of arming these soldiers with the traditional weapons, battle axes, shields, spears and swords, he gathered (1) empty ceramic pots, (2) lamps, and (3) trumpets.

One can be reasonably sure that this occasion was in mid-March for the following citation occurs in Ginzberg's *Legends of the Jews*,

*The day on which Gideon gained his great victory was during the Passover....*⁸

This was not a passover anniversary of the average year, but rather of a flyby year. Of the previous mid-March flyby of 1349 B.C., nothing is recorded in Hebrew literature. It may have been a relatively weak one, or it may have been a heavy, but unrecorded one.

At midnight on the night of Friday the 13th (of Nisan on the Hebrew calendar), Gideon's small band advanced toward the Midianite encampment with their strange and unique hardware. First, they lit their lamps, perhaps simulating cosmic sparks. Next, they blew their trumpets, perhaps simulating the equivalent of a warning siren. Thirdly, they bashed their pots, simulating shock wave noises of distant celestial discharges. And finally, the 300 soldiers shouted "The Sword of the Lord." The Midianite raiders were spooked during this night. Perhaps they too had heard some celestial scuttlebutt about this being a night of cosmic disorder. The invading raiders packed their military bags and equipment, and without waiting, headed for their homeland.

The interpretation just about to be presented of a scheduled catastrophic flyby makes sense out of this strange and sudden military withdrawal. The Midianite raiders feared being struck by the flux tube of Mars and its celestial discharges, just like their fathers and their grandfathers once were. If such was upon them, there was no time to waste in getting out of the area. If this interpretation is not correct, then what is the logical alternate explanation?

What could strike fear into the hearts of the Midianite raiders based on (a) lighted lamps, (b) blowing trumpets, (c) bashing in of clay pots, and (d) yelling "The Sword of the Lord" or some other such phrase? The Midianite raiders were not a cowardly lot. Yet, their sudden, induced surge of fear was both intense and overwhelming. This fear must have some rationale behind it. That rationale seems to have escaped the rabbis and the Christian commentators, who have no concept of Planetary Catastrophism.

Perhaps what seems so strange and bizarre is not really so. Gideon is to be credited with a remarkable plan, well-executed by disciplined, elite soldiers acting in unison. The unison of the lighting of the lamps and the distant noises obviously was the key to the spooking of the Midianite raiders. Gideon did not want sloppy soldiering for such an occasion. What the Midianite raiders did not know was that the Sword of the Lord functioned between the two planets but only on the sunward side, since Mars invariably made sunward side flybys. Thus the Sword of the Lord was operational in 1241 B.C., but it was raking the Americas in the other hemisphere. The Sword of the Lord had been functional, raking Eurasia some 54 years earlier, but that was an October flyby, one during the daytime of Palestine. Thus, in mid-March catastrophes there was no Sword of the Lord operational in the Middle East.

Perhaps Gideon also did not know that, but if he did understand it, he wasn't about to tell the Midianites. Such is the historical scene; we turn now to the astronomical scene.

If one assumes the 360-day year in the catastrophic era, and the 12:1 orbital resonance for the Earth's orbit with Jupiter's, one can calculate the position of any planet for any ancient year. Thus far, the emphasis has been on October flybys. Every 108 years, one occurred. Every fifth such flyby, Saturn was in Capricorn, narrowing down the Martian orbit. Those, we suspect, were the years of the heaviest catastrophes, what we call megacatastrophes.

Every 540 years, there was a megacatastrophe in October. Among the cases cited have been 2484 B.C. (The Flood), 1944 B.C. (The Tower of Babel Discharge) and 1404 B.C. (The Long Day of Joshua.) What would happen if both Jupiter and Saturn were to exchange places? What would happen if Jupiter were in Capricorn (rather than Cancer) and Saturn were in Cancer (rather than Capricorn)? If one traces the positions of the planets back to the final catastrophic year, 701 B.C., one can discover that the zodiacal arrangement was the opposite case, with Jupiter in Capricorn, and with Saturn in Cancer. The 540-year megacycles was operational for mid-March catastrophes even as they were for October catastrophes. In short, conditions in 1241 B.C. were ominous indeed, with the planets Jupiter and Saturn in exchanged position when compared to the Long Day of Joshua.

Thus, in an astronomical sense, The Gideon Midnight Bash was the forerunner, a preview to the Long Night of Sennacherib in 701 B.C. The Long Night of Sennacherib was probably also an extended "day," featuring spin axis precession and crustal skid, except it happened during the nighttime for Palestine. The major difference between The Gideon Midnight Bash and The Long Night of Sennacherib, 540 years later, was that (for whatever reason) in 701 B.C. Mars made its final flyby on the outside, on the night side of our planet. On the night of March 20/21, 701 B.C., it would have been very appropriate for some midnight soldiers to call out "The Sword of the Lord," as we shall see. (On that night, 540 years into the future, the army invading Palestine would be Assyrian, not Midianite.)

We shall return to Ginzberg. He adds in his Talmudic commentary that in those days, many of the Hebrews themselves were so addicted to the worship of Baal (Baalzebub) that they constantly carried around small images of Mars with them in

their pockets and occasionally kissed the image with fervor. Under a uniformitarian scenario, such seems strange and inexplicable, even foolish and silly. Under a catastrophic scenario, one can well understand the popularity of such an ineffective ritual. Such was part of the petitions, pleadings and solicitations to the planet-deity Mars. So also was the sacrificing of infants into its belly oven, demonstrating how sincere and fervent were the worshippers. All of this, including Gideon's Midnight Bash, including kissing images of Mars, and including infant sacrifice reflects the high level of tension and fear which the Hebrews, among other ancient peoples, had for Mars flybys.

EXAMPLE # 8 October 24, 1080 B.C. THE PHILISTINE PHALANX.

This day was another Centennial, a centennial of 108 years rather than of 100.

*And as Samuel was offering up the burnt offering,
the Philistines drew near to battle against Israel:
but THE LORD THUNDERED WITH A GREAT THUNDER ON THAT DAY
upon the Philistines, and discomfited them;
and they were smitten before Israel.
I Samuel 7:10 (Caps ours.)*

What was the nature of the "great thunder" on that particular day?

In Hebrew, "thunder" is *gowl*, which includes the idea of both thundering and sparks. "Thundered" is *ra'am* which means thundering with a great roar, very violently. "Discomfited" is an anemic English word from the Hebrew *huwm*, meaning to make an uproar, to agitate greatly, to destroy, to make a great noise, to ring as a peal of thunder. "Smitten" in Hebrew is *nagaph*, whose meanings include to gore, to defeat, to inflict, to dash, to slay and to strike, as with a plague. The language of catastrophism is there in full form. But the modern translations have been anemic, flat, and as uninspired as is the economy of Eastern Europe in our era.

Josephus, as translated by William Whiston, provides a little extra clarity:

But things so fell out, that they would hardly have been credited, though they had been foretold by anybody, for in the first place, God disturbed their enemies with an earthquake, and moved the ground under them to such a degree, that he caused it to tremble, and made them to shake, insomuch that

by its trembling he made some unable to keep their feet, and made them fall down, and by opening its chasms, he caused that others should be hurried down into them; after which he caused such a noise of thunder to come among them, that it was ready TO BURN THEIR FACES; and he so suddenly shook their weapons out of their hands...

*So Samuel, with the multitudes, pursued them to Bethcar, a place so called: and there he set up a stone as a boundary of their victory, and their enemy's flight, and called it "The Stone of Power."
(Caps ours.)⁹*

TIMING. As it was in the case of Gideon's Midnight Bash and with Sisera's Celestial Centennial, the timing of the event is at best approximate from Biblical sources. Precise chronologies again are lacking. However, one can make an approximate dating by locating several timing-related factors. (1) The Philistine Phalanx was routed when Samuel was a young priest, a freshman priest. (2) Under the Code of Moses, priests were invested at the age of thirty, never earlier, never later. (3) The analysis of Finis Dake is that Samuel died at an age of about 98 years.¹⁰ (4) Samuel died in or about the year 1015 B.C., in the 38th year of Saul's reign. The conclusion is, therefore, that Samuel was born about 1113 B.C. and he was ordained to the priesthood 30 years later, in 1083 B.C. This was three years earlier than the Philistine Phalanx, which is dated by cyclicism at 1080 B.C. Thus, by a convoluted means of dating, the year of 1080 fits for the time when Samuel was a freshman priest.

It is estimated that on this particular flyby day in 1080 B.C., Mars was in the range of 40,000 to 60,000 miles and if so, the subcrustal tide generating earthquakes would have been 150 to 400 feet high. If Mars were 50,000 miles distant, the subcrustal tide would have been in the range of 230 feet. So it was that Josephus indicated that there were great earthquakes, and the ground under the Philistine Phalanx developed sudden fissures. Also it is easy to perceive that, once again, iron armor (this time owned by Philistines) attracted celestial lightning. Further, it is easy to perceive that such lightning did indeed create flash burns and the earthquakes would create sudden fissures as the crust flexed like the belly of a woman in travail, or childbirth.

It is relatively easy to estimate the amount of sub-crustal tide which would occur during a close Mars flyby. The Moon, at 240,000 miles, creates a crustal tide of 3.1 inches. The Sun at 93,000,000 miles also creates a subcrustal tide of 1.4 inches. When the Sun and the Moon are in an alignment, these two figures add.

TABLE II
SUBCRUSTAL TIDES CAUSED BY ASTRONOMICAL BODIES

Mars at Varying Distances	Mars-Induced Crustal Tide	Moon At 240,000 Miles	Sun At 93 Million Miles
240,000 miles	2.25 feet	3.1 inches	1.4 inches
120,000 miles	18 feet	3.1 inches	1.4 inches
60,000 miles	144 feet	3.1 inches	1.4 inches
30,000 miles	1152 feet	3.1 inches	1.4 inches
15,000 miles	9216 feet	3.1 inches	1.4 inches
12,000 miles	18000 feet	3.1 inches	1.4 inches
10,500 miles	26689 feet	3.1 inches	1.4 inches

Table-2

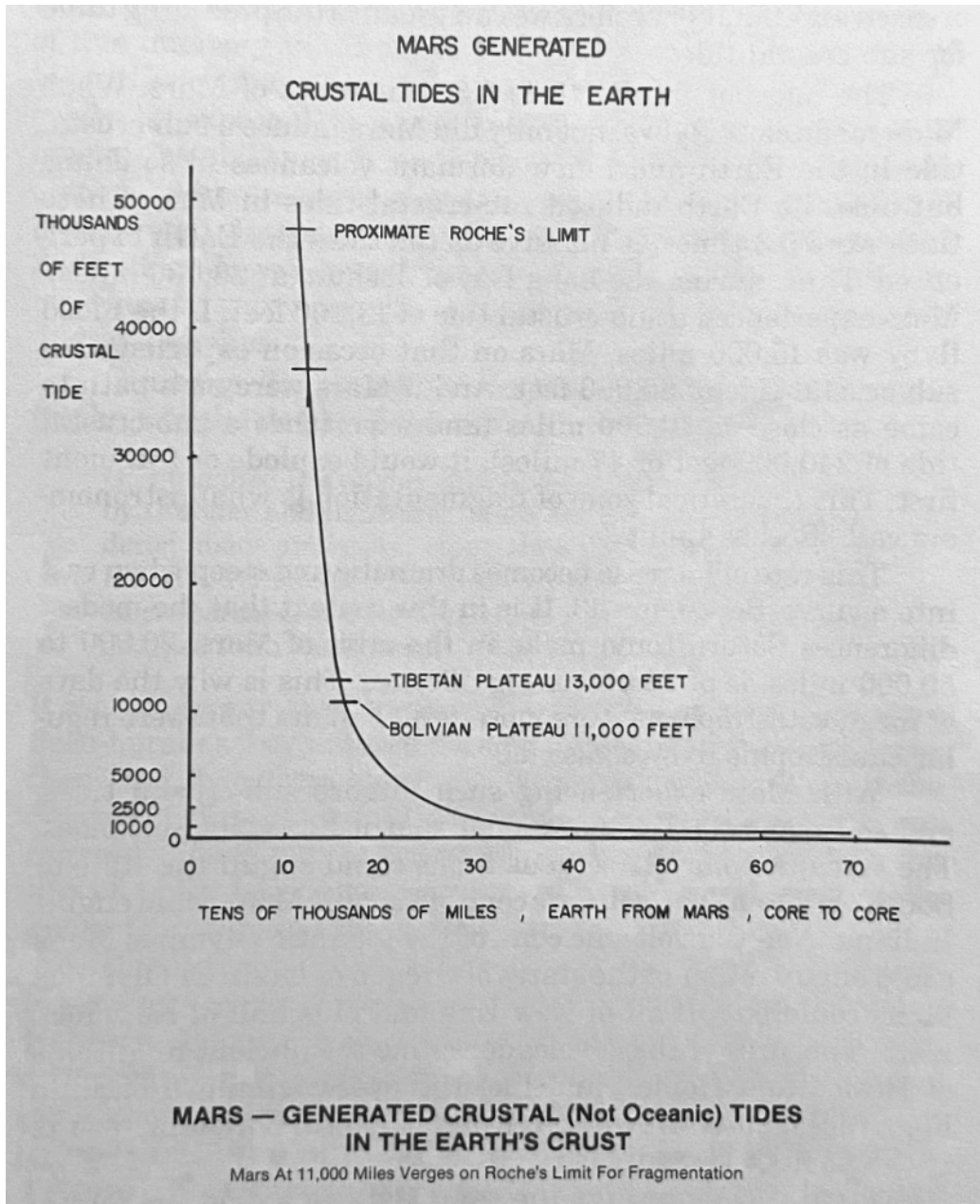


Figure-13

Mars has a mass of 8.74 times that of the Moon. Therefore, Mars, when it was at a distance of 240,000 miles, created a tide of 27 inches. Tides increase according to the mass over the cube of the distance rule. This means that as the distance between Mars and the earth halved, the tidal intensity increased eightfold. Therefore we can produce the preceding table for sub-crustal tides.

The mass of the Earth is 9.3 times that of Mars. When Mars made close flybys, not only did Mars induce a sub-crustal tide in the Earth and renew dormant volcanoes in so doing, but also the Earth induced sub-crustal tides in Mars. Those tides were 9.3 times as massive as the tides the Earth experienced. Thus, during the Long Day of Joshua (at 28,000 miles), Mars experienced a sub-crustal tide of 13,200 feet. If the Flood flyby was 15,000 miles, Mars on that occasion experienced a sub-crustal tide of 85,000 feet. And if Mars were on a path to come as close as 10,500 miles (and experience a sub-crustal tide of 240,000 feet or 47 miles), it would explode or fragment first. This theoretical zone of fragmentation is what astronomers call "Roches Limit."

This rate of increase becomes dramatic and steep when cast into a curve. See Figure 13. It is in this context that the modest differences Saturn could make in the orbit of Mars, 20,000 to 50,000 miles, is of enormous significance. This is why the days of mega-catastrophism were more severe affairs than were regular catastrophic flyby occasions.

With Mars experiencing such intense sub-crustal tides, and so frequently, it is no wonder that it has giant volcanoes. The volcanic cone of Ascræus Mons could engulf the state of South Carolina. The volcanic cone of Pavonis Mons could engulf Indiana. And the volcanic cone of the gigantic Olympus Mons could engulf either of the states of Oregon or Utah. Or Olympus Mons could engulf all of New England plus half of New York state. The sizes of these volcanoes, like the ancient renditions of Hesiod and Homer, and like the overwhelming Noachian Flood, are results strewn across part of our solar system, results of the ancient Mars flybys.

Figure 13 represents the same data in a diagram format as Table II. Note the steepness of the curve when the distance of Mars is less than 30,000 miles. Our estimate is that of the 170 or so flybys, about six or seven were within 20,000 miles, and they preceded the Noachian Flood, which at an estimated 15,000 miles, was the closest of them all.

The Philistine Phalanx we are estimating at 50,000 miles, and perhaps even as distant as 60,000 miles. At 60,000 miles it would create a sub-crustal tide of about 150 feet. Earthquakes of this intensity would make a Richter scale of 1 to 10, even if logarithmic, obsolete. A sub-crustal tide of 150 feet or so could easily be expected to create fissures or chasms in regions of crustal instability such as

Greece, Palestine, Turkey and Iran. One should not assume that the account of this catastrophe is exaggerated. Josephus did not consider the account exaggerated and neither do we. Samuel, the freshman priest, was the ultimate eye-witness source for this account as found both in the Bible and in Josephus.

Ginzberg, like Josephus, describes this moderate" catastrophe and the defeat of the Philistine Phalanx.

God terrified the enemy first by an earthquake, and then by thunder and lightning. Many were scattered and wandered about aimlessly; many were precipitated into THE RENTS TORN IN THE EARTH, and the rest had their faces scorched, and in their terror and pain their weapons dropped from their hands. (Caps ours) ¹¹

It would appear that some of the Philistine formations were flash-burnt as they watched the electrical discharge or discharges; "they had their faces scorched." This is not unlike many of the citizens of Hiroshima on the day that the first atomic bomb was dropped. "Rents torn in the earth" suggest sudden fissures, the like of which have been known to suddenly occur along earthquake fault zones in the modern era.

This catastrophe in 1080 B.C. was no doubt well remembered, and was, for many years, also celebrated by the victorious Hebrews. Among a large number of Hebrews, Samuel saw it as an eye witness. Records were made and were passed on to future generations. A catastrophe similar to the Philistine Phalanx, the flyby of 1080 B.C., would not recur in Palestine for more than a century. Nevertheless, its next arrival was predicted and widely expected, amid grave fears and anxieties. This flyby would be part of the basis as to why, just before the flyby of 972 B.C., the Hebrews took a national census. Moreover, when the next cataclysm did arrive, it was with a certain timing, "even to the time appointed." (See II Samuel 24:15.)

NOTES

1. In standard gyroscopic theory, when there is a spin axis precessing that precession takes three forms:
 - A. A change in spin axis tilt, either steeper or shallower
 - B. A change in spin axis location, in any direction.
 - C. A minute change in spin axis velocity, always an increase.
2. Were a continent to drift 5,000 miles in 250,000,000 years, which is standard Continental Drift dogma, and at a steady rate, which is also standard Continental Drift dogma, a continent would drift 1 mile in 50,000 years. This is the equivalent of 1 foot in about 4200 years, which is 1 inch in 350 years.

There is evidence that the Earth's spin axis has relocated, and hence the Earth's equator has relocated. The Earth's equatorial diameter is 26 miles greater than its polar diameter due to centrifugal force, or spin. A shift in the equatorial bulge of major proportions (3,000+ miles) seems to have occurred about 4500 years ago, during Noah's Flood. The Earth's subcrustal isostatic readjustment to its new equatorial bulge is believed to be still occurring in minute amounts at this date 4500 years later. Those minute shifts are misinterpreted as "evidence" for Continental Drift.

3. The temperature at the location struck by the celestial lightning may have exceeded a million degrees Fahrenheit momentarily.
4. Josephus, *Antiquities*, Book V, Ch. I, pp. 17.
5. A condensation of the rhetoric leaves us with the essence of the question. Were Joshua and Isaiah unenlightened or was Lyell?
6. Josephus, *loc. cit.*
7. M. M. Noah, *The Book of Jasher*. Mokelumne Hill, Calif. 95245, Health Research, p.260.
8. Ginzberg, *op. cit.*, Vol. IV, p. 41.
9. Josephus, *op. cit.*, Book VI, Ch. 2, pp.2.
10. Finis Jennings Dake, *Dake's Annotated Reference Bible*. Atlanta, Dake Bible Sales, p. 319. "Samuel died at a ripe old age and all Israel mourned for him..." It is supposed that he died about 2 years before Saul did, when he was about 98 years of age (note b 8:1.)
11. Ginzberg, *op. cit.*, Vol. IV, p. 64.

Chapter V

THE DAVIDIC FLYBY The Catastrophe of 972 B.C.

Following the flyby of late October, 1080 B.C. (the Philistine Phalanx), just discussed, there must have been a flyby in March of 1025 B.C. according to our model. Unless the following catastrophic scene relates to 1025 B.C., there is no account to be found. The model indicates that the flyby of 1025 B.C. should have been at night (Palestine Time) and on the opposite side of the planet. It also should have been among the more distant of the mid-March flybys, perhaps 60,000 miles. Either of these reasons may suffice for an explanation as to why it does not appear in the Scripture.

There seem to be three descriptions in Scripture of the flyby of 972 B.C., technically four. One is given twice. The following celestial scenario is found in Psalm 18:7-15. The authorship of this Psalm is ascribed to David. If so, David must have composed it in the last year, or next to the last year of his life, in 972 B.C. or in 971 B.C. Since this description is also found in II Samuel 22:8-16, we conclude it must be a Psalm of more than average import. Some call this the Great Psalm.

Account # 1

*Then the earth shook and trembled;
the foundations of heaven moved and shook,
because he was wroth.*

*There went up a smoke out of his nostrils,
and fire out of his mouth devoured:
coals were kindled by it.*

*He bowed the heavens also, and came down;
and darkness was under his feet.*

*And he rode upon a cherub, and did fly:
and he was seen upon the wings of the wind.*

*And he made darkness pavilions round about him,
dark waters, and thick clouds of the skies.*

*Through the brightness before him
were coals of fire kindled.*

*The Lord thundered from heaven,
and the most High uttered his voice.*

*And he sent out arrows, and scattered them;
lightning, and discomfited them.*

*And the channels of the sea appeared,
the foundations of the world were discovered ...
at the blast of the breath of his nostrils ...*

II Samuel 22:8-16 and Psalm 18:7-15

The "cherub" or angel in this passage was discussed in Chapter II as one of the forms of Mars in the Old Testament. A "cherub" was to the Hebrews an angel of destruction. In modern parlance, the word has taken quite a different connotation. As the fifteen subsequent categories of observations are made about the flyby of 972 B.C., having a familiarity with this scenario will contribute to the over all understanding.

The next two descriptions (along with the previous one) comprise a literary and an astronomical gold mine. For analysis these are a triad of "mother lodes" out of which rich veins of golden perspectives emanate. This triad comprises one of the richest concise literary accounts of catastrophism found in any language, be that language Chinese, Greek, Hebrew, Incan, Mayan, Persian, Punic (Phoenician), Roman or whatever the alphabet of origin. The eye-witness aspect of these next two accounts must not be under-estimated.

Account # 2

And David said unto Gad, I am in a great strait: let us fall now into the hand of the Lord; for his mercies are great: and let me not fall into the hand of man. So the Lord sent a pestilence upon Israel from the morning EVEN TO THE TIME APPOINTED: and there died of the people from Dan to Beersheba seventy thousand men.

And when THE ANGEL STRETCHED OUT HIS HAND upon Jerusalem to destroy it, the Lord repented him of the evil, and said to the angel that destroyed the people, It is enough: stay now thine hand. And the angel of the Lord was by the threshing place of Araunah the Jebusite.

II Samuel 24:14-17 (Caps ours)

Account # 3

So the Lord sent A PESTILENCE upon Israel: and there fell of Israel seventy thousand men. And God sent an angel unto Jerusalem to destroy it: and as he was destroying, the Lord beheld, and he repented him of the evil, and said to the angel that destroyed, "It is enough, stay now thine hand." And the angel of the Lord stood by the threshing floor of Ornan the Jebusite. And David LIFTED UP HIS EYES, AND SAW THE ANGEL OF THE LORD STAND BETWEEN THE EARTH AND THE HEAVEN, HAVING A DRAWN SWORD IN HIS HAND STRETCHED OUT OVER JERUSALEM. Then David and the elders of Israel, who were clothed in sackcloth, fell upon their faces.

I Chronicles 21:14-16 (Caps ours)

Clues abound in these two magnificent eye-witness accounts of the flyby scene, as they also do in Psalm 18, which may or may not be an eye-witness account. It is presumed that these two eye-witness accounts are by two different persons. Perhaps one of those two sources was the prophet Gad. Solomon, in his late twenties at the time, is a possibility as a reporter or editor. From these two flyby accounts, no less than fifteen categories of information can be sifted and sorted out.

OBSERVATION-A: THE APPARENT NEED FOR A CENSUS. By 973 B.C., the land was already filled with apprehension. Jupiter was in its 9th cycle since the Philistine Phalanx, and it was next door in the zodiac to Cancer. It was the 107th year since the previous October flyby. Another destructive flyby was scheduled within a year.

There were apprehensions. There were questions. Would the flyby occur during the daytime or the nighttime? Would the flyby discharge on cities such as Jerusalem? Would deadly shock waves radiate out from the site of striking lightning? Would earthquakes level many of the structures of Jerusalem? Would there be renewed volcanism? Would there be out-of-control prairie fires ravaging croplands and orchards? How many people would be killed during the pestilence? The questions that David and his cabinet were asking concerned the severity of the coming destruction rather than whether or not it would come.

To one of these questions, a human answer could be engineered. That question concerned the expected casualty count. There were two possible solutions. One was to unpile collapsed buildings and count dead bodies, but such a procedure would not allow for persons vaporized directly at the spot of celestial discharges, nor would it allow for bodies missed. The other and easier solution was to take two roll calls, or censuses, one before the flyby and one following it. With the exception of some who might die from natural causes, a simple subtraction of the second list from the first list would indicate the general extent of the casualties in each district, in each community and in each town. When totaled, this procedure would provide a composite sum for the whole land.

In II Samuel 24:1, it is reported that David did authorize a national census, and furthermore his action was viewed as a sin. Why it was regarded as a sin isn't stated, but it is implied that such reflected a lack of faith on David's part. Whether this is the correct interpretation or not, a census was taken before the celestial flyby. It probably required several months to organize and to complete. It is implicit that there must have been in fact two censuses taken, one before and one after the flyby, because there was a totaling of the casualty counts from throughout the land. There was no criticism in Scripture of the second census.

As a consequence of David's sin as leader of the nation, Gad (the prophet) advised David that he had three choices in his punishment.

- Three years of famine.
- Three months of military defeat by his enemies.
- Three days of pestilence from on high.

See I Chronicles 21:11-12. The Lord, in His foreknowledge, no doubt realized that David would choose that punishment which was coming anyhow, the pestilential flyby. It approached, and like the train, it was on schedule.

OBSERVATION-B: THE SECOND ROLL CALL AFTER THE FLYBY. After the pestilence passed over, a second roll call was taken to count the survivors. By comparing census lists, it was found that there were 70,000 who had been killed. BUT, traditionally only men over the age of 20 would have been counted in either the first or the second census. Comparable numbers of women (60,000) and children and youths under 20 (100,000) can be presumed as casualties also. This is a total of over 200,000.

The census extended to all 12 provinces of Israel. It was from Dan (in the far north) to Beersheba (in the arid south). A Belgian counterpart is from Ostend on the North Sea to the Ardennes in the extreme east of Belgium. The casualties occurred throughout the land, not in just one or two cities, communities or provinces.

What was the population of Israel (including all 12 tribes) at that time? It was probably between 3,000,000 and 4,000,000, conservatively speaking. A casualty total of 250,000 out of 4,000,000 is 6¼%. One can thus roughly estimate the casualty rate as having been between 5% and 7% throughout the land. By comparison, if a catastrophe hit the United States and produced 15 million fatalities (not including the injured) in a 36 or 48 hour period, such would be recorded in the annals of American history as a dreadful fact even if later historians did not understand the nature of it. So it was with Israel in 972 B.C.

OBSERVATION-C: THE CYCLIC TIMING. In our citation from II Samuel 24, there was a capitalization of the phrase "even to the time appointed." This phrase is much like the phrase in The Epic of Gilgamesh, "the fixed time arrived." (English translators chose the word "fixed" on both occasions.) To a Planetary Catastrophist, there is little doubt that the ancients were aware of the cyclicism of ancient catastrophes, even though their methods might have varied.

In that era, Jupiter was in a precise 12:1 orbital resonance with the Earth, which means it traversed one-twelfth of the celestial circuit each year. Very conveniently, the Sumerians or their predecessors arranged the zodiac (the celestial circuit of the

fixed stars) into twelve regions, one region for each year of Jupiter. In our sequel, we will present our research which will reveal how we know that the ancient catastrophic cyclicism was 108 years. It will be of a technical nature.¹

It is known that the ancients were interested in tracking the various planets in their journeys around the zodiac. Since 108 years (the catastrophic cycle) is divided by twelve equals nine, it follows necessarily that every 9th cycle meant a celestial upheaval. Also, we know that Jupiter was in Cancer (the crab) during the catastrophic October flybys, as it was in Capricorn during the catastrophic mid-March flybys. Therefore, it follows that Jupiter could have served as a silvery celestial clock in its 12-year orbit. We speculate that "the fixed time" for the year was when Jupiter arrived in Cancer for the ninth time. In addition, we know that, within the calendric year, it was the month of October or Marchesvan (Mars' month). From the Celts and their Samhain (Halloween), and from the Romans and their amilustrum, and from the Book of Genesis, which cites The Flood as occurring on the 17th day of the 2nd month, we observe that the autumn catastrophic day was in late October. The 17th day of Marchesvan in the Hebrew calendar is our 24th of October. Such was the date every 108 years when the citizens of Palestine "buttoned up" and perhaps stocked their caves, root cellars or their fox holes.

OBSERVATION-D: THE CALENDRIC TIMING. Our model indicates that catastrophes occurred either in mid-March or in late October, and on anniversaries of earlier flybys only. There is some indication here of an autumn flyby. Scripture refers to the "threshingplace" of Araunah (or Ornan), a Jebusite farmer. Both wheat and barley stalks in mid-March are only ankle high and green. These two grains typically were harvested in late May or early June. By harvesting, we mean the stalks were cut and gathered in bunches. Later, winnowing and threshing would occur, even up into the late autumn.² The threshing activity is a hint of this flyby being autumnal.

OBSERVATION-E: THE THREE-DAY DURATION OF THE PESTILENCE. In I Chronicles 21:11, the duration of the "pestilence" was cited as three days. This need not mean a full 72 hours. It may mean, in the thinking of the ancients, one full day and fractions of the day on either side, which would comprise 3 days to them. We identify Mars with the Angel of the Lord, and in its catastrophic orbit as sketched in Figure 1, Mars had a certain velocity (as did the planet Earth). Also if their orbits crossed, there was an angle formed by those two orbital lines.

Figure 14 (like Figure 9 in Chapter IV) illustrates our team analysis of the trajectory of Mars, with Deimos and Phobos in its ancient, catastrophic orbit. The velocity of Mars varied, being more rapid toward perihelion and being slower toward aphelion. When Mars was crossing the 92.1 million-mile region from the Sun, its velocity was between 77,000 and 78,000 m.p.h. The Earth's velocity was close to 67,000 m.p.h. Thus Mars was about 11,000 m.p.h. faster.

Our research team, led in this phase by Ron Hatch, has determined that the angle formed by the orbits was 19° . This should be considered accurate within 1° . By combining the differing velocities and the different trajectory angles, it turns out that Mars approached the Earth during late October and during mid-March at a rate of about 27,000 m.p.h. This translates into about 650,000 miles per day. Figure 14 illustrates this velocity on a map with a half million-mile scale.

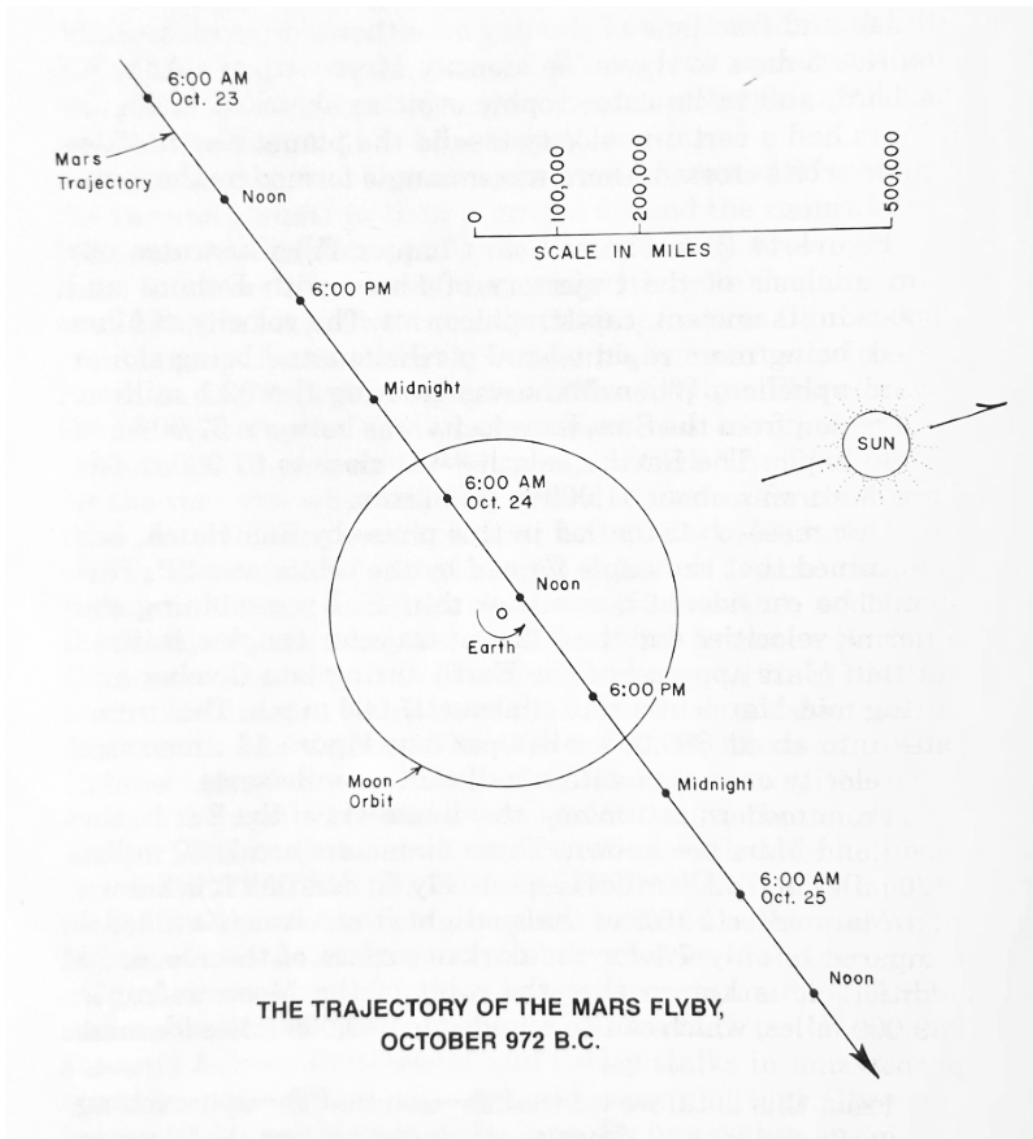


Figure-14

From modern astronomy, the diameters of the Earth, the Moon and Mars are known. Those diameters are 7900 miles, 2170 miles and 4200 miles respectively. In addition it is known that Mars reflects 16% of the sunlight it receives (its albedo) compared to only 7% for the darker surface of the Moon. In addition, it is known that the orbit of the Moon averages 239,000 miles, which can be rounded to 240,000 miles for most purposes.

From this data, we can understand that the approaching Mars reflected 9 or 10 times as much sunlight as the Moon at 240,000 miles, the lunar orbit, if they were in the same phase (full moon or a comparable crescent). Again, if they were in the same phase, Mars-shine would equal Moon's glow when Mars was at 600,000 miles, both coming and going. By dividing 1200,000 miles (the distance for which Mars-shine exceeded the Moons luminosity) by 27,000 m.p.h., that time period of greater Mars-shine is estimated at 44 hours.

By further analysis, if it is assumed that the time when the two planets were the closest (the perigee) was at 10:00 a.m. on October 24th, it follows that the time when Mars-shine became brighter than the glow of the Moon (assuming comparable crescents) began about noon of October 23. It continued through mid-morning of October 25, one full day and fractions of two others. There is no doubt that the ancient Hebrews (among others) compared the brightness of the two bodies, Mars with a 4200-mile diameter and the Moon's of 2,160.

By the same line of reasoning, the brighter disc of Mars looked as big in diameter as the Moon at 470,000 miles distant. Mars looked bigger than the Moon for about 36 hours. This would have been from 8:00 p.m. on the evening of October 23 until 4:00 a.m. on October 25. The significant earthquakes and the sweeping of the Sword of the Lord (the flux tube) were both limited to 7 or 8 hours, which would have been from 6:00 a.m. of October 24th until 2:00 p.m. of the same day. We have ascertained that the "Destructive Cherub" possessed (1) a gravitational field, (2) a planetary magnetic field, (3) rotation like a generator and (4) reflection. Further, the time period of the destructive flyby given in I Chronicles is based on the visual reflection, three days (including fractional days) and was not based on the timing of the earthquake duration or the duration of the flux tube, the Sword of the Lord.

OBSERVATION-F: THE DIRECTION OF THE SWORD OF THE LORD. David and his cabinet looked and did see the oncoming danger in the form of the cherub or angel. It is recorded exactly which direction the entourage looked. It was not north toward the Hittites and the Assyrians. It was not south toward Egypt. It was not west; toward Greece. It was *primarily UP*. "David lifted up his eyes. He saw the angel of the Lord standing between the Earth and heaven." Earlier, it was reported by Apollodorus that Typhon was observed similarly by the sea-going Greeks, "standing on the sea," amid celestial scenery with his hair brushing the stars. The Sword of the Lord is apparently the same phenomenon the Greeks called Typhon, and this dual phenomenon is very similar to the Io-Jupiter flux tube of our time.

The degree of fear displayed by the Hebrews to the Sword of the Lord and by the Greeks to Typhon was comparable. (From Typhon comes our modern English word, "typhoon.") Since the Earth rotates on a west-to-east direction, that direction which David looked to see the Sword of the Lord was upward modified by eastward. Furthermore, the direction which the Sword of the Lord progressed (east-to-west) was logically the opposite of the Earth's west-to-east rotation.

OBSERVATION-G: THE DAYTIME FLYBY. Our Seattle research team has done work in some depth on this model. Even as Hatch led in the research in discovering the cyclicism, so it is that Loren Steinhauer assisted by having created a computer model of the catastrophic orbit of Mars. What was learned was that if Mars were to make a nightside flyby, the perturbations (or pulls or yanks) on Mars would be reversed, and with that reversal, the catastrophic orbit would unravel rapidly into a non-resonant, more circular orbit. Thus, in a computer program of the catastrophic orbit of Mars, it is seen as essential that Mars make a sunward side flyby on each and every occasion if there are to be successive, later catastrophes. The text indicates indeed that this was a sunward side flyby. Furthermore, a broader review of a succession of October catastrophes reveals that all of those which are recorded in the Bible and fall into the October pattern were daytime flybys, whereas all of those recorded as March flybys or passovers were at nighttime for citizens of Palestine and for those of the entire Eastern Hemisphere.

Yet another feature of this mid-morning flyby is the nature of the torque which Mars apparently put on the Earth's spin axis, and the direction of any crustal skidding which occurred. In both cases (spin axis precession and crustal skidding), for daytime flybys as reported from Palestine's longitude, such relocation of the North Pole as might occur will be in the direction toward Alaska and away from Norway and Eastern Europe and Palestine. Palestine will shift slightly closer to the equator, and slightly closer to the heart of the dry belt, the so-called "horse latitudes" where deserts predominate on the westerly side of all continents.

This geometry was a repeat of the Long Day of Joshua geometry, although the passover seems to have been not as close, perhaps in the range of 40,000 to 50,000 miles rather than the 27,000 miles of the "L.D.J." It was also a repeat of the geometry of the Sisera Celestial Centennial and the Philistine Phalanx flyby, 1296 B.C. and 1080 B.C. respectively. This sweep or sequence of observations indicates that the timing of the Mars flyby was rather precise, varying in timing by one to three hours rather than by a day or two.

OBSERVATION-H: THE ANGEL OF THE LORD (seen between heaven and Earth.) The Book of I Chronicles (21:16) records David as seeing the angel. II Samuel 24 confirms this, and Psalm 18 supports the same.

In Hebrew, "angel" is *mal'ak*, or messenger, a divine dispatcher of judgment. In Psalm 18, "cherub" is *keruwb*; our sources give the derivation of this word as "uncertain." However, *ruwb* (a component) is a word containing such meanings as controversy, adversary, debate, contention and strife or striving. Our theory suggests on October 24, 1972 B.C., the two gravitational fields of Mars and the Earth indeed were in strife, in contention (for the satellites of Mars among other things), and were in an adversarial or competitive posture. Similar things could be said about the two planetary magnetic fields as they clashed. In our view, clashing magnetic fields and competing gravitational fields were characteristics of not just one, but of every flyby as described in the Old Testament.

OBSERVATION-I: THE DRAWN SWORD. In Hebrew, "drawn" is from *shalaph*, a prime root meaning to pull out, to pull up, to pull off, or to draw forth. "Sword" is *chereb*. The verb *chareb* means to desolate, to destroy, to lay waste. To this writer it seems apparent that these words are catastrophic and hemispheric words more than they are "cutting" or "piercing" words. In the written accounts, such words seem to have been reserved for the once-or-twice in a lifetime scenes of broadside death and destruction. If Mars was at 40,000 miles (at its closest), the Sword of the Lord, at its brightest and shortest, was 125,000 miles long (40,000 miles times Pi.) Such was a very handsome-sized (and deadly) scimitar indeed. Furthermore it glistened.

OBSERVATION-J: THE BRIGHTNESS OF THE SWORD. This electrical flux tube of charged particles and ions was resplendent at night, in competition with the Moon. But it also was resplendent in the middle of the day, when the prominence of even a full moon fades badly. We have it from two eye-witness accounts that the Sword of the Lord was sufficiently bright to compete with the Sun during midday.

In 1979, the Io-Jupiter flux tube, a splotchy aurora, was photographed for some 13,000 miles of its length. Its brightness has been estimated at 40,000 Rayleighs in visible wave lengths of light and at 60,000 Rayleighs in the ultra violet ranges.³ It is difficult to estimate the brightness of the Sword of the Lord or the Silver Bowstring of Apollo Shootafar, except to suggest luminosity somewhere between

100,000 and 1,000,000 Rayleighs. Its nighttime resplendence must have been dazzling indeed and well beyond any glitter Hollywood could possibly contrive or imagine.

OBSERVATION-K: THE GEOGRAPHICAL RANGE OF DESTRUCTION. Casualty lists came in from each of the 12 provinces, or tribal counties. Both of the editors of II Samuel and I Chronicles clearly were Judeans, probably citizens of Jerusalem. Their geographical horizon was limited to their political horizon, from Dan in the north to Beersheba in the south. From our general analysis, we project that this pestilence was hemispheric in its geographical spread, but the communications system of these authors only included the 12 tribal counties.

In Chapter VI, we shall see that Amos emerged, suddenly and dramatically, at the court of King Jeroboam, an idolatrous monarch of the Northern Kingdom, in the year 758 B.C. He announced that the coming flyby of Mars would be two years hence (in 756 B.C.). It would bring fire, which would fall upon every one of the capital cities of the 7 or 8 nations surrounding Palestine, including the capital cities of Samaria and Jerusalem. In the pronouncements, we see two things. First there is the wider geographical horizon of Amos, a horizon which is region-wide rather than nation-wide. Second there was the meeting of astronomy, geography, history and, in that case, government. Once again, in 756 B.C. as in 864 B.C. and as in 972 B.C., the scope was hemispheric, the Eastern Hemisphere receiving the brunt in each case.

OBSERVATION-L: THE RELATED TERMS "PESTILENCE" AND PLAGUE." Pestilence comes from the Hebrew word, *deber*, which is derived from the verb *dabar*, meaning to destroy. "Plague" comes from *maggephah* which is wholesale slaughter. It is derived from the verb *magaph*, which means to beat, to slay, to dash, to smite, to strike, to inflict, or to gore. The use of the prefix "ma" suggests it was a great or widespread smiting rather than an individual event of violence, such as a stabbing. "Ma" has been seen before in *Ma ayish* and *Me ovr*, words which describe the bad planet or the destructive planet. "Ma" also appears in Marchesvan, roughly the Hebrew month of October.

Ours is the scientific age. It is also (lamentably) a uniformitarian age in thinking. Since 20th century Americans live in an age of understanding epidemics to be widespread and of a viral or bacterial nature, there is a tendency among modern

readers to equate "pestilence" with an epidemic of widespread extent such as small pox, bubonic plague, cholera or typhoid fever. Such, to the modern mind, are "pestilences." However, there was no bacterial, no viral, no insect and no biological meaning to those Hebrew words. "Pestilence" referred to sudden, mass destruction of celestial origin which occurred about once per century. The scope, as indicated earlier, was regional/hemispheric, that is, semi-global.

The Greeks and even the early Romans perceived some of their heroes as being conceived or born during catastrophic conditions. Hercules was one, and Romulus was another. The grandsons of the pioneers of Rome liked to tell of the time of the founding of Rome (750 B.C.) when Rhea Silvia (a daughter of an Etruscan chief) was raped by one no less than Mars. That rape produced a pair of twins, Romulus and Remus, founders of Rome. Those grandsons of the Pioneers embellished the story to add that as twins, the babies were suckled in the wild by a she-wolf, Lupus Martis. (Wolves also were related to Mars, perhaps because of their general viciousness.)

It is safe to say that neither Romulus nor Remus received any genes or milk from Mars. And it is likewise safe to say that the Earth received from Mars no bubonic plague, no typhoid, no measles, no cholera and no other viral disease. Whoever raped Rhea Silvia wasn't Mars. The fact of the matter is that Mars raped the Earth in 756 B.C., in 864 B.C. and in 972 B.C. The Earth was sometimes known as Hera, a Greek goddess from which comes our term "Earth." The 756 B.C. flyby led to the destruction of the Etruscan State (Tarshish in our opinion) but also to the founding of Rome. In 972 B.C., Mars also assaulted the Earth, with Jerusalem surviving relatively unscathed as a corporate community. But for Palestine it was not entirely so. We cannot overlook the 6% casualty count.

OBSERVATION-M: THE LOCATION OF THE DISCHARGE. An interplanetary electrical discharge fell upon the mesa that was Ornan's farm.

*And God sent an angel unto Jerusalem to destroy it: and AS HE WAS DESTROYING, the Lord beheld, and he repented him of the evil, and said to the angel that destroyed, It is enough, stay now thine hand. And the angel of the Lord STOOD BY THE THRESHING FLOOR of Ornan the Jebusite.
I Chronicles 21:15 (Caps ours.)*

It would seem that the discharge fell on the mesa which would become the Temple Mount. That discharge must have incinerated the barn and other structures of Ornan and left it a leveled pile of cinders. Apparently Ornan and his family survived just fine in their storm cellar. The discharge must have been for a millisecond in the hundreds of thousands of amperes range, and it would have vitrified any dirt or sand at the discharge spot. It would be interesting if, upon a very careful microscopic examination of dirt from the surface of that mesa, some tiny beads of glass were found, evidence of temperatures over 3,000° F. and of a discharge. A broader search throughout Palestine and other places might prove very interesting in this regard.

As it turned out, Ornan's storm cellar was a better place in time of a catastrophism than was the vaunted Tower of Babel constructed by Nimrod. Ornan's storm cellar was a location that dodged the electricity of Mars, whereas Nimrod's structure was one which attracted, or unwittingly courted Mars' electrical wrath. Ornan's farm was just several hundred yards outside the walls of Jerusalem as they were at that time, to the northeast.

OBSERVATION-N: THE CHOSEN LOCATION FOR THE FIRST TEMPLE. The destructive afternoon of October 24, 972 BC. passed, and pandemonium in the city of Jerusalem rapidly settled down. Relief had come as the flux tube swept westward, out across the Mediterranean Sea. The city had been spared from the electrical havoc, if not from the earthquakes. That evening or the next morning, David and his cabinet inspected the strike site. He interviewed Ornan and inspected the cinders which had been his home and barn. David had wanted to build a temple to the Lord for years. It occurred to one of the party that this would be an ideal site, in suburbia, just a few hundred yards to the northeast of Old Jerusalem. The 450-year old tabernacle needed a permanent location, as did its hardware. This flat mesa was an excellent site for such a memorial to the Lord and to Jerusalem's deliverance. David made a generous offer, and Ornan was a willing seller at this time.

This site was a location where architecture, astronomy, geography, history, religion and even electricity all met and played a role. Other temples come to mind such as the temples constructed by the sons of the pioneers of Rome, dedicated to their favored planetary deities, Mars, Jupiter and Saturn. Mars Hill in Athens comes to mind, and the ancient order of the Areopagites, the court pages for Mars. The

Kaaba, a meteorite that fell at Mecca perhaps in this era, 1½ millennia before Islam, comes to mind. In these cases too, architecture, electricity, astronomy, geography, history, and religion combined in their various roles.

In Northwestern Europe, the numerous Celtic "henges" also come to mind, for there also, architecture, astronomy, geography and religion all met to play a role. Since it was important that those henges be aligned true to the cardinal points of the compass (not to the solstices as some suppose), the ensuing crustal skids and spin axis torques caused subsequent remodeling projects to occur, in century after century, as the North Pole jumped around somewhat during such flybys as 972 B.C., 864 B.C., 756 B.C. and others. The modern triad (Evolutionary Uniformitarians, Fiat Creationists and Theistic Evolutionists) has overlooked everything in this possibility.

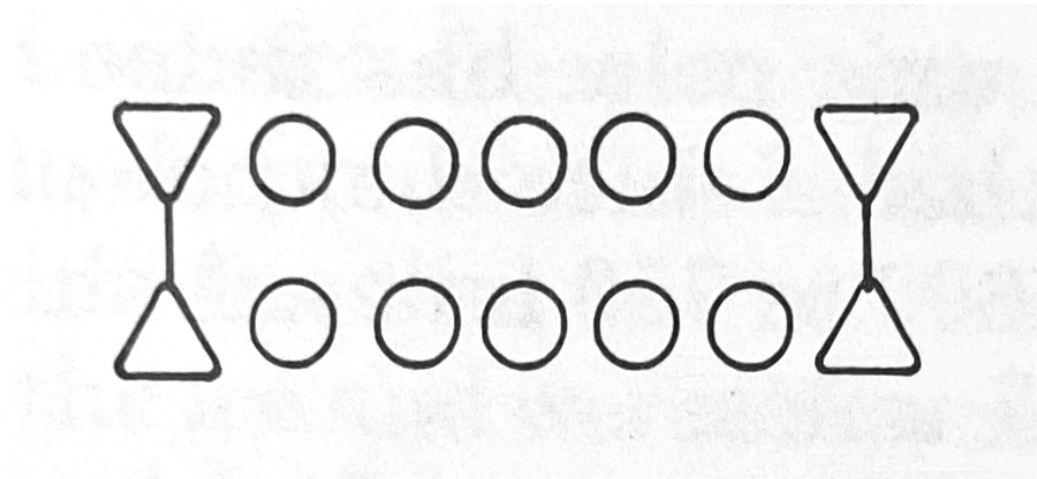
OBSERVATION-O: THE ALIGNMENT OF THE FIRST TEMPLE. This temple was conceived by David and his cabinet, but it was built by his successor, Solomon. Its foundation was laid in 967 B.C., just 5 years after this flyby. Perhaps it was well that it was delayed until after the flyby for several reasons. One is that by waiting, it avoided any possibility of general devastation. Another is that the populace was in a more buoyant mood, more expansive-minded. Yet a third reason is that a flyby might have caused another adjustment or correction for north-south and east-west orientation and the cardinal points of the compass.

It is not known if the First Temple was built aligned perfectly with east and west, north and south of that era, but such is presumed. It is known that the First Temple was surveyed and its foundation was established with much care, as indeed the entire building was built with a major concern about lay out patterns and placements.

Charles McDowell, a geographer and a historian, thinks that the First Temple was constructed so carefully that the fixed stars, shining at night, shone through the apertures of the Temple and onto the huge basin filled with water. This basin or bath had a perimeter of 30 cubits (about 45 feet) and a height of 5 cubits or 7½ feet. Its diameter was 15 feet. It contained about 750 cubic feet or 6,000 gallons of water. He believes the Hebrews charted at night the arcs described by the reflected starlight off of the bath, and in this way they would have immediately known if yet another change in the location of true north had occurred.

McDowell points out also that the basin was held by twelve statuesque golden oxen, one for each month of the year. There were 30 cubit markers distributed symmetrically with their dividers so as to comprise 360 units, the day count per year and the degree count per circle.

In our inch, if we divide it into 8 parts, we only use 7 subdividers to record each 1/8 inch. The inch marker is not a subdivision marker. Guided by Dober's remarks, I will give a graphic description of the cubit subdividers:



Cubit-Marker

Here the symbol (illustration) is intended to represent the cubit division marker. In this manner it can be seen that there are 10 sub-unit markers. Accordingly, because there were 30 cubit markers distributed symmetrically around the sea, it was necessarily divided into 360 parts.⁴

He further notes that the Ugaritic alphabet contained 30 letters, as if a harmony was intended with the day count per month. In all of this craftsmanship of which we have mentioned but a little, the Temple Foundation was laid out amid a large, 35-acre mesa where space was abundant. Is it likely that it would be aligned in any way other than according to the cardinal points of the compass?

It is known that the foundation of the Second Temple, constructed early in the Uniformitarian Era (6th century B.C.) was aligned precisely according to true north and south, east and west. However, the foundation of the First Temple is found to

be variant. The following is from personal correspondence with Asher Kaufman, a physicist at the Racah Institute of Physics, Hebrew University, Jerusalem.

*This note is to draw your attention to my research on the Temples of Jerusalem, their plan and precise location. For a popular account, see **Biblical Archaeology Review**, March-April 1983... There is the interesting fact that the First (Solomonic) Temple built about 997 B.C.E. was aligned 6.0° south of west. One would expect it to have been aligned exactly east-west, as was the Second Temple built about 516 B.C.E.⁵*

Our suspicion is that a net shift of 6° occurred compositely from the subsequent flybys of 864 B.C., 809 B.C., 756 B.C. and 701 B.C. Our further suspicion is that another net shift of 4° to 6° in the same direction occurred during the composite shifts from the Long Day of Joshua down to the Davidic Flyby. Thus Jerusalem's latitude indeed has shifted southward. And the North Pole, the spin axis pole, has indeed shifted from the Barents Sea toward Alaska since the time of Moses, and probably in an amount of 600 to 750 miles. A shift of 1° in latitude southward is about 67 miles.

It is in this light that we wish the remodeling of the henges of Great Britain to be viewed. Our suspicion is that their alignments when constructed were also oriented to the cardinal points of the compass and not, as is frequently presumed, to the solstices. A review of those henges in this light might prove fruitful.

The Old Testament is the flagship of ancient catastrophic literature. It is a gold mine for human history and for theology as well. Cited in this chapter are 3 modest passages, from which were mined the preceding 15 observations.

- II Samuel 22:8 to 21 (See also Psalm 18:7-15)
- II Samuel 24: 12 to 25
- I Chronicles 21:7 to 27

Students of catastrophism who are familiar with the details of the Old Testament have a big natural advantage to students lacking a broad familiarity with Old Testament material. Similarly, students of catastrophism who are conversant with the Greek literature of the Heroic Age, prior to 700 B.C., also have automatic

advantages in ability to perceive and to correlate. Familiarity with these literatures, ideally, is achieved during a person's teens or twenties where the material can become foundational in decisions and evaluations.

In the climate of Planetary Catastrophism, at some point in time it dawns in a person's mind how shockingly mistaken uniformitarian spokesmen are, and how unauthoritative those spokesmen have been, however widely their views may have been circulated and affirmed. In the case of this writer, the suspicion that the uniformitarian approach was mistaken arose when he was in college, taking courses that related to Earth history, and while he was simultaneously familiarizing himself with the Bible. Penetrating questions presented to the academic figures were fielded poorly.

For instance, there was the class devoted to anthropological topics. In class, your author (then eighteen) asked a question about how the quick-frozen mammoths of Siberia came to be. How did they happen? The lecturer's response was that perhaps the mammoths had walked out too far on a frozen lake, fell through the ice and were drowned. Your writer's retort was that if they had fallen into water, their carcasses would either have rotted or would have become fish food, and would not have become frozen. The lecturer suggested that perhaps, through some miracle, that didn't happen this time. Immediately your author's next question concerned why the mammoths are found quick-frozen in Northern Siberia with subtropical vegetation in their stomachs, and half-swallowed in their mouths also. The lecturer's response was that, maybe, they had walked a long way. This writer's third and final retort was that there were evidences of at least several dozen quick-frozen monsters, including a pair of two-horned quick-frozen rhinoceroses.⁶ The lecturer's third response was that, after all, there were millions of years, weren't there, for such things to happen. Following this, your author disheveled his hair in abject silence. But the conviction was growing that something in the traditional explanation was very wrong.

NOTES

1. The key issue in understanding the 108-year nature of the cyclicism will be the "inferior conjunctions" of Mars. An inferior conjunction was when Mars passed between the Sun and the Earth. There was one of these type of conjunctions for each 2-year orbit. (There were also "superior conjunctions" with the Earth in the middle, and there were two of these each orbit of Mars.) The movement or progression of the inferior conjunctions resembled the progression of a pendulum with a 54-year half stroke. Also, the progression of the superior conjunctions resembled the progression of a teeter-totter, also with a 54-year half stroke. Technical aspects of the ancient catastrophic resonant orbit will be explained in our sequel.
2. In I Chronicles 21:20 the account says, "Now Ornan was threshing wheat."
3. Patrick Moore & Garry Hunt, *Atlas of the Solar System*. Chicago, Rand McNally, 1983, p. 257.
4. Charles McDowell, "Solomon's Temple: An Astronomical Observatory." *Catastrophism & Ancient History*, Vol. III, Part 1, Jan. 1981, p. 43.
5. Personal Correspondence, Asher Kaufman (Racah Institute of Physics, Hebrew University of Jerusalem) to Donald W. Patten.
6. George Digby, an English explorer of Siberia before World War I, listed 25 locations where quick-frozen mammoths were known to have been found, mostly in northern Siberia. In addition he provided locations where two poorly-preserved two-horned rhinoceroses had been found according to Russian records of that time. He was on site during the excavation of the Beresovka mammoth, and saw quick-frozen sub-tropical vegetation in the mouth and in the intestinal region of that quick-frozen mammoth.

See George Digby, *The Mammoth and Mammoth-Hunting in Northeast Siberia*. London, Witherby, 1926."

Chapter VI

The Mt. Carmel Barbecue and Several Other "Picnics" Catastrophes Between 900 B.C. and 750 B.C.

A search has been made in the Old Testament and in Josephus for descriptions, direct or indirect, of a flyby in mid-March, 917 B.C. Our model holds that one did occur. Only one hint of such has been found. A further search of Ginzberg's Talmudic commentaries was made, and this search produced no additional results.

A line of logic is established as to why the Mars flyby scheduled for March of 917 B.C. is not spoken of in Hebrew literature. The reasons seem to be twofold. First and most important, like the majority of mid-March catastrophes, it was probably occurring around the midnight hour, Palestine time, or perhaps an hour or two later. This means that the Eastern hemisphere would have been spared all of the electrical spray of celestial discharges, and the Western Hemisphere would have suffered. Secondly, very possibly this flyby of Mars was among the more distant ones. More distant in our view is 50,000 to 60,000 miles in its post-midnight perigee. If so, the earthquaking would have been more severe in the Western Hemisphere. Hence perhaps it was a relatively mild flyby occasion.

Even as most (if not indeed all) of the mid-March flybys occurred around midnight (Jerusalem time), so most of the late October flybys occurred during the daytime, and toward noon. This observation tends to lend support to the idea that while Jupiter and Saturn could alter the schedule of Mars, that alteration was usually one of 30 minutes to 3 hours. A sophisticated computer analysis of orbits, integrated for the Sun and at least four planets (Earth, Mars, Jupiter and Saturn) will either confirm or deny this perspective of timing. We encounter no October flyby descriptions that support a nighttime flyby out of the eight we have identified. Most were in the mid-morning so far as we can determine.

EXAMPLE # 10 October 24, 864 B.c. THE MT. CARMEL BARBECUE.

THE ASTRONOMICAL SCENE IN 864 B.C. With the help of an ephemeris, we have traced the position of Jupiter back to 701 B.C. on a 365.2564 day measurement for the year. In that year, Jupiter was in Capricorn, which was normal for a mid-March catastrophe. In 701 B.C., we perceive that the new era of a 365/4 day year began,

and with it, the precession of the Earth's orbit. Before that time, we perceive the Earth had a 360-day year and a slightly smaller orbit. If so, $6\frac{1}{2}$ years earlier in 708 B.C., Jupiter was in the feared Cancer. Jupiter then had a 12-year orbit. Thirteen 12-year orbits (and 156 years) earlier, in 864 B.C., Jupiter was in Cancer, and this was normal or traditional for all October catastrophes.

Concerning the planet Saturn, an ephemeris indicates when in our era Saturn last entered or left Cancer. With help from an ephemeris and by using a 365.2564-day year, we discover that in the year 701 B.C., Saturn was in Cancer, and it was 180° opposite to Jupiter. The year 701 B.C. thus was a mega-catastrophic year of the March case.

Saturn was in Cancer for $2\frac{1}{2}$ years, from 701 B.C. to 699 B.C. Fifteen years earlier in 714 B.C., Saturn was 180° removed, in Capricorn. Furthermore, Saturn at that time was in a 30-year orbit when the Earth had a 360-day year. Thus, five Saturn orbits earlier (and 150 years), Saturn was once again in the dreaded Capricorn, 180° opposite to Jupiter. This means that the year 864 B.C. was a mega-catastrophic year of the October variety. To a prophet or to a star-gazer of that era, Jupiter once again in Cancer was ominous. With Saturn in Capricorn, such was doubly ominous.

In Chapter IV, there was an extensive analysis of The Long Day of Joshua. That analysis included the astronomical situation, the geomagnetic situation, the subcrustal tidal scene and the gyroscopic scene. It was estimated that Mars passed within 28,000 miles of the Earth in 1404 B.C. This event, 540 years later, was nearly a carbon copy, with the exception that the flyby happened 2 to 3 hours later in the daytime. We think that the closeness of the flyby was in the range of 30,000 miles in 864 B.C. much like the range in 1404 B.C., and 1944 B.C. We also think that the geomagnetic tail of Mars swept the Earth in the early afternoon during the "L.D.J." whereas it swept the Eastern Hemisphere (and Palestine) in the late afternoon in the 864 B.C. flyby. However, as was demonstrated in Figures 9 and 10 the electrical sweeping of the magneto-tail of Mars was two or three hours later than the perigee, the point of closest approach.

SETTING THE STAGE FOR CONFRONTATION. Often, on previous flyby days, there had been military confrontations. In Chapter IV, such confrontations were cited in 1404 B.C., in 1296 B.C. and in 1080 B.C. Sometimes, the Hebrews fought with the Canaanites and at other times, it was with the Philistines, a Greek colony from

which Palestine takes its name. On this occasion of 864 B.C., there was military peace between the Northern Kingdom and Phoenicia. Ahab (the king) had married a Phoenician princess, Jezebel, and a strong political alliance was formed.

In addition, the worship of Baal (Mars) and Ashtarte (Venus) had become the state religion of the Northern Kingdom, to the chagrin of Elijah among others. King Ahab was indifferent to both the Lord of Hosts and the code of Moses, but he wanted trade and peace. Jezebel, on the other hand, was not indifferent; she was completely hostile to the worship of Yahweh, so much so that she ordered an inquisition. The elusive Elijah was chief among those worshippers of Yahweh whom she wanted to destroy. In 867 B., early in the year, Elijah had appeared dramatically at the court and announced a coming famine and drought of three years, which Elijah blamed on the apostasy of Israel led by Ahab and Jezebel. She had her secret police out looking (unsuccessfully) for Elijah. Thus, the year 864 B.C. finds the Northern Kingdom in a state of political peace but in a state of religious contention, to say nothing of drought and famine.

THE LOCAL SCENE OF THE BARBECUE. For some reason, Ahab and Jezebel were absent from this picnic. Perhaps it was due to the severe famine. Hay for the horses was scarce. The distance from the picnic scene to their palace at the capital (Samaria) was 30 or 35 miles. Perhaps that was too far to go for a picnic, and also, Jezebel didn't know Elijah would be there. The picnic was planned for the beach below Mt. Carmel, near the modern city of Haifa. Some 400 priests, prognosticators and star-gazers of the Baal faith agreed to meet and contend with Elijah and his unnamed aide. They agreed to meet on a date we consider to have been the anniversary day of the Long Day of Joshua and of the Celestial Centennial of Sisera. It was also the 108th anniversary of the Davidic Flyby of 972 B.C. It was somewhat like the military leaders of the past who agreed to give battle on a flyby date. The "fight" was staged between Baal and Yahweh, not between the Hebrew army and another army. Although it was not a military scene, it was a contention nevertheless. Both sides agreed that the God who answered with fire falling from heaven, He was God.

Prior to this, some 32 years earlier, Elijah had announced a coming drought and famine which did come (and it is also recorded in Phoenician historical annals.) The announcement (or prediction) was made in the court of Jezebel, and Elijah proclaimed its cause was the apostasy of Jezebel and Ahab. Jezebel's regal fury was unrestrained. As the drought persisted, her fury increased. Many people had

migrated by boat across the Mediterranean, and the remaining populace was lean and undernourished. They didn't know whom to blame for the drought, Ahab, Baal, Elijah, Jezebel or Yahweh. Many heard of Elijah's daring message and wondered if indeed the drought was punishment for the apostasy led by Jezebel.

THE TEST. The leaders of the Baal religion and Elijah agreed on one thing prior to the flyby day. They agreed that the deity who answered with fire, He was God. This is another indication that the historians and astronomers, the astrologers and clergy of that day were quite well aware of the cyclicism of catastrophes and the timing of the cyclicism, October 24 in this case.

THE GEOGRAPHICAL SCENE. Fresh water was very scarce. It had hardly rained for three winters and four summers. What fresh water could be found needed to be conserved for people for their thirst. There was virtually none for other uses. As we shall see, Elijah "baptized" the sacrifice in water liberally. It must have been sea water, readily available on the beaches at the foot of Mt. Carmel, where driftwood and unrationed sea water were abundant.

THE ACTION. The priests of Baal were given center stage first. Perhaps they had first choice. Around noontime or 1:00 p.m. was the traditional time when fire had fallen during previous October flybys. The priests of Baal began a weird orgy. These sooth-sayers and seers then went into their celestial war-dance. Perhaps it resembled an Indian war-dance. It was a pagan ritual imploring Baal-Mars to do its thing, to drop a thunderbolt on Mt. Carmel. The pagan seers and sooth-sayers danced and lanced themselves, and they bled their favorite color, red, a color which was fairly close to the color of the appearance of Mars, a reddish-orange planet. If there were volcanic ash smoke or forest fire smoke in the general atmosphere, that smoky atmosphere would result in Mars appearing all the more crimson.

Elijah, the monotheist, and his aide were lean from malnutrition. He was also gutty, as was demonstrated in his dramatic sermon to Jezebel and her court 3½ years earlier. Elijah was unflinching in his conclusions, whether the crowd was for him or against him (as it was on this occasion among others.) For several hours, beginning perhaps just before noontime, the astrologer-priests of Baal danced, pled, bewailed and otherwise entreated their deity to fire off some celestial sparks toward

Northern Palestine and Mt. Carmel. (Mars didn't.) Elijah observed their entreaties with a gallows humor. (He knew that he was scheduled for Jezebel's torture rack unless something unusual happened.)

Elijah had a few questions which he raised at the appropriate time. His pagan opponents must have resented his posturing in the light of their superior numbers (400 to 2). He asked the pagan planetary priesthood if perhaps Mars was talking with someone else and was too busy to be bothered with their entreaties. Elijah's humor was not appreciated. Next, Elijah suggested that perhaps Baal (Mars) was on a long journey and had no time for the picnic. Again, his gallows humor was unappreciated. Persisting unabashedly, Elijah suggested that perhaps Baal-Mars was asleep and needed to be wakened as the celestial war-dance (and the planetary silence) continued. Elijah's sarcasm and disdain became down-right infuriating to the pagan majority that day.

If Mars was 30,000 miles distant, it would have appeared to cover 125 times as much sky as does the Moon at 240,000 miles. Thus, for Elijah to suggest that Mars was on a long journey can be taken in more than one way. Notice, in his humor Elijah did not suggest that Baal-Mars wasn't there. However, in implying Mars wasn't much interested, he was also implying that their entreating activities didn't amount to very much.

In time, the celestial priesthood became tired out and disappointed. Elijah's cajoling didn't help. The planetary priesthood had owned center stage for perhaps 2 or even 3 hours. By consensus, it was Elijah's turn by late afternoon. First, Elijah repaired the ancient altar to Yahweh. With his aide, he repaired that altar with 12 stones, which were symbolic for each of the 12 tribes of Israel. For some 60 or 65 years, there had been a political separation between the Northern Kingdom and the Southern Kingdom, and Ahab's dynasty, including his father's (Omri's) reign, was a symbol of that disunification. The repair job utilizing 12 stones was a direct political insult to the throne of the Northern Kingdom, and to Ahab and Jezebel, the regents. Elijah, the unionist, was winning no popularity contests, but he was also making his point.

Next, Elijah slew a heifer and placed the parts, quartered, on the altar, upon some sticks of wood that had been gathered. It could very well be that the sticks of driftwood also numbered 12, but that is speculative. Finally, Elijah asked for four

barrels of water, which were provided and which he poured out over the sacrifice. It was probably sea water, which unlike fresh water, happens to be rich in ions. (The magneto-tail of Mars was sweeping Eastern Asia, advancing 1700 m.p.h., but it had not yet arrived in Palestine.) Nothing was happening on the electrical front, and since timing was of the essence, Elijah asked for another four barrels, a request he repeated a third time. This aspect of the sacrificial rite now totaled 12 barrels of water, like the 12 stones and possibly like some 12 sticks of driftwood, all symbolic of the 12 tribes of a united Israel. Observe the irony of the story. After the third "baptism" of 4 barrels of sea water, Elijah, a prophet, not a chemist, paused. Strategically, this salty baptism may have gained Elijah another hour.

We estimate the time was now around 4:30 p.m. or perhaps 5:00. Perhaps by this time it was 2½ or 3 hours after the Mars perigee. Perhaps the magneto-tail of Mars was raking Eurasia, sweeping across it at a rate of 1700 m.p.h. Perhaps it was Palestine's moment of truth. ZAP!

*Then the fire of the Lord fell,
and consumed the burn sacrifice,
and the wood, and the stones, and the dust,
and licked up the water that was in the trench.
I Kings 18:38*

This a remarkable case in ancient literature, very possibly an eye-witness rendition, which, if so, enhances its historic value.

There was considerable amperage in this thunderbolt. It barbecued the beef. It boiled the water and it heated the stones. The boiled water was there in some volume. It even melted the dust (and possibly sand). It may be of interest to note that the thunderbolt from Mars struck not just Mt. Carmel generally. Rather, it struck their specific barbecue pit. Elijah probably would have been vindicated if the lightning had merely struck the mountain, sending shock waves across the picnic party. As it was, there were probably shock waves which knocked the picnickers, cup over tea kettle. Notice that if the lightning licked up the dust, perhaps it also vitrified any dust or sand adjacent the altar. Perhaps glass was created on that beach that day from silicon oxides that melt at around 3000° F. Wouldn't it be

amazing if some amateur archaeologist of the Planetary Catastrophist persuasion searched those beaches and the adjacent region, and would find vitrified glass? Such a discovery would be welcome, but it would not be a total surprise.

Elijah and his unnamed aide did not have the first laugh that day. But, the last laugh they did have. The gutty prophet went on to further confrontations with the reigning planetary pantheist, Jezebel. She had been seeking his "scalp" for several years, and now her determination did not wane. Surprisingly, the gutty prophet outlived her. The unflinching prophet was among the more dynamic figures in Hebrew history, as would be Jonah and Isaiah in the century to come, the 8th B.C.

As we pointed out earlier, science is not regulated by majority votes at scientific conferences. It is regulated by immutable rules, laws and principles. Similarly, the falling of fire on Mt. Carmel that day in 864 B.C. was hardly governed by majority vote, which was 400 versus 2 to the contrary. The falling fire was regulated by the timing of the magneto-tail of Mars, sweeping across Eurasia it would seem. In addition, there were other factors, like saltiness, like faith and divine omniscience which may have played a role, a role which most scientists don't understand, but which many theologians respect.

The Story of Phaethon Apollo

The story of Phaethon Apollo is found in Greek heroic literature, and it has been preserved in Latin by the great poet, Ovid. There are numerous parallels between Ovid's Book II of his *Metamorphoses* and Hesiod's *Theogony and Shield of Herakles*. The reader is encouraged to acquire Ovid's works and read the entire story of Phaethon, son of Apollo. It is but 553 lines in length. The following is Edgar and Ingrid Aulaire's condensation, as well as two of their portraits depicting two scenes, one of celestial serenity and one of Phaethon's difficulties in driving the chariot of Apollo (his father) across the cosmos. That cosmos happened to include the region of the Earth's gravitational and geomagnetic fields.

Helios had a son named Phaethon. He was a mortal and very proud of his radiant father. One morning as Helios was about to set off on his daily journey across the sky, Phaethon came to him and begged him to grant his dearest wish ... but when he heard Phaethon's wish, he sorely regretted his oath. He

tried in vain to make his son change his mind, for what Phaethon wanted was to drive the sun chariot for one day, and Helios knew that no one but he himself could handle the spirited steeds.

Phaethon was determined to have his wish, and Helios had to give in. Sadly, he put his golden rays on his son's head and rubbed divine ointment on his skin so he could withstand the searing heat of the chariot. He barely had time to warn him to stay well in the middle of the heavenly path when the gates of the palace were thrown open, and the rearing horses were brought forth. Phaethon leaped into the chariot, grasped the reins, and the horses rushed out.

At first, all went well and Phaethon stood proudly in the glowing chariot. But the fiery steeds soon felt that unskilled hands were holding the reins. They veered off the heavenly path and brushed by the dangerous constellations that lurked on both sides of it. The animals of the zodiac were enraged: the bull charged, the lion growled, the scorpion lashed out with its poisonous tail. The horses shied and Phaethon was thrown halfway out of the chariot. Far down below he saw the earth and he grew so dizzy that he dropped the reins. Without a firm hand to guide them, the horses bolted. They raced so close to the earth that the ground cracked from the heat of the chariot and rivers and lakes dried up. Then upward they sped so high that the earth froze and turned to ice.

Zeus stood on Olympus and shook his head. He had to stop the careening chariot to save the earth from destruction, and he threw a thunderbolt at it. In a shower of sparks, the chariot flew apart and Phaethon plunged into the river Po... Hephaestus had to work the whole night through to mend the broken chariot so Helios could drive it again the next day. Helios grieved over his lost son, and he never again allowed anyone to drive his chariot except for Apollo, the god of light.¹



**PHAETHON (MARS), HAPPY HORSES AND MERRY MAIDENS
IN NORMAL TIMES**

53 Out of Every 54 Years

Figure-15



**PHAETHON (MARS), BUCKING STEEDS (Deimos and Phobos)
AND THE ZODIAC ON CATASTROPHIC OCCASIONS**

The 54th Year

Shifts in Spin Axis Locations and in Spin Axis Tilts Are Suggested
(Hence Spin Axis Precession)

(Note Even the Zodiac is Mixed Up)

Figure-16

Commentary on the Phaethon Apollo story may be in order. Observe the grasping, grabbing claws of Cancer. Jupiter with its massive gravitational field grasped at Mars many times as it passed through its ancient 218-million-mile aphelion, 45% of the distance from the Sun out to Jupiter. Jupiter is 320 times as massive as the Earth and 3000 times as massive as Mars.

Notice that all of this action occurred during one day. The problem for Hephaestus and his cosmic crew was to repair the chariot so that it would be ready to resume early on the following morning. Mars in a flyby scenario as depicted in Figures 9 thru 12 would have advanced 27,000 m.p.h. relative to the Earth's velocity, but at an absolute velocity of 77,000 m.p.h. in its orbit. With respect to the Earth, the chariot of Apollo advanced between 600,000 and 650,000 miles in a 24-hour period. The Phaethon story is limited to one 24-hour period, or a fraction thereof, just like the flyby of Mars.

Notice that the horses pulling the chariot passed near the Earth, while Phaethon looked down on our planet. The horses raced so close to the Earth that there was much heat. There were also thunderbolts and showers of sparks. Phaethon's chariot traversed regions from fire to ice in a fraction of a day. Notice that Zeus, or Jupiter (from the position we know to be Cancer) shook his observing head. Notice that the road the horses galloped over was a heavenly path, not an earthly dirt road. Observe also that the horizon was seen as careening, which we interpret to be a wiggling and a wobbling of the planetary spin axis. After this day was over, Apollo (a Greek transliteration of Baal) once more took the reins. Ovid in his 550 lines of descriptive action is considerably more expansive than was the condensation of the D' Aulaires.

Was Ovid's review of Phaethon Apollo a late reworking of a Greek description of the flyby of 864 B.C., the Barbecue? We cannot say for certain. There were three subsequent flybys, in 809 B.C., in 756 B.C. and in 701 B.C. according to our model. What we can say with certainty is that the flyby of 864 B.C. was the closest flyby of the first millennium. This conclusion is based on the positioning of Saturn, 180° opposite Jupiter, exerting its additional influence to the maximum to narrow down the orbit of Mars.

One can calculate the difference in the gravitational impact of Jupiter versus Saturn on Mars to an overall or average extent. Saturn is only 30% as massive as is Jupiter. In terms of closeness Saturn is only 55% as close to the Sun (and to the average position of Mars) as is Jupiter. However, Saturn stays in any particular sector of the zodiac 250% as long as does Jupiter. By multiplying these three factors (.30 times .55 squared times 2.50), the result is about 23%. Thus, Saturn's effect was about one-fifth that of Jupiter in terms of warping the Martian orbit.

Figure 1, (in Chapter I) presented our conclusion as to the ancient orbit of Mars. To a person with a uniformitarian world view it is shockingly radical. To a person with a catastrophist point of view, it is carefully constructed and supported. Figure 1 is presented as a system. That Mars-Earth system had a relationship to Jupiter and Saturn which is depicted in Figures 6 and 7 in Chapter III. It is important to get the "little" picture as presented in Figure 1. It is of equal importance to get the "bigger" picture as is presented in Figures 6 and 7. In Figure 6 it is easier to begin perceiving the influence of Jupiter on Mars, which in the catastrophic era was profound. Similarly profound was the influence of Saturn. With Figures 1, 6 and 7, we have the ¼ billion mile perspective, the 1 and the 2 billion mile perspectives of the four important related orbits of the catastrophic era. The Greeks also must have sensed some of the importance of "Zeus-pater" (Jupiter). While Ares was important, nevertheless, Ares had a "father" and that paternal planet was Jupiter, while its "uncle" was Saturn.

All in all, it seems that from the Greek perspective, the flyby of 864 B.C. was a disaster. From the perspective of the 400 prophets of Baal and the Phoenician religion, this flyby was also a disaster, at least in regard to their auguring abilities. For Elijah and his aide, we sense that "his" beef, as well as his meat, was well-done.

EXAMPLE # 11 March 20/21, 809 B.c. THE GREEK PICNIC" ON TROJAN SHORES.

In Greece, like in Palestine, the tradition of celestial destruction accounts ran deep, and the prospect of each coming celestial flyby was the subject of speculation, apprehension, and sometimes, opportunism. In 810 B.C., the Greek military viewed control of the Dardanelles (and Troy) as a choice plum; the city controlled trade routes involving much foreign commerce. Troy commanded the channel between Europe and Asia, leading from the Aegean Sea to the Black Sea. Through this channel sailed commerce to the Danube River and the Balkan region, to the Dneiper

and Don Rivers and Southern Russia, where there were slaves. It also controlled the commerce to the Caucasus where gold had been found. It was a crossroads location. If cosmic lightning were to hit the city of Troy, as had been the case in the past, would such an occasion be a devastation or would it be an opportunity? The answer to that question depended on whether one was a Greek or a Trojan.

Heinrich Schliemann (1822- 1890) as a youth read and reread *The Iliad* by Homer. He suspected that it contained much historical truth. He became intimately associated with the story's details. Subsequently, he led a dig which was an endeavor to discover Troy. The dig uncovered a city he believed to be Troy; it had been destroyed five or six times by fire. To a Planetary Catastrophist, this is particularly interesting because Troy was constructed of largely brick and other inflammable materials. Our belief is that the city he considered to be Troy had been struck by celestial lightning which had been generated by Mars, a rotating generator.

Assume that the city we shall call Troy was founded around 1700 B.C. In 9 centuries, the Earth had experienced about 16 flybys of which half (or 8) affected the Eastern Hemisphere electrically. If Troy had been hit by celestial electricity on 5 of those 16 flybys, its odds of being struck during the next flyby were in the range of 30%; 60% for daytime flybys.

The Greek military, including Achilles, Agamemnon and Menelaus, consulted the priests of Apollo (Baal), Calchas and Chryseis by name according to *The Iliad*. The question put to the sooth-sayers was whether Troy would once again be zapped with an electrical discharge of cosmic dimensions. The second question concerned whether earthquakes accompanying the flyby would be sufficiently intense to weaken or collapse any part of the city walls. If Troy were to suffer either full destruction (and be turned into a cauldron) or partial destruction, who would be there to pick up the pieces? The Germanic Goths from the Balkans? The Scythians from Southern Russia? The Hittites from Central Turkey? The Phoenicians from what we now know as Lebanon? The Phoenicians were worldwide traders and liked to establish overseas colonies. The Greek political and military leaders felt that they, the Hellenes, would be the most appropriate successors to Troy. And then there was also something about repossessing the beautiful Helen for the king of Sparta, Menelaus.

Calchas and Chryseis confirmed for them that Troy would be zapped once again by Apollo. With confirmation from these "sages" of Apollo, the dice were cast. Many city states of Greece agreed to supply contingents, including the Athenians, the Argives, the Myrmidons, the Pylians, the Ithacans, the Cretans, the Rhodians, the Phthians, the Ionians, the Danaans and of course, the Spartans. The timing of the invasion was planned to coincide with the flyby of Apollo-Mars-Ares, who would be doing most of the dirty work, the destruction from on high.

It is our perception that this catastrophe described in *The Iliad* was in mid-March, 809 B.C. for three reasons. First is the literary reason. In *The Aeneid*, it is stated that Aeneas, a Trojan survivor, visited Carthage as it was being built. Most scholars date the founding of Carthage in the very early part of the 9th century B.C., between 810 B.C. and 805 B.C.² Additional input is that the famine of 867 B.C. to 864 B.C., just discussed, played a major part in the desire of some Phoenicians to emigrate. Thus, we think that the Phoenicians migration to the African colony commenced in the drought of the 860's B.C., while the construction of the city of Carthage commenced some 60 years later, around 805 B.C.

Secondly, there is textual analysis. Nowhere in *The Iliad* is the year of the campaign or even the month of the campaign mentioned. However, the time of the arrival of the various Greek contingents was a windy month. That is in the text.

*...and when the child of morning, rosy-fingered dawn, appeared they again set sail for the host of the Achaeans. Apollo sent them a fair wind, so they raised their mast and hoisted their white sails aloft. As the sail bellied with the wind the ship flew through the deep blue water, and the foam hissed against her bows as she sped onward.*³

If the waves were strong and if the sails billowed, the wind was strong also.

There are a variety of planetary wind systems. In this case, the mid-latitude westerlies are the controlling wind regime. The westerlies are calm in the Mediterranean in September and October, probably the two calmest months of the year. On the other hand, February and March are particularly windy months, traditionally coming in as either a lamb or a lion and leaving the opposite way. If

Greece (like Palestine) were some 5° or 6° higher in latitude, for reasons discussed in earlier chapters, at 45° N., the strength and certainty of the spring winds would have been even greater than in our time, when Troy is at the 40th parallel north.

Thirdly, there is cyclic analysis. October catastrophes of that era were in 756 B.C., 864 B.C., 972 B.C. and 1080 B.C. Each of these is eliminated. Mid-March catastrophes occurred in 701 B.C., 809 B.C., 917 B.C. and 1025 B.C. Only the date of mid-March 809 B.C. fits well. By combining geography, history and cyclicism, we find a new tool for dating ancient events prior to 701 B.c.

By mid-March, the various contingents arrived from the Greek city states, from Cilicia (the Danaans), from Crete and from Rhodes. They unloaded their bags and equipment. Their armor included iron helmets, iron mail, iron battle axes, iron spears, iron swords and iron shields. Some of that iron came from a district in Greece called Magnesia, from which is derived our word "magnet." In fighting tools, iron was much superior to bronze, bone or wood. This iron armor (along with their other supplies) was laid out on the beaches as Apollo-Ares approached inexorably, 650,00 miles per day, night after night.

As it was with the Barbecue, it seems that destruction on this occasion came in late, around the time of dawn. Whether it came from the flux tube or from the magneto-tail of Mars we are uncertain, but we favor the flux tube.

Thus did he (Agamemnon) pray, and Apollo heard his prayer. He came down furious from the summits of Olympus, with his bow and his quiver upon his shoulder, and the arrows rattled on his back with the rage that trembled within him. He sat himself down away from the ships with A FACE AS DARK AS NIGHT, and HIS SILVER BOW RANG DEATH AS HE SHOT HIS ARROWS IN THE MIDST OF THEM. First he smote their mules and their hounds, but presently he aimed his shafts at the people themselves, and all day long the pyres of the dead were burning.⁴ (Caps and pars ours)

Since Mars or Apollo is pictured as having a face "as dark as night," this suggests a normal, inside or sunward side flyby with Mars in a thin, but brilliant crescent. As it was in Elijah's day, so it was in the day of Agamemnon, the falling fire was remarkably hot for normal wood-fueled fires. Fires were also somewhat scattered or widespread.

Where did the fire come from? Did the Trojans have an electromagnetic and/or gravitational scalar beam that they beamed down across the beaches, busy with Greek soldiers and supplies? Was there a broad spillage of gasoline? Could there have been a sudden spurt of submarine petroleum injected into the sea? Hardly! Students of ancient Greece have failed to perceive that these were electric fires, a result of discharges or thunderbolts from Ares, or Mars, via (1) the flux tube of electrons and charged particles, or (2) the sweeping magnetotail of Mars sweeping across the planet. These sparks, in the Greek perception, were sparks or flaming arrows shot from the Bow and Silver Bowstring of Apollo Shootafar. (Incidentally, "Shootafar," like "Passover," is a highly descriptive word.) "Passovers" were measured as the crow flies, and varied usually from 25,000 miles to 60,000 miles in our estimate. Flux tubes were looping, and materialized around 125,000 miles from the Earth when Mars was that close.

Two contingents seem to have been hit especially hard, the Argives and the Danaans. The Argives were from Argos, a city state about half way between Athens and Sparta. In an earlier century, the explorer Jason (with his Argonauts) had hailed from Argos.

Then the god sent a deadly dart upon the Argives, and the people died thick on one another, for the arrows went everywhither among the wide host of the Achaeans. At last a seer in the fullness of his knowledge declared to us the oracles of Apollo.....⁵

Since the flaming arrows went "everywhither," we know that this fire did not result from a gasoline spillage or a petroleum leak.

The magneto-tail of Mars seems also to have joined the fray.

Thus marched the host like a consuming fire, and the earth groaned beneath them as when the lord of thunder is angry and lashes the land about Typhoeus among the Arimi, where they say Typhoeus lies. Even so did the earth groan beneath them as they sped over the plain.⁶

The groaning Earth suggests a wave of earthquake activity. Typhon, we believe, was the flux tube, even as Gorgon (cited in Chapter I) was the ugly face of Mars itself, pocked with 3,000 craters, waving spiral "hair," and with three huge eye-sockets

(Argyre, Isidis and Hellas).

The steeds of Mars were not absent either.

These were inspired of Ares, but the others by Athene-- and with them came Panic, Rout and Strife, whose fury never tires, sister and friend of murderous Ares, who, from being first low in stature, grows till she uprears her head to heaven, though her feet are still on earth. She it was that went about among them and flung down discord to the waxing of sorrow.....⁷

Panic and Rout were Phobos and Deimos. Strife possibly is another satellite which may have been swept out in one of the last 3 flybys. Homer pictured Mars as being sometimes very small but which grew rapidly in size. In 2 years, Mars would approach the Earth from a distance away as far as 300 million miles down to as close as 30,000 miles, and during certain mega-catastrophes, even somewhat closer. Indeed "Scarface" grew in size and resided with its head in the heavens.

The Greeks had petitioned Ares for the zapping of Troy; now their questions demanded an answer as to why the Greeks themselves had been the recipient of cosmic discharges instead. Achilles spoke with some urgency to Menelaus, king of Sparta.

"Son of Atreus," said he, "I deem that we should now turn roving home if we would escape destruction, for we are being cut down by war and pestilence at once. Let us ask some priest or prophet, or some reader of dreams (for dreams too are of Zeus) who can tell us why Phoebus Apollo is so angry....⁸

Heavy questions were being directed to leaders such as Agamemnon, Achilles and Menelaus about the "pestilence."

A display of iron armor amid their encampment was unthinkable as a factor for drawing the wrath of Apollo.

...and Agamemnon prayed, saying: "Zeus, most glorious, supreme, that dwellest in heaven, and ridest upon the storm cloud, grant that the sun may not go down nor the night fall till the palace of Priam is laid low, and its gates are consumed with fire...."⁹

As mentioned earlier, the prayers of the Hellenes (including Agamemnon) were that Troy would receive a cosmic discharge. Furthermore, it seems that the prayers of the Greeks were that Troy would be zapped on this particular day.

To make a long story short, it seems that Agamemnon and Menelaus asked (demandingly) of the sooth-sayers, Calchas and Chryseis, what had gone wrong. (After all, they were the experts on Apollo and other celestial matters.) Those two seers, however, were mentally nimble. They were not about to take any blame. Chryseis maintained that the reason was the disrespect which Menelaus and especially Agamemnon had shown for Apollo (and perhaps his priests too.) Such, they asserted, was the cause for the wrath of Ares. With the pointing of their sooth-saying fingers, all eyes turned back to Agamemnon and Menelaus for an explanation. The Argive and Spartan colonels had no answer for such cosmic accusations.

Such is the story behind the story of the Hellenic invasion of Troy. What had been expected to be "a piece of cake" for the Greek military turned into a long, dragged out, bloody war of attrition. In time, the Greek invaders resorted to strategies involving a "horse" other than the celestial steeds of Apollo. And so it was that the "picnic" on Trojan shores was not a piece of cake, and it did not turn out as expected.

In our model and theory, Homer portrayed the next to the last of a long series of some 85 mid-March flybys, or passovers. The modern world is fortunate that his description has survived the ravages of the last 28 centuries. However, it is unfortunate in that our 20th century uniformitarian heritage has not allowed us to understand, to appreciate, or even to correlate the celestial catastrophism of this story (among others).

Could it be that Troy would have been the victim of a discharge of celestial lightning that early morning hour in March of 809 B., except for the Greek iron armor on the beaches close by, attracting the wrath of Ares? Even as the Greeks were consumed with awe and dread of Ares-Apollo, so it should be no surprise that the Phoenicians (and their colonists at Carthage) were equally as consumed with fealty toward Baal and Ashtarte. In addition, the city of Rome, founded in the aftermath of the flyby of 756 B.C., was filled with awe of Mars, Jupiter (Zeus-pater) and Saturn.

EXAMPLE 12 October 24, 756 B.C. A "WHALE OF A PICNIC" AT NINEVEH.

The flyby of 756 B.C. shall be discussed from four different geographical locations, Assyria, Italy, the Northern Kingdom and the Southern Kingdom. Their respective capitals were Nineveh, the future Rome, Samaria and Jerusalem. As one gets closer to the period we designate as Uniformitarian Period II, beginning in 701 B.C., the surviving literature of catastrophism noticeably expands.

In Jonah's time, the political situation, so far as the Hebrews were concerned, had become very bad. About 950 B.C., on the banks of the Upper Tigris River, the Assyrian Empire had emerged with its capital at Nineveh. The Assyrian government developed traditions making it among the most aggressive, butchering and cruel of all the empires up to that time. Assyrian psychological warfare was dispiriting. Before Assyrian legionnaires would attack a city, the option of surrender was given with the condition that all the citizenry would be deported to another sector of the empire. Such was the Assyrian method of assuring that no local patriots remained to stir things up. If the city refused the terms of surrender, its populace would be butchered, down to the last baby.

Jonah hated the Assyrians, even though their capital was 500 miles distant. By Jonah's time, Assyrian soldiers had already invaded those Hebrew provinces beyond the Jordan River, the other side of Galilee. Those populations had been deported to the lower and middle reaches of a river identified in the Bible as the Gozan River. The Gozan has now been identified as the Volga River, a river 2300 miles in length (compared to 1700 miles for the Euphrates and 1000 miles for the Tigris.)¹⁰ Assyrian legionnaires expanded their empire easterly into India, northerly into Russia and Siberia, and westerly toward Palestine and Egypt. The southern boundary was the shores of the Indian Ocean and, to some extent, the deserts of Arabia. The Assyrian government deported these first and second waves of Hebrew captives to their northernmost outpost, where they were to serve as a buffer between the "civilized" Assyrian Empire and the "barbarian" hordes, the Bulgars, the Huns, the Medes, the Mongols, the Penchenegs, the Tatars and other wild nomadic peoples of the northern plains. They were deported deep into Central Russia, 700 miles up the Volga, where the Hebrews founded the ancient city of Samara, the "New Samaria." They also seem to have founded Kazan, another 200 miles even farther upstream. This was the coldest and most inhospitable fringe of the Assyrian Empire. Their descendants later became the core of the Hebrew population of Eastern Europe, a population which has maintained its cultural

identity now for 2750 years. This was the place where some of Jonah's friends had been deported. Jonah did not care for the Assyrian military or political leadership in the least.

It would seem that Jonah, a native of Galilee, had studied reasonably well, including some astronomy, some geography, some history and also the Hebrew religion. Could it have been that one of Jonah's teachers had been disappointed that God had not zapped Nineveh in 864 B.C., the day of the Barbecue? And, if not in 864 B.C., could not the flyby of 809 B.C., which zapped the Greek encampment on Trojan beaches also have zapped the more deserving city, Nineveh?

Into this predisposition of Jonah's mind came the calling of the Lord. It was a call for Jonah to preach, of all places, in Nineveh. Jonah wanted nothing to do with it and with possible deportation to Russia. Instead, he boarded a ship sailing westward, perhaps to Italy, to Tarshish, to the Etruscan capital on the banks of the Arno. Then came the storm and the whale (or big fish) and the terrified sailors' sacrifice to the storm-god: Jonah himself. To the whale, Jonah was indigestible. To Jonah, the whale's digestive system acted as a bleaching agent.

After this experience, a call to preach at Nineveh wasn't so bad. Ashen, bleached and pale, Jonah now responded. Such a call would compare today with preaching a message of imminent destruction to the warlords of Moscow on their home turf, not exactly a bed of daffodils. Why would God call Jonah (or any other Hebrew prophet) to preach to Nineveh of all cities and to their royal court? That government had already banished Hebrew captives to Central Russia and perhaps to some of the cities of southern Siberia. This call of Jonah's (to preach) is a question the answer of which escapes us.

Jonah, being indigestible, was burped up on some beach of the Eastern Mediterranean, with a change of color, a change of heart and with a new determination. Originally dark-haired and recalcitrant, could it be that now he was transformed into a Bible-preaching blond? He set off for Nineveh and arrived there, we think, sometime in early September of the year 756 B.C. He must have begun his series of messages from the Lord promptly.

Jonah's preaching in Nineveh began around September 14, 756 B.C., which was just one week before the autumnal equinox (September 21 and the first day of autumn.) Also, it was precisely 40 days before the scheduled flyby of October 24 of the same year.

*And Jonah began to enter into the city a day's journey,
and he cried, and said,
"Yet forty days, and Nineveh shall be overthrown."
Jonah 3:4*

In a normal year, Jonah would have been jailed, killed or at the very least, extradited to Central Russia. But, 756 B.C. was no average year. The more Jonah thought about it, the more he relished the prospect of astronomical disaster for Nineveh. What a stroke from the Lord he envisioned. So, he camped outside the city, although his sermons were delivered, apparently, to high places including the palace in downtown Nineveh.

Jonah must have preached to the citizenry about the imminency of astronomical disaster to the wicked capital city. He expected that the Lord of Hosts would zap Nineveh, doing even more damage than had happened on the shores of Troy during Agamemnon's assault of mid-March, 809 B.C. Cities such as Troy had experienced catastrophism once every one or two centuries for a long time, and such cities as Nineveh wanted no more of it. Jonah preached catastrophism, that is, in modern parlance, "fire and brimstone." The fire was from celestial discharges from the magneto-tail of Mars and the flux tube, and perhaps to a lesser extent from volcanic eruptions. Jonah had no idea that the Ninevites would listen to his sermons and repent.

So the people of Nineveh believed God, and proclaimed a fast, and put on sack cloth, from the greatest of them even to the least of them. For word came unto THE KING OF NINEVEH, and he arose from his throne, and he laid his robe from him, and covered him with sackcloth, and sat in ashes. And he caused it to be proclaimed and published throughout Nineveh by decree of the king and his nobles, saying,

"Let neither man nor beast, herd nor flock, taste anything: let them not feed, nor drink water. But let man and beast be covered with sackcloth, and cry

mightily unto God: yea let them turn every one from his evil way, and FROM THE VIOLENCE THAT IS IN THEIR HANDS. Who can tell if God will turn and repent, AND TURN AWAY FROM HIS FIERCE ANGER, THAT WE PERISH NOT."

And God saw their works, that they turned from their evil, that he said that he would do unto them; AND HE DID IT NOT.

Jonah 6:5-10 (Caps ours)

Such was the king's decree, reflecting a wholesale change of attitude, a change in unison. But what kind of a "change" was it? Was the repentance "from their violence" or was it more superficial?

On this flyby occasion, Nineveh, now about 200 years old as capital of Assyria, fared like Jerusalem in 972 B.C. and like Troy in 809 B.C. For whatever reason along with their general repentance, Nineveh was spared. Why did the Ninevites repent? Why did they even listen to Jonah? Under such conditions as an impending flyby of Mars, why should the Ninevites want to be in disfavor with any of the regional deities, Greek, Hebrew, Indo-Aryan, Persian or whomever? The fact that the Lord of Hosts of the Hebrews was the Creator, and not just another regional planet deity, escaped them.

In the Book of Jonah, Jonah's sermon material is not given. (It may have been much like the sermons of Joel, preaching at the same time to the citizenry of Jerusalem, whose fiery sermons are recorded in part.) However, the king's response is given, though not the name of the particular king. In the last century, the ancient king lists of Assyria have been unearthed on clay tablets at Nineveh. The lists are complicated. Information from Thiele's work indicates that the king in 756 B.C. may have been none other than Assurbanipal.¹¹ It was King Assurbanipal's library where clay tablets were discovered by Rawlinson and Layard, and which clay tablets were first read by the amateur archaeologist, George Smith, late in the 19th century. Among that library of clay tablets was found The *Epic of Gilgamesh*, cited in Example # 1 of this series, describing Utnapishtim and the Ark, that is, Noah.

Assurbanipal (if he indeed was the king in 756 B.C.) may have repented "from the violence that is in their hands." However, either his repentance or his reign didn't last very long. Assyrian legionnaires resumed their butchery and raiding, assaulting

more than 100 cities throughout the Middle East during the next 50 years, cities stretching from the delta of the Nile to the delta of the Indus and the delta of the Tigris. Subsequent expansive-minded emperors included Tiglath Pileser, Sargon, and Sennacherib. However, for the citizenry of Nineveh, the cosmic crisis was over, and the city relaxed and celebrated. There was dancing in the streets. For many, it was picnic time.

Jonah, however, didn't join in with the festivities. He perceived that Nineveh, the cruelest of capital cities, had been spared. Jonah was very angry with God, who seemingly dismissed his prayers and dashed his fondest hopes, to say nothing of proving him a faulty prophet. Inside the city, the petitions of the populace seemingly were heard; outside the city Jonah went into depression. The story is there, including the gourd (or squash or pumpkin) in leaf season, establishing that this flyby could not have been a mid-March one. Thinking his mission a failure, the blond bombshell "bombed out." We hold that this was the 169th in a long list of some 170 Mars flybys. Jonah failed to foresee that the next would be the last, and he failed to foresee how much destruction it would wreak, and where, and upon whom. Had he foreseen such, his criticism of the Lord of Hosts might well have been muted. Apparently Jonah's prayer to God did not include a petition for patience.

THE "BLASTED ETRUSCAN PICNIC" OF 756 B.C.

There is evidence, not cited here, which suggests that at this same time, Central Italy was hit by a meteorite, one of the components in the ancient ring system of Mars. Perhaps it was a satellite with dimensions of 3 to 4 miles. Perhaps it was a little brother to Deimos and Phobos.

Such a large projectile hit the Earth in Central Italy, about midway in the boot" between top and bottom, and between east and west (the Adriatic and Tyrrhenian Seas.) It has left an impact basin, a crater about 60 miles north of Rome, Lake Bolsena. The lake's dimensions are 7 miles by 9 miles. Lake Bolsena is not in a caldera of a volcano, for there is no volcanic talus present.¹² But outflows of lava (or basalt) are numerous on the lake bottom.

Our theory is that this meteoritic blast was so destructive to the Etruscan State in Central Italy that the Etruscan State never did revive. (Perhaps the Gauls came in to ravage the survivors.) This lake is less than 100 miles from the current city of

Florence, and the Arno Valley, the core of the Etruscan State. Instead, Rome arose in its ashes, on the southern flank. Rome's founding is described by Livy and is dated at 750 B.C., plus or minus 2 years. This is just 6 years after the destructive flyby witnessed by Amos and Jonah, if our cyclic analysis is correct. Bearing this in mind, is it any surprise that the patron deity of Rome was the planet Mars? Is it any surprise that Jupiter and Saturn (the other two resonant planets) were the ones of prominence in their celestial triad? Indeed, before Rome was even 50 years old, the Romans had built temples to each of these three planet deities. The temple of Saturn happened to serve as the treasury of early Rome. Since undersea volcanoes and earthquakes created massive tidal waves during flybys, it was shrewd of the Romans to found their city 10 miles up the Tiber River, safe from any future massive tidal waves that might occur. In conclusion, what became a festive picnic for the Ninevites became a disaster of grave proportions to the Etruscans. And that disaster provided an opportunity for the founding and growth of Rome.

THE "PICNIC" OF 756 B.C. IN THE NORTHERN KINGDOM

A brief reading of the Book of Amos will reveal a battery of catastrophic scenes and terms, some being poorly translated. Amos began his series of "fire and brimstone sermons to the court of Jeroboam II in the year 758 B.C., probably in the autumn, just two years before the *raash*, sometimes translated as earthquake. Jeroboam II was a successor to Ahab of the Northern Kingdom during the next October flyby, 108 years subsequently. Amos began his sermons just two years before that "earthquake." If his sermons commenced around the time of Halloween, Mars was making its last orbit before the flyby of 756 B.C. According to our theory, in the last week of October in 758 B.C., Mars was 600,000 miles distant at its closest. It was a good time for a Planetary Catastrophist to warn the citizenry of what would be recurring in just 24 months.

Concerning a *raash*, it has been improperly perceived and translated. It was an earthquake; earthquakes were one of six or eight courses on the "catastrophic menu." In being translated as "earthquake" by the King James translators, that implies to our age that it would have been capable of being measured on the Richter scale of a modern seismograph. Earthquakes much greater than a seismograph could possibly measure were part of the catastrophic "menu" of October 24, 756 B.C. Other courses on that menu included celestial discharges, possibly with momentary heat of 100,000° F. at the strike site, as were shock waves, capable of being heard for 15,000 miles. Tidal waves would have swept the coasts, generated by submarine volcanism and earthquakes. Renewed volcanism,

spin axis re-tilts, significant crustal skids, modest relocations of the cardinal points of the compass, magnetic polarity reversals, geomagnetic field recharging and a scattering of regional prairie fires would have occurred, to say nothing of possible falling meteorites, debris from the ring system of Mars. Beyond this was the orchestra, a cacophony of noise from the clashing planetary magnetic fields in collision, and the celestial scenery. To call that event an "earthquake" is like calling World War II a regiment-sized skirmish.

One can only imagine the contents of Jonah's sermons by reading those of Amos and Joel. In the first 1% chapters of the Book of Amos, the prophet opens with a fiery introduction. His forecast was that fire would fall from heaven, just two years hence, on eight regional capital cities of the Middle East. Nineveh, some 500 miles distant, like Memphis on the delta of the Nile, was not included. Included were:

1. Jerusalem of Judah	1:2 and 2:4-5
2. Damascus of Syria	1:4
3. Gaza of Philistia	1:6
4. Tyre of Phoenicia	1:10
5. Teman of Edom	1:12
6. Rabbah of Ammon	1:14
7. Kiriath of Ammon	2:2
8. Samaria of Northern Israel	4:2 and 3:2

Samaria was the scene of the sermon. Jeroboam's court was not thrilled by the plucky prophet, who did not shrink from denouncing ethical, moral and political sins in high circles.

Later, in his brief writings, Amos castigated the Moabites for worshipping planetary images. He predicted that in two years the structural integrity of the buildings throughout the land would be tested severely. (A flexing of the Earth's crust as much as 1,000 feet in some regions, if not Palestine, was likely.) Amos predicted widespread destructions of fields, orchards and pastures by prairie fires out of control. He predicted a fearful despondency which would overwhelm the corporate population of the land, from royalty to peasantry.

Amos seems to have described the planet Mars in its trajectory in chapter 9, but the King James translators, among others, have missed it.

And the Lord God of hosts is he that toucheth the land, and it shall melt, and all that dwell therein shall mourn: and it shall rise up wholly like a flood; and shall be drowned, as by the FLOOD OF EGYPT.

It is he that BUILDETH HIS STORIES IN THE HEAVEN, AND HATH FOUNDED HIS TROOP IN THE EARTH; he that calleth for waters of the sea, and poureth them out on the face of the earth: The Lord is his name. Amos 9:5-6 (Caps ours)

In Chapter III, a description of the Exodus catastrophe occurred. Included in that catastrophe was a tidal wave, radiating out from the submarine volcano, Thera, 60 miles north of Crete. On that occasion, the Minoan civilization centered on the north side of the island of Crete was destroyed in one single hour. Some 500 miles distant, radiating tidal waves, lower in height, swept across the Sinai Isthmus, timed to engulf the pursuing Egyptian militia. Amos predicted that the coming flyby might be like this on the sea coasts. Inland, during a flyby day, would be a better location.

"Buildeth" in Hebrew is *banah* meaning to build or to set up. Height is implicit in this word, but the translators have not realized that it was 30,000 or 40,000 miles of height. "Stories" in the heaven is a word we think occurs only once in the Old Testament, *maalah*. Meanings of this word include a journey to a higher place, an arising (as a thought), climactic progression, as in a set of stairs. It is related to *ma'aleh* which also means ascent, elevation, platform, cliff, going up, mounting up and climbing stairs. In the "heaven" comes from the Hebrew word *shameh* which has meanings including a visible arch (as in a rainbow), the higher aether where celestial bodies revolve, air and heaven. Since the meaning of this word includes the ethereal heavens, why should that region not be considered 40,000 and 50,000 miles upwards? There is nothing in the text that indicates otherwise. Arches describe rainbows and they also describe sectors of orbits. Clearly, October 24, 756 B.C. was not a day of rain and rainbows. It was to be a day of fire and brimstone according to Amos, and it was a day of fire and brimstone according to Joel.

"Troop" in Hebrew is *'aggudah*. The normal meaning of this word includes a band, a bundle, a knot or an arch. Alternative meanings include burden and troop. Translators of the King James era and of our era have been thinking of chariots, horses, soldiers of valor, charioteers, and such, including horses hoofs and horses prancing. A moving band or bundle in the cosmos is, in our opinion, an improvement. Even better is a rotating knot or a rotating wheel or a gyroscope whose path is an arch. "Founded" in Hebrew is *yacad*, and it means to lay a foundation, to establish and to appoint.

If a translator were a Planetary Catastrophist, his work would contain distinct improvement over the traditional translators, lacking such a point of view. Is it too much to say that the traditional translators may have mistaken this verse completely? Amos handled the cosmic description rather well, and furthermore, his listeners, having seen Mars 600,000 miles distant in 758 B.C., and having heard much about the flybys of 864 B.C. and 972 B.C., knew precisely what kind of a picnic Amos meant. It was true that they would be eating outside (perhaps in storm cellars, caves or fox holes) because eating inside poorly constructed buildings would not be safe.

THE "PICNIC" OF 756 B.C. IN JUDEA

This flyby was also the occasion of the writings of another prophet of "fire and brimstone" caliber, Joel. Unlike the case of Jonah, we know nothing of the personal life or career of Joel. Also unlike Jonah, we have an interesting sampling of his sermon material. The Book of Joel embraces 3 short chapters of fiery figures of speech, perhaps the most fiery of the entire Old Testament.

To Joel (like to Isaiah, Amos and Jonah), the "Day of the Lord" was a very meaningful term, as it was to the populace of Palestine at large. It was another term for a passover, only usually the "Day of the Lord" seems to have referred to an October flyby while "Passover" was a mid-March term.

*Let all of the inhabitants of the land tremble:
for THE DAY OF THE LORD COMETH,
for it is nigh at hand.
Joel 2:1 (Our caps)*

Amos began preaching fire and brimstone about 720 days before the flyby occurred. Jonah began his series of sermon about 40 days before the flyby. Joel also preached that "fire and brimstone" was near at hand, although we do not know how many days near at hand" might have been. Like Jonah, it may have been a matter of weeks.

Joel's catastrophic forecast was similar to that of Amos.

*A DAY of darkness and gloominess,
A DAY of clouds and of thick darkness....*

*A fire devoureth before them;
and behind them a flame burneth. ...*

*Like the noise of chariots on the tops of the mountains shall they leap,
like the noise of a flame of fire that devoureth stubble....*

Joel 2:2a, 3a, 5

The noise of a prairie fire, only magnified substantially, was compared to the noise of the Day of the Lord. There were thick clouds emanating from the huge volcanoes of Mars; their massive sizes reflect (1) the gravity of the Earth, far greater than that of Mars, pulling on its internal mantle, and (2) the number of times flybys must have occurred, a number somewhere between 150 and 200 if we interpret paleomagnetic polarity reversals correctly. There were also massive outpourings of gases and lavas from volcanoes around the Earth, a symphony of discordant noise.

Joel also expected rather intense earthquakes. Those were the days when a "fire and brimstone" preacher had the rapt attention of the whole community.

*The earth shall quake before them;
the heavens shall tremble:
the sun and the moon shall be dark,
and the stars shall withdraw their shining....*

Joel 2:10

... for the DAY OF THE LORD is great and very terrible.

Joel 2:11b

*The Lord also shall roar out of Zion,
and utter his voice from Jerusalem;
and the heavens and the earth shall shake.
Joel 3:16*

Richter scales on seismographs are designed to measure earthquake magnitudes, but on a logarithmic (not an arithmetic) scale. This means that a rating of 2 is 10 times stronger than 1, and a rating of 8 is 10 times stronger than 7. Between 1904 and 1957, there were only six earthquakes that measured a magnitude of 8.4 or greater on the logarithmic Richter scale. It is our opinion that the earthquakes of Joel's day and Jonah's were so severe as to have gone off the graph and even might have destroyed the instrument itself, had any seismographs existed. Our modern world is uniformitarian and empirical in experience. If, in our modern time, "the present must be the key to the past," is it possible that our modern age has no comprehension of those ancient times, *none at all?*

JOSEPHUS ON THE "EARTHQUAKE" OF 756 B.C.

In the Old Testament, Amos, Joel and Jonah prominently describe the flyby of 756 B.C. In addition to that, Josephus displays some additional material. No one is certain of all of the sources of Josephus, but they were clearly wider than the Old Testament or the Hebrew language. Josephus wrote his history of the Jewish Nation about 80 A.D. His section on the reign of King Uzziah (who ruled in 756 B.C. in Jerusalem) is of particular interest for two reasons. First, he describes how bad the earthquake was with respect to the First Temple. William Whiston's translation of Josephus is as follows.

Suddenly the earth quaked so violently that a great breach was torn in the Temple, through which a brilliant ray of sunlight pierced... Nor was that all the damage done by the earthquake. On the west side of Jerusalem, half of the mountain was split off and hurled to the east, into a road at a distance of four stadia.¹³

A stadium is a Latin word, derived from the Greek word, "stade," about 600 feet. The landslide seems to have been over 2,000 feet, almost a half mile down one of the gulches of that ancient, rather hilly city. Observe the eye-witness nature of this

rendition, rather like the scene portrayed at the Barbecue and the pair of eye-witness accounts at the time of the Davidic Flyby. These four eye-witness sources should not be undervalued.

A second reason this account is of major importance is the story given by Josephus that, on this occasion, something possessed King Uzziah so strongly that he broke holy tradition and entered the temple to lead worship. Such a function was forbidden to royalty and was reserved to the priesthood. Nevertheless, Uzziah broke the long-standing tradition, to the great dismay of the priesthood. Simultaneously, he seems to have suffered something of a stroke. Perhaps the celestial fear was too great for the veins in his brain. This malady was seized upon very soon by the offended priesthood to disqualify Uzziah from reigning. He was retired and his son, Jotham, more acceptable, was crowned co-regent.

From Biblical sources, this flyby year is very difficult to date. From Amos, it is clear that it is toward the end of the reign of Jeroboam II of the Northern Kingdom. Jeroboam II's dates are 782 B.C. to 753 B.C. This points us toward the decade of the 750's. Jotham, Uzziah's son, reigned for 25 years, including his co-regency, and he died in 731 B.C.¹⁴. Twenty-five years plus 731 B.C. yields 756 B.C. This is an oversimplification of a rather complicated analysis of dating for the middle of the 8th century B.C. This is how we have dated this catastrophe, which we suspected was periodic even before our dating was established.

Thirdly, from the description of Josephus, it appears that Jerusalem suffered heavily from earthquake activity. Numerous buildings must have collapsed, and others threatened to do the same, as did the First Temple. But, Jerusalem seems to have escaped electrical damage, as it did on the occasion of the 972 B.C. flyby. In addition, there are indications that there was a modest spin axis re-tilt on this occasion. This comes from the description of the last flyby of 701 B.C., described by Isaiah. Analyze Isaiah 38:8-b with specific reference to a "returned" shadow, a word with connotations of the sun dial shadow changing not just once but twice, if not more.

Summary of Chapter

Twelve catastrophes have been examined in this work thus far. Some were discussed in depth, and many were briefly treated because the literary record is so scant. Between 2484 B.C (our model's date for the Noachian Flood) and 756 B.C.,

there were 16 flybys of the October case, one every 108 years (like clockwork). This book has touched on 8 of them, or 50%. There were also 16 flybys of the mid-March case, flybys which affected the Western Hemisphere far more grievously than the Eastern Hemisphere. Four of the 16 have been cited, one from Greek sources and three from Hebrew sources. In addition, a fifth (and the last) March flyby is about to be discussed. With 5 of 16 discussed, this is nearly one-third. Combining the October cases with the mid-March cases, 13 are cited out of 32, for a "batting average" of .406. This list includes the last 4, and 5 of the last 6. This reflects that the ravages of the catastrophic era affected libraries of the 2nd millennium B.C., and urban life in general very severely. A case in point is the Etruscan state of which virtually nothing is known. (Only one of the first ten catastrophes is described, The Great Noachian Flood.)

The next catastrophe we have chosen to discuss will be our thirteenth. In our Western world, traditionally the number 13 is unlucky." If there is a well-founded correlation of misfortune and the 13th, perhaps it is for the 13th of Nisan, always a Friday on the Hebrew calendar, and always March 20th. Most of the mid-March flybys were at night for the Eastern Hemisphere. Our Halloween theme of the Celts reflects nighttime flybys although the October flybys were the daytime ones. It seems that the orbital time of day of Mars varied, but only modestly, a few hours from one flyby to the corresponding flyby 108 years later. This is in harmony with what we know in celestial mechanics.

In our study, the thirteenth of this series of catastrophes is also the last. On the night of March 20, 701 B.C., the flux tube of Mars unloaded its celestial lightning on Assyrian armor. (Jonah would have loved to have seen it.) We think that the Assyrian army was 250,000 strong. Assyrian cuniefom indicates that the Assyrian emperor, Sennacherib, survived, but it also indicates he had been badly burned, perhaps flash-burned on one side.¹⁵ The thirteenth on this unfolding list was unlucky for Sennacherib, and even more so for 185,000 of his legionnaires, who lost their lives. But, as it so happens, the thirteenth in our discussion with respect to Earth history could be judged fortunate.

It is our theory that this was the final Mars flyby and the first and only outside flyby. It unravelled the catastrophic orbital system, thereby bringing the era of global cataclysms to an end. Sennacherib and his legionnaires were unlucky. For subsequent generations, Sennacheribs misfortune became their good fortune. Celestial peace arrived in the year 701 B.c.

On some unknown day somewhere around 10,000 B.C., perhaps even 9,900 B.C., it is our theory that Astra fragmented on the Roche Limit of Mars, sending thousands of fragments into space, becoming the asteroids. Other thousands hit one side (and only one side) of Mars, creating craters. A few remained in orbit around Mars, creating a ring system. The core of Astra (the Hellas fragment) hit Mars at almost the bull's eye. It is only 10° east of the center of the cratered hemisphere, centered at 320° W. longitude and 45° S. latitude.

Because of the collision with Hellas, Isidis, Argyre and thousands of lesser fragments, Mars staggered, lost some potential energy, and fell into a new orbit where its new perihlion was a staggering 75 million miles close to the Sun, and its aphelion was out near the fragmentation scene, some 215 million miles from the Sun. That day, 9900 B.C., there was an energy exchange for the planet Mars, which insured that the Mars-Earth Wars, or Catastrophes, would occur. It insured that the Earth would experience crustal deformations on a global scale, and incidentally in swath-like flyby patterns. It insured that the Earth would experience oceanic upheavals, and the aftermath, settling sedimentary strata. It insured that the Earth would experience much friction at the Moho between the thin crust and the 1700-mile-deep mantle. It insured that the Earth would develop a geomagnetic sheath, and that the Earth's magnetic polarity would become reversed, alternately, for many, many cycles. The Earth's geomagnetic sheath or umbrella thus developed, would intercept the solar wind and the solar alpha particles, and thus would assist the conditions for biological life on our planet immensely.¹⁶

NOTES

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1. Ingri and Edgar D'Aulaire, *Book of Greek Myths*. New York, Doubleday, 1962, pp. 82 - 85.
 2. Personal Correspondence, Marvin Luckerman, editor of *Catastrophism & Ancient History*, to Donald W. Patten, August 12, 1985.
 3. Homer, *The Iliad*. Book I, paragraph 39.
 4. *Op. cit.*, Book I, paragraph 3.

5. *Op. cit.*, Book I, paragraph 30.
6. *Op. cit.*, Book I, paragraph 64.
7. *Op. cit.*, Book V, paragraph 57.
8. *Op. cit.*, Book I, paragraph 8.
9. *Op. cit.*, Book II, paragraph 26.
10. Immanuel Velikovsky, "Beyond the Mountains of Darkness The Search for the Ten Lost Tribes." *Kronos* Vol. VII - 4, Summer 1982, pp. 40 - 47.

When the captives of Judah were transported to the Tigris-Euphrates Valley about 600 B.C., in vain did they look for or find their captive brethren from the Northern Kingdom.

The Hebrews of the Northern Kingdom had been transported to the middle reaches of the Volga, where they founded the city of Samara, and where the Samara River flows into the Volga at a major bend eastward in the river.

Some of the Hebrew captives were also relocated in the cities of the Medes, who in the 8th century B.C. occupied Turkestan and Uzbekistan, a region of dry steppes and high mountains in southern Siberia, north of Iran, or Persia.

11. Edwin R. Thiele, *The Mysterious Numbers of the Hebrew Kings*. Grand Rapids, Eerdmans, 1965, pp. 209 - 215. Thiele lists one Assurdan as acceding to the Assyrian throne in 771 B.C., 15 years before the flyby of Jonah's day.
12. Immanuel Velikovsky, *Worlds in Collision*. New York, Doubleday, 1950, p. 273. Velikovsky cites the Roman author, Censorinus, when writing on "world ages" as follows. "The Etruscans were versed in the science of the stars, and after having observed the prodigies with attention, they recorded these observations in their books."
13. Josephus, *Antiquities*. Book VIII, Ch. 10, paragraph 4.
14. Thiele, *op. cit.*, page 203.
15. Louis Ginzberg, *Legends of the Jews*. Philadelphia: Jewish Publication Society of America, 1928. Vol. IV, p. 269. "The death of the Assyrians happened when the angel permitted them to hear the "song of the celestials." Their souls were burnt, though their garments remained intact.
16. For further development, See Donald Wesley Patten, "The Origin and the Decay of the Earth's Geomagnetic Field." *Catastrophism and Ancient History*, Vol. IX Part 2, July 1987, p. 91 ff.

If the Earth's crust contained very little iron and 5% copper, that copper, too, would have become magnetized during a flyby but such magnetization would have vanished within hours. Copper nails, when given an electrical charge, achieve a field which vanishes when the charge ceases. However, the Earth's crust contains an average of 5% iron, and iron behaves differently. Iron nails, when given a charge, develop a magnetic field just like copper nails. However, like elephants, they remember. In the case of iron nails, magnetism will both stay and decay; it is called remanent magnetism. The time period required for the decay of the field depends on the purity of the iron, the size of the nail and the resistance of the alloy.

In the case of the Earth, the geomagnetic field is also staying but decaying. It is decaying at a rate which, for any single generation is minimal, only 5% per century. But for 100 generations, such as we have experienced since 701 B.C., the decay is great. It has been from 1.23 Gauss down to the present .307 Gauss. In another 1350 years, the field strength will be down to .153 Gauss, and will continue to weaken.

There are two sides of every coin. One side is that catastrophes ceased and the second era of uniformitarianism arrived in 701 B.C. The other side is that the geomagnetic sheath, necessary for the survival of biology, began a slow but steady and sure decline. While catastrophes were bad, causing wholesale devastation, they were not as bad, for biology, as will be the devastation caused by un-intercepted alpha rays from the Sun.

In 3350 A.D. the field strength will be .153 Gauss. In 4700 A.D., it will be .076 Gauss. At what strength range the lethal character of these rays will prevail is unknown. However, scientists with uniformitarian heritages need to ponder topics of great significance such as this one.

Chapter VII

The Long Night of Sennacherib The Final Flyby, March 20/21, 701 B.C.

In Chapter IV, it was proposed that the Long Day of Joshua was about 28 hours long rather than 24, and the daytime part of that day was 16 hours rather than 12. It was caused by a combination of crustal skidding and spin axis shift, or precession. If there was an extra-long day, as in the case of Joshua, could there also have been a lengthened night? This question is considered in the following pages.

Mid-March, 701 B.C. in Greece - Hesiod's Version

That Hesiod described a flyby in his *The Shield of Herakles* seems to this writer to be beyond dispute. In our model, there were only two Mars flybys after Homer's time. One was in 756 B.C., a daytime flyby for Palestine, and the other one was in 701 B.C., and was a nighttime flyby. In the daytime flyby of 756 B.C., Mars made an inside, or sunward flyby, and its form was as a crescent. In the 701 B.C. flyby, Mars in March made an outside flyby, and it appeared as a "full Mars" and was shaped like a full Moon or like a round shield.

The shield of Herakles (or Hercules as it is often known) was not badge-shaped. It was circular or round. Perhaps the round shield as a visualization doubles for the disc of Mars on the final flyby. Hesiod described that shield as follows.

For all THE CIRCLE OF IT with enamel and with pale ivory, and with electrum it shone, and with gold glowing it was bright, and there were folds of cobalt driven upon it. In the middle was a face of Panic, not to be spoken of, glaring on the beholder with eyes full of fire glinting.

(Caps ours) ¹

What did Hesiod mean by "pale ivory," "enamel," "shining electrum," and "glowing gold?" Could this be a comparison to the disc of Mars, when it was a full moon as it was during, and only during the last flyby?

Hesiod we know was a Greek writer who lived after Homer. Our model of cyclic catastrophism indicates that Homer portrayed the flyby of 809 B.C., the dating of the Trojan War. Lattimore, a translator of Hesiod, gives the following information.

To Herodotus, Homer and Hesiod were contemporaries... Modern opinion tends to put Hesiod later. What seem to be the two main reasons for this are not, I think, sound. ...

I believe, nevertheless, that Hesiod is a little later than Homer. The best piece of evidence is precisely the one which has bothered many scholars in the past. Hesiod's competition, mentioned above, was at the funeral games for Amphidamas, who was a figure in the Lelantine War and whose death ought then not to have taken place before the end of the 8th, or the beginning of the 7th, century. ²

Lattimore's analysis allows us a second reason to conclude that Hesiod witnessed the flyby of 701 B.C., just like Isaiah.

Hesiod wrote three works, *The Works and Days*, *Theogony* and *The Shield of Herakles* (or Hercules.) *The Works and Days* contains little of a catastrophic perspective; it is largely on outlooks upon life. In line 766, Hesiod indicates that the Greeks had a calendar with 30 days per month, and 12 months per year, a total of 360 days.

Observe the Days that come from Zeus, all in their right order. Explain them to your workers; that the thirtieth of the month is best for supervising works.... ³

Other ancient calendars also contained 30, but never $29\frac{1}{2}$ or $28\frac{1}{2}$ days per month. Also the ancient year contained 360, and not 365 or $365\frac{1}{4}$ days.

The following is a sampling of ancient calendars or other time-keeping methods, all of which operated with a 360-day year.

Arabia: The ancient Arabs had 360 statues surrounding Hobal, which is yet another form of Baal-Mars. Each statue had one genii for each day, and there were 360 genii.

Assyria: One *sarus* was a decade. A *sarus* was composed of 3600 days. ⁴

Babylonia: The Babylonians of the 2nd and the early 3rd millennium B.C. had a ten-day period known as a *decan*. There were 36 *decans* per year. Their circle had 360 degrees also.

China: The ancient Chinese calendar contained 360 days, and their ancient circle also contained 360°. Later, *both* were changed to 365¼, both days and degrees. The additional 5¼ days was termed "Khe-ying."

Egypt: The sacred Book of Sothis and the Canopus Decree both say that the Egyptian year was 360 days. That ancient year was adjusted to 365 by a committee on calendric reform, priests who met at Canopus in 238 B.C.

Greece: The ancient Greeks had 360 idols in their theology of Orpheus, one idol for each day per year.

India: The ancient Veda texts speak in unison of an ancient year of 360 days.

Japan: The ancient Japanese had 360 idols before the palace of Dairi, one for each day of the year.

Mexico: The Mayans had 72 weeks per year in the ancient times. Each week was comprised of 5 days.

Palestine: The Pentateuch contains 12 months in a year, and each month was 30 days. Each month was specifically 30 days, not 28, 29 or a fractionated number.

Persia: The sacred Bundahis has a year divided into two *rogin* or apertures. Each *rogin* had 180 apertures. That system was eventually revised to accommodate another 5¼ days.

Peru: The ancient Inca calendar was divided into 12 *quilla*. Each *quilla* had 30 moons. Later, a 5-day addition was made, which was named *Allcacanquis*.

Rome: The earliest Romans of the 7th and 8th centuries B.C. had a calendar which contained 36 days per month, and there were precisely 10 months, once again making a 360-day year. The last 36-day month was December. That system seems to have been carried down from the even more ancient Etruscans.

Thus, 360 as a day count per year can be divided many different ways. Those ways included by 2, by 5, by 10, by 30, by 36, by 72 and by 180. More research is apt to turn up with 4 and 90 also, for the duration of the four seasons.

Like Hesiod 800 years earlier, Plutarch understood that the ancient calendar had been composed of 360 days. It had been changed on the occasion of a celestial crap game. The planets played with dice, however, the stakes were not coins or chips but rather days. The gamblers were not persons but planets. And the casino was not in Nevada, but encompassed the celestial regions.

*Hermes playing at draughts with the moon, won from her the seventieth part of each of her periods of illumination, and from the winnings he composed five days, and intercalated them as an addition to the 360 days.*⁵

This is especially interesting when one notes that 360, divided by 70, yields 5.14 additional days. Modern astronomers consider the day to be 365.256 days. Thus, Plutarch was in error by only 0.116 days, or about 2 hours.

Plutarch seems to have had the right theme (an additional day count per year) but there was some confusion in details. From our model of cyclic catastrophism, we theorize that it was not Mercury that won, but Ares, which gained energy as its day count per year diminished from the ancient 720 to the modern 687 days. The gain by Mars was a gain in the sense of energy. The Earth lost energy and revolved more slowly as its orbit expanded, and the day count required to complete the new orbit increased to $365\frac{1}{4}$ days.

Theogony

Hesiod's *Theogony* pictures an ongoing warfare; the warring stars are celestial rather than military. These include Zeus (Jupiter), Kronos (Saturn), Ares (Mars) and Gaia (Earth). He also depicts an epic battle between the Titans and the Olympians.

Then, when Zeus had put him down with his strokes, Typhoeus crashed, crippled, and the gigantic earth groaned beneath him, and the flame from the great lord so thunder-smitten ran out along the darkening and steep forests of the mountains as he was struck, and a great part of the gigantic earth burned in the wonderful wind of his heat, and melted, as tin melts in the heat of a carefully grooved crucible when craftsmen work it, or as iron, though that is the strongest substance, melts under stress of blazing fire in the mountain forests....⁶

Typhon (Typhoes) we met in Apollodorus as a Greek corollary to the Sword of the Lord and the flux tube of ions and charged particles which Voyager photographed between Io and Jupiter.

Hesiod confirms Isaiah that there were lightning strikes of immense amperage.

All earth was boiling with it and the courses of the Ocean and the barren sea, and the stream and the heat of it was engulfing the Titans of the earth, while the flames went up to the bright sky unquenchable, and the blaze and the glare of thunder and lightning blinded the eyes of the Titan gods for all they were mighty. The wonderful conflagration crushed Chaos ...

The winds brought on with their roaring a quake of the earth and dust storm, with thunder and with lightning, and the blazing thunderbolt, the weapons thrown by great Zeus, and they carried the clamor and outcry between the hosts opposed, and a horrible tumult of grisly battle uprose, and both sides showed power in the fighting. Then the battle turned; before that, both sides attacking in the fury of their rage fought on through the strong encounters. ...⁷

Hesiod's themes are parallel to Joel's themes, and both are much like the themes in Isaiah's and Amos' accounts. It was an unforgettable scene, as (what we now know were) planetary magnetic fields charged into each other at a relative velocity differential of 27,000 m.p.h. or so.

The battlefront was 100,000 miles broad if indeed not broader in this electrical sense. The two magneto-heads were between 40,000 and 60,000 miles in diameter each, in our estimate. Their two magneto-tails were shaped like very long, tapering wings with shoulders that may or may not have been symmetrical on that

day. Each magneto-tail stretched out 200,000 miles or more in the direction opposite the Sun, driven by the solar wind. Hesiod painted a very similar picture to that which Isaiah sketched, only in a different language and amid a different culture.

The Shield of Herakles

Works and Days includes 828 lines, but it does not feature catastrophic themes. *Theogony* contains 1024 lines and features an abundance of themes of celestial chaos. *The Shield of Herakles* contains only 480 lines, but this essay contains a panorama of catastrophic themes even richer than *Theogony*. Following are selected citations.

Horses and chariots of a cosmic order are pictured, featuring the son of Ares in the "precinct" of Apollo.

It was he, Herakles, who killed Kyknos, high-hearted son of Ares, for he came upon him in the precinct of Apollo, who strikes from afar, himself and his father, Ares insatiable in battle, blazing both of them like the light of burning fire in their armor, and standing in their chariots, and their running horses trampled and dented the ground with their hooves ...

*Lines 56-62*⁸

The "precinct" of Ares might relate to the "first point of Aries" in the ancient zodiac, which was also related to the Earth's orbital position on March 20/21. If so, that is additional support that Hesiod was reporting on the final flyby of 701 B.C., when the son of Ares (Kyknos) was defeated.

Ares or Mars featured arrows, or thunderbolts, or sparks and loud, crashing noises, which is again reminiscent of the writings of catastrophic scenes by the Hebrew "fire and brimstone" prophets.

... nor fear the crashing of man-slaughtering Ares who now, screaming aloud, courses all over the sacred grove of Phoibos Apollo, the lord of far-ranging arrows. Strong though Ares is, this passion for battle is madness.

*Lines 98-101*⁹

Apparently the Greeks, like the Romans, considered Ares-Mars to be the deity who behaved crazily amid scenes of celestial warfare.

It seems that the Greeks were quite aware that the Earth was spherical, and was rotating, and was of the same order of things as was Ares.

My uncle, in very fact the father of gods and mortals exalts your head, as does the bull-god, THE SHAKER OF THE EARTH...But come, put on your armor of battle, so that, with all speed, we may bring together the two chariots, ours and Ares', and fight; he will not terrify either yourself, the fearless son of Zeus, nor me, Iphiles' son...

Lines 103 , 104 and 108-110 (Caps ours) ¹⁰

In our model, Mars was indeed the "Shaker of the Earth" and vice versa. Hesiod portrays both planets as having celestial chariots, or should one say, orbits.

The steeds of Mars, Deimos and Phobos, were also prominent.

On it were wrought the figures of Onrush and Backrush, on it Battlenoise and Panic and Manslaughter were blazing, and Hate was there with Confusion among them, and Death the destructive; she was holding a live man with a new wound, and another one unhurt, and dragged a dead man by the feet through the carnage. The clothing upon her shoulders showed strong red with the men's blood, as she glared, horribly, and gnashed her teeth till they echoed. And on it were the heads of snakes, dreaded, indescribable, twelve of them, who across the land pursued the races of mortals, those fighters who tried to fight in the face of Zeus' son, Herakles.

Lines 154-164 ¹¹

Mars had an appearance more terrifying than any Halloween costume ever designed. But then, the Halloween themes from the Celts may have been derived from scenes just like this, except as seen from Northwestern Europe.

Ares must have looked very much like a grim reaper.

On it were standing the swift-footed horses of grim-faced Ares, in gold, and he himself, the spoiler, the destructive, gripping his spear in his hands and calling out to the foot-fighters and stained red with blood, as if he stood in his chariot and were killing real, live men, and beside him Terror and Panic stood, straining forward to get into the battle of warriors.

*Lines 193-196*¹²

Deimos and Phobos (Terror and Panic) were escorting this grim reaper.

We do not understand a role for Venus in the panorama of Mars-Earth catastrophism. We do suspect, however, that the orbit of Venus was in 8:5 resonance with Earth's orbit and hence 16:5 with the orbit of Mars.

... such was the son of Amphitryon, insatiate of battle, as he stood up to face Ares, advancing on him and swelling the valor within; and the other came close to him, heart vexed with fury, and the two of them, screaming aloud, advanced to encounter. As when a boulder, breaking loose, springs from a great cliff and rolls down in long bounces, and with furious force the crashing noise goes on, but then there is a high cliff standing in its way, and the boulder crashes into it, and is stopped there; with such tumult Ares the destructive, burden of chariots, charged crying aloud on Herakles, who came eagerly to meet him. But now Athene, daughter of Zeus of the aegis, came to stand in the path of Ares...

*Lines 432-444*¹³

The path of Ares was also the orbit of Ares. Athene was Venus. We do not know where Venus was on that pivotal day, but if it had some ancient role in its present orbit, that would not be surprising, having been so close to the perihelion of Mars. Hesiod compares the clashing planetary magnetic fields to the sound of a particularly massive avalanche. Words abound of superlative power, destruction, and terror, usually related in one way or another to Ares in *The Shield of Herakles*. Why Hercules received the credit for the defeat of Ares is not known to us; however, perhaps the credit had to go to some stout-hearted cosmic warrior. Hercules is one of many archetypes of Mars in Greek literature.

Hesiod seems to have had his roots in the city state of Boetia, near the Greek Thebes, about 50 miles northwest of Athens. He described the last flyby of Mars as a circle or disc, or shield coated with glowing gold, shining electrum, enamel and

pale ivory and very bright. There are three descriptions of what we conclude was the same scene Hesiod saw, during the night of March 20/21, 701 B.c. in the Bible, found at Isaiah 37:36, II Kings 19:35 and II Chron. 32:21.

Mid-March, 701 B.C. in Palestine - Isaiah's Version

BACKGROUND. In 756 B.C., under the influence of Jonah's sermon and the impending Mars flyby, the citizens of Nineveh and even the king repented (much to Jonah's chagrin.) They experienced a reprieve from divine wrath. But that repentance, from the theological perspective of the Judeo-Christian tradition, was brief. Soon the violence and the killing continued. The Assyrian kings who succeeded Assurbanipal (such as Tiglath Pileser, Shalmaneser, Sargon and Sennacherib) carried on with the bloody tradition of military conquest, raiding, plundering and butchery far and wide. Each year, it seems, another sector in the expanding Empire was designated for further imperial conquests.

In the era of 722 B.C., the Northern Kingdom and Samaria, its capital city, were under assault. The city was captured after a long siege and consequent famine. The captured populace was marched eastward and northward some 1500 miles, past the headwaters of the Euphrates and Mt. Ararat, and past the Caucasus to the Volga River. From the mouth of the Volga, many were sent upstream to the big bends at Samara and Kazan, another 500 or 600 miles. In 701 B.C., Jerusalem (like Samaria in 722 B.C.) was surrounded by Assyrian legionnaires. Would they, if they surrendered, also be sent to Central Russia? In the light of Assyrian foreign policy, military might and the size of the empire, such was entirely possible.^{14 15}

In the year 701 B.C., once again it was the turn for the southwest sector of the Assyrian Empire to expand, and incorporate Judah and Egypt. Egypt was the plum. Judah and Jerusalem were merely burrs under the saddle on the way to Egypt. They would be disposed of early in the spring, so that the Assyrian juggernaut could get on quickly with the summer campaign on the delta of the Nile.

In 702 B.C., in Nineveh, the astrologers of Sennacherib advised him that the raiding and pillaging, plundering and general political rapine would be especially easy and especially rich in March of the year 701 B.C. Nergal (the Assyrian Mars) was ready to once again render cosmic assistance. The crystal ball-gazers were having a

heyday in Nineveh, perhaps partly encouraged by the reprieve of 756 B.C., and perhaps partly encouraged by a perception that mid-March flybys normally missed the Eastern Hemisphere, as they electrically raked the Western Hemisphere.

The Assyrian military command was impressed by the crystal ball-gazers and the monthly prognosticators, much as the Greek military had been impressed in 809 B.C., some 108 years earlier. Judah and its capital city, Jerusalem, probably would surrender rather than experience liquidation. If they didn't, the earthquakes might rift the walls, or perhaps the celestial arrows of Apollo Shootafar would hit Jerusalem, turning it into a cauldron. By the first of May, Palestine would be in hand, and the lush delta of the Nile would be in sight. The year 701 B.C. promised excellent "pickings" for the legendary legionnaires of Sennacherib.

IN JERUSALEM, as in Assyria, there was a new king, Hezekiah, who acceded in 716 B.C. Preparing for a prolonged siege, Hezekiah authorized the digging of a great tunnel under Jerusalem to provide sufficient water for the city's populace, even if swollen with refugees. Hezekiah also chose Isaiah as one of the members of his cabinet. We conclude that Isaiah had experienced the flyby of 756 B.C. as a youth, and very likely had helped clean up the rubble of the destroyed buildings. Thus, Isaiah in 701 B.C. was nearing 70 years of age.

THE QUESTIONS OF THE HOUR. What would be Hezekiah's decision in the face of the oncoming assault of Sennacherib and his military machine? Would he surrender, and accept deportation to Central Russia or some place even more remote (like Siberia)? Would he commit suicide and let someone else make the decision? Would he resist and pray to Yahweh for a miracle? Would he plead for mercy, especially territorial mercy from Sennacherib (for was not Israel the chosen people but also the chosen land)? What would be the advice of the respected cabinet official, Isaiah? Would the other cabinet officials concur with Isaiah, or would they concur with the emissaries of Sennacherib? Jerusalem was indeed between a rock and a hard spot.

For some time, and up well into late 702 B.C., Isaiah counseled peace and surrender. Perhaps he emphasized the importance of the survival of the Jews as a nation and as a culture. But a short time later, by late 702 B.C., for some reason, Isaiah changed his counsel entirely and advocated resistance. We can only suggest that Isaiah had received some kind of a message from the Lord of Hosts, a message

that HE (the Lord) would deliver Jerusalem. In fact, Isaiah began to offer the astounding advice that the Assyrian legionnaires (with all of their valor and vaunted armor) were in greater danger than was the city of Jerusalem. How could such outrageous advice be considered? The following represents Isaiah's perspective, including his unique advice; it comes from the first 36 chapters of the Book of Isaiah.

In the understanding of Planetary Catastrophists, chapter 37 contains the description of the flyby itself. Talmudic information presents this catastrophic night as the time of the passover, Nisan 13/14.¹⁶ Being that the evening of Nisan 13 was Friday the 13th, would that night be lucky or unlucky? If so, for whom? Hezekiah? Sennacherib? The Assyrian juggernaut? Jerusalem?

A CAGED CITIZENRY, By the end of February, Sennacherib had captured all of the fortified cities of Judah. The last to fall were Lachish and Libnah, 20 and 30 miles to the southwest. Only Jerusalem was left, overburdened with perhaps a half of a million refugees from the farms and villages of the land. Jerusalem was in a state of near panic. The citizens of Jerusalem looked upon themselves like birds caught in a cage.

*As birds flying, so will the Lord of hosts defend Jerusalem;
defending also he will deliver it;
and PASSING OVER, he will preserve it.
Isaiah 31:5 (Caps ours)*

Birds are aerial images. "Passing over" is also an aerial or bird-like image. Perhaps, in turning to use these aerial images in a different context, Isaiah was incorporating an element of metaphoric humor into his message.

ISAIAH ON THE COMING MISFORTUNE OF THE ASSYRIAN ARMY. The Assyrian army is estimated to have numbered one-quarter million, possibly more. Most of them were veterans of earlier campaigns. These veterans, as in many ancient armies, relished the pillaging, the rape and the general killing they were preparing to do.

*Then shall the Assyrian fall with the sword,
not of a mighty man.
Isaiah 31:8*

What kind of a "sword" could Isaiah have possibly had in mind? "What other kind of sword was there?" asks the Evolutionist, the Uniformitarian, and the Fiat Creationist? Indeed what other kind was there? And how could it be "not of a mighty man?" Indeed.

THE LIGHTNING NATURE OF THAT SWORD. Isaiah, like Hesiod, was not given to pale adjectives. Humor perhaps. High drama, definitely. But not to anemic, passive language.

*And the Lord shall cause HIS GLORIOUS VOICE TO BE HEARD, and shall shew
THE LIGHTING DOWN OF HIS ARM,
With the indignation of his anger, and WITH THE FLAME OF A DEVOURING
FIRE, WITH SCATTERING, AND TEMPEST, AND HAILSTONES.
For through the voice of the Lord shall the Assyrian be beaten down.
Isaiah 30:30-31*

In this passage, Isaiah uses the metaphor "voice" rather than "sword." Voices travel by means of sound waves, like blasts and shock waves. Lightning and shock waves combined comprise Isaiah's vision of a successful offense against the vaunted Assyrian juggernaut.

ISAIAH ON EARTHQUAKES. Bear in mind that, based on the rule of the mass over the inverse of the cube of the distance, crustal heaving would vary with the distance of Mars. Mars at 240,000 miles would achieve 10 times the heaving by the Moon. At 120,000 miles, it would be 80 times. At 60,000 miles, it would be 640 times. At 30,000 miles, it would be multiplied by 5,000 compared to the lunar-induced crustal tide which is about 3 inches.

*...for the windows from on high are open,
and the foundations of the earth do shake.
Isaiah 24:18*

Perhaps the crustal tide would not be at its 100% maximum in Palestine, but rather in some other part of the Eastern Hemisphere. Even so, a 20% or 30% portion of that force, flexing the Earth's crust, could create substantial earthquakes. However, would such earthquakes damage Jerusalem's primary defense, its 20-foot thick and 60-foot high walls?

ISAIAH ON A CONFUSED ROTATIONAL PROGRESSION. A confused rotational progression includes the spin axis going into a brief barrel-roll. But it also includes the 10 or 15-mile thin crust going into a 3 or 4-hour skid (easterly).

*The earth shall reel to and fro like a drunkard,
and shall be removed like a cottage.
Isaiah 24:20*

In that time in the villages, huts were one step above tents. Huts and cottages could be lifted by a group of men with staves and relocated like a mobile home. This is one figure for the Earth that Isaiah employed. Another figure was that of the drunkard, trying to find his way home in the dark. These are homely metaphors.

What Isaiah actually reported, two or three days after the flyby (see Isaiah 38:8), was that the shadow on the sundial had shortened. It had shortened ten degrees", which is probably better translated ten "hand spans", or about 7 feet. A typical Egyptian obelisk of that era was 80 or 90 feet tall, although some rose over 115 feet. The spin axis indeed had precessed once again, as Isaiah reported the equivalent of the North Pole having moved (and the latitude of Jerusalem). It was the Earth, but more precisely the spin axis of the Earth which acted like a drunkard, having wobbled for a few hours. Isaiah, in reporting such, was indeed a splendid reporter for Earth history.

ISAIAH ON A SHOCK WAVE RADIATING OUT FROM A CELESTIAL DISCHARGE. The following is from a scientific encyclopedia on shock waves.

Shock Wave: *An abrupt increase in...temperature, accompanied by a decrease in velocity, in a supersonic field of flow ... An intense sound will develop into a shock wave after traveling a short distance. Thus, a strong explosion inevitably produces a shock wave, which is in some cases the most damaging aspect of the blast. ...*

Shock waves are more complex than most other types of waves. The reflection of shocks from surfaces does not obey the law of equality between angles of incidence and reflection; at a critical angle, regular reflection is replaced by Mach reflection in which a triple shock configuration is formed. ¹⁷

In many passages, Isaiah describes shock waves, or tumults. The following is a sample.

*For thou has been a strength to the poor, a strength to the needy in his distress, a refuge from the storm, a shadow from THE HEAT, WHEN THE BLAST OF THE TERRIBLE ONES IS AS A STORM AGAINST THE WALL.
ISAIAH 25:4 (Caps ours.)*

Once again, Isaiah is perceived as a star reporter on Earth history.

ISAIAH ON CATASTROPHIC NOISE. On the morning of June 30, 1908, an icy bolide, perhaps 200 yards in diameter, streaked through the Earth's atmosphere across Northern China and was seen by millions. It exploded over Northeastern Siberia. The sound of the explosion, a sound wave, was heard in Germany, some 3,200 miles to the west. It was also heard in Manilla, 3300 miles directly south. A reflection of the flash of the explosion was seen in the clouds above London. At Kansk, 375 miles distant, the shock wave knocked down horses two minutes after the flash. At Vanavara, a trading post 40 miles away, the shock wave collapsed windows and ceilings, and flung people into the air. ^{18 19}

*All ye inhabitants of the world, and dwellers on the earth, see ye, when he lifteth up an ensign on the mountains; and when he bloweth a trumpet, hear ye.
Isaiah 18:3*

*Their roaring shall be like a lion, they shall roar like young lions: yea, they shall roar....
Isaiah 5:29*

And in that day they shall roar against them like the roaring of the sea:

*and if one look unto the land, behold darkness and sorrow,
and the light is darkened in the heavens thereof.*

Isaiah 5:30

Noise generated from celestial discharges is compared by Isaiah to trumpets blowing, to lions roaring, and to the angry sea. Shock waves, incidentally, can kill by concussion, without harming the clothing of the victim or creating any damage to the skin.

ISAIAH ON THE CELESTIAL FLUX TUBE, Mars-Earth Type (Not Io-Jupiter Type.) If Isaiah were about 65 to 70 years old in 701 B.C., he had seen such a flux tube, as a child as had other old timers. A student, no doubt he had access to literature of catastrophes in the libraries of Jerusalem, descriptions of the phenomenon in more ancient times. A cosmic discharge at the bottom of a flux tube, as we have come to understand, was not an unknown thing. Nor is it an unknown thing in our time; similar discharges at the bottom of the Io-Jupiter flux tube occur in our time every day and every hour. They are hot enough to vaporize sodium, sulfur and silicon into gases, and those gases were recorded by the cameras of Voyager.

*Behold, the Lord hath a mighty and strong one, which as a tempest of hail and
a destroying storm, as a flood of mighty waters overflowing, shall cast down to
the earth with the hand.*

Isaiah 28:2

*Thou shalt be visited of the Lord of hosts with thunder, and with earthquake,
and GREAT NOISE, WITH STORM AND TEMPEST, AND THE FLAME OF
DEVOURING FIRE.*

Isaiah 29:6 (Caps ours.)

Great noise? Storm? Tempest? Flame of Devouring Fire? With Earthquake? With Thunder? Being cast down? This is one of many examples of Isaiah's description of the bottom end of the Mars-Earth flux tube of ions and charged particles. Once again, Isaiah deserves credit as a reporter for the "Journal on Earth History." The fact is, in the wider picture, he made a scoop, better than any such "Johnny Come Lately" as Charles Lyell who carped about those "ancient physio-theologians."^{20 21} Isaiah was magnificent.

ISAIAH ON THE ASTRONOMICAL APPROACH BY MARS. In our model in Figure 1, Mars came in from its aphelion, a zone out amid the asteroids, some 218,000,000 miles from the Sun, and some 126,000,000 miles from the closest part of the orbit of the Earth. But Mars came in, slowly at first, inexorably, and accelerating when in the inner part of its orbit.

*...the Lord of hosts mustereth the host of the battle.
They come from A FAR COUNTRY, FROM THE END OF HEAVEN...
and the weapons of his indignation, to destroy the whole land.
Isaiah 13:4-5 (Caps ours.)*

On this occasion, Mars came in and across about 200 million miles of space during one year, from April 702 B.C. to March 701 B.C. Indeed it was from the end of heaven so far as astronomers of that era, without binoculars or telescopes, could determine.

ISAIAH ON THE DIRECTION OF THE ASTRONOMICAL APPROACH BY MARS. During the autumn, due to the Earth's spin axis tilt, Mars approached from the celestial south, by all appearance. Our theory holds that on such occasions, the magnetic north pole and the magnetic south pole were reversed, leaving the magnetic north pole on the edge of Antarctica. But by the same token, Mars seemed to approach from the celestial north during mid-March flybys.

*Howl, O gate; cry, O city; thou, whole Palestina, art dissolved:
for there shall come FROM THE NORTH a smoke,
and none shall be alone in his appointed times.
Isaiah 14:31 (Caps ours.)*

The tilt of the Earth's spin axis allows us to understand why Mars would come from the celestial north to all appearances. The icy deposition on Mars during The Flood allows us to understand subsequent melting and evaporation of those ices, resulting in a cometary tail. That cometary tail formed each time Mars passed perihelion, some 75 million miles near to the Sun, and not far from the orbit of Venus, if indeed not far from Venus itself. Thus, the cometary tail of Mars was far more prominent to Earth viewers during mid-March flybys than it was amid October flybys. The Exodus catastrophe contains information of a cometary tail, the "pillar of fire by night." Here, the "smoke from the north" seems to be a parallel

description, though less dramatic. Mars may well have had a cometary tail 50 million miles long. The translators have chosen the word "smoke" from the Hebrew *shan*. To our thinking, it might be better-translated as a vapor, as in the tail of a comet (which in effect Mars was).

ISAIAH ON THE ROTATION OF MARS. Mars in our time has a tilt of 24°, very similar to the 23¼%° tilt of the Earth. Perhaps of greater importance to the coming text, Mars has a rotation rate of 24 hours, 37 minutes, again much like the Earth's spin rate.

*The nations shall rush like the rushing of many waters:
but God shall rebuke them, and they shall flee far off,
and shall be chased as the chaff of the mountains before the wind,
and LIKE A ROLLING THING BEFORE THE WHIRLWIND.
Isaiah 17:13 (Caps ours)*

"Rolling thing" in Hebrew is *galgal*, sometimes translated as a whirlwind (which also rotates.) Sometimes it is translated as a wheel, which rotates as well. "Wheel" is closer. "Gyroscope" is closest. "Rolling thing" is inadequate.

ISAIAH ON THE DAY OF THE MARS FLYBY. The Hebrew term "passover" is well-titled. March 20 on our calendar was the same day as Nisan 13 in the ancient Jewish calendar, one day before the spring equinox. Even though uniformity in the orbits of Mars and the Earth has been extant for almost 2700 years, the tradition that Friday the 13th is unlucky still persists. Is this a Jewish relic of the catastrophic era?

*For it is A DAY OF TROUBLE, and of treading down, and of perplexity by the
Lord God of hosts in the valley of vision, BREAKING DOWN THE WALLS, and of
crying to the mountains.
Isaiah 22:5 (Caps ours)*

*And they shall go into the holes of the rocks, and into the caves of the earth, for
fear of the Lord, and for the glory of his majesty, when he ariseth to shake
terribly the earth. IN THAT DAY...
Isaiah 2:19-20a (Caps ours)*

The "holes in the rocks" were caves, very valuable items of real estate during flyby conditions. Storm cellars would have been good substitutes.

We have presented one dozen examples of catastrophic reporting by Isaiah. These are mere samplings from his first 37 chapters. Isaiah was a far better observer and reporter on Earth history than was Charles Lyell, the god-father of modern uniformitarianism. In fact, Hesiod (who never received any award) also was a better observer of Earth history than was Lyell, who was awarded a knighthood by Queen Victoria. Superior reporters of ancient catastrophism are relatively few, particularly few outside of the Biblical recorders, as the ravages of time and forgetfulness have destroyed vast literary sources. Among those ancient eye-witness reporters, none (in our opinion) was the equal of the magnificent Isaiah.

The Third Week of March, 701 B.C.

Cooperating with his astrologers and inspired by their advice, Sennacherib rolled up the cities of Libnah and Lachish in February and had moved his feared juggernaut to the out-skirts of Jerusalem by mid-March. There, the legendary legionnaires enjoyed a brief bit of R & R, (rest and relaxation). In a few days, Nergal would breach the walls of Jerusalem (with earthquakes) and Nergal also might zap the city with a discharge, turning it into a cauldron. Prospects for looting seemed excellent. Murder and general rapine were expected to be wide-spread. The soldiers re-honed their iron swords, repaired their iron battle axes, polished their iron helmets, and sharpened their iron spears while enjoying a brief respite. The campaign for Egypt and its riches would come very shortly.

Simultaneously and in stark contrast, the citizens of Jerusalem became more jittery and apprehensive every hour as the approach date of Mars came, and as the reflection of Mars grew in the nocturnal heavens, night by night, inexorably and resplendently. Some prepared their wills, while others felt there would be nothing left worth giving after the looting and rapine. Some prepared a leg of lamb with figs or apples, as if it might be their last meal. They ate, drank and made merry, especially with strong wine because from all appearances, there was little to celebrate if sober. Many expected to die shortly, others dreaded the possibility of deportation as slaves to Southern Russia or elsewhere. Some worshipped Baal-Mars and other planets such as Ashtarte-Venus, Khecil-Jupiter and Khima-Saturn. Isaiah was a watchman in the night, and posted himself on a parapet for optimum observation. Deimos and Phobos were circling Mars, one every 20 hours and the

other every 8 hours. The craters of Mars such as Argyre, Hellas and Isidis were as visible as ogre's eyes. The volcanoes of Mars began renewed eruptions, adding to the explosiveness of the scene.

By the evening of March 19, Mars was somewhere between 800,000 and 750,000 miles distant, and was closing rapidly (and growing in size). In the middle of the night, Mars disappeared behind the western horizon, only to rise on the eastern horizon 12 hours later and to appear even more fearfully, about 10:00 a.m., March 20. By 8:00 p.m., Mars was perhaps 125,000 miles distant; and the flux tube of electricity began to form, and electricity flowed. Polynesia and shortly, Eastern Asia, began to be swept or raked by the flux tube, which was progressing across the face of the Earth, some 1700 m.p.h., that is, some 35° of longitude per hour. It was visible to Isaiah, who seemed to know something others didn't. Such was also visible to Sennacherib, amid his soldiers and their iron armor. Confident in the advice of his astrologers, Sennacherib awaited eagerly the spectacle of Jerusalem's destruction.

In the early evening hours, Mars continued to approach, growing fearfully in all of its celestial splendor. By 11 p.m., Mars was around 60,000 miles distant, but this approach was different (according to our model). This one was occurring on the outside of the Earth, toward the usual midnight hour as did most mid-March catastrophes; those previous had been on the inside, or the sunward side, showing its crescent. Tonight, it was, shall we say, a full Moon? Or was it a full Mars? It was like an electrum disc, shiny like pale ivory, like shiny enamel glowing with gold, to use Hesiod's words.

At 60,000 miles, Mars covered a full 4° of the sky; shortly at 30,000 miles it would cover 8°. At 60,000 miles, Mars was 125 times as bright as a full moon, and at 30,000 miles it would be 500 times as bright. At 60,000 miles, the closest points, crust to crust were 56,000 miles but at 30,000 miles, those closest surfaces would be separated by only 24,000 miles.

A careful analysis of the account of Isaiah reveals this to have been a nightside flyby, unlike all other flybys. A computer program of the catastrophic orbits of Mars and the Earth will teach that the normal kind of flyby is a sunward flyby. The natural kind is a sunward side flyby. And if resonance is to be maintained, it must be a sunward side flyby. An outside flyby will begin to unravel the system. A distant

outside flyby (at 50,000 or 70,000 miles) will threaten the stability. (Some of our research team feel that even a distant outside flyby can unravel the system; others feel it will threaten but not unravel it; however, a close flyby will unquestionably unravel the system and send Mars into a rounder, shrunken orbit.)

Toward midnight, the fearful show intensified, and a genuine nightmare show it was. Suddenly ... ZAP.

Then the angel of the Lord went forth, and smote IN THE CAMP OF THE ASSYRIANS a hundred and fourscore and five thousand: and when they arose early in the morning, behold, they were all dead corpses. Isaiah 37:36 (Caps ours)

Some were killed by vaporization. Some were killed by lethal shock waves. Others were killed by flash burns. None were killed by pursuing Jewish cavalry; the city had none. The caged citizens of Jerusalem were too stunned, too surprised, too elated to do anything in terms of military action. They were completely happy just to survive. Celebrations glutted the city's narrow streets. A good number of citizens praised God their Creator and perhaps made a short trip to the First Temple to compare notes, to worship, to pray a simple prayer of thanksgiving, to sing and to socialize. Shortly, there was dancing in the streets as Jerusalem enjoyed its "picnic time."

Concerning Sennacherib's army, some survived. Assyrian cuneiform indicates Sennacherib himself survived, though burned. Such injury is no surprise to a Planetary Catastrophist. He may have been 500 or 600 yards distant from the center of the encampment. Many of the trees just below the Tunguska Bolide Explosion were vaporized. A little farther out in radius, the trees were sheared off, leaving only the stumps. Out even a little farther, many of the trees were flash-burnt on one side, but not on the other. Similar features surrounded the Mount St. Helens explosion in the state of Washington recently. Where trees were burnt on one side the temperature of outflowing air masses exceeded 5000° F Many of the survivors of the Hiroshima and Nagasaki nuclear explosions were flash-burnt on one side but not on the other.

Talmudic discussions of this occasion are cited as follows.

With his vast army Sennacherib hastened onward, in accordance with the disclosures of the astrologers, who warned him that he would fail in his object of capturing Jerusalem, if he arrived there later than the day set by them. ²²

The death of the Assyrians happened when the angel permitted them to hear the 'song of the celestials. Their souls were burnt, though their garments remained intact. ^{23 24}

The advice of the astrologers for Sennacherib to hurry and get to Jerusalem before March 20 can now be evaluated. Sennacherib's astrologers were no more insightful than were Agamemnon's or Hitler's. Perhaps it is no coincidence that both Hitler and Sennacherib failed in their campaigns to destroy Judaism.

Nobody knows for certain when the Assyrian Empire arose on the banks of the Upper Tigris River. However, Assyrian king lists go back beyond 890 B.C. ²⁵ The empire was at least 200 years old by the time of Sennacherib, a time span that compares to the duration of the United States at this point in time. On this night, like a comet, the Assyrian empire passed its zenith and its perihelion. Soon after Sennacherib returned to Nineveh to recover from his wounds and his bruised pride, his two sons conspired (successfully) to assassinate him. Then the two brothers had a falling-out. From there, military defeat and political turmoil racked the kingdom. Within 50 years, it was all over. Its disintegration began the night when over 180,000 elite legionnaires were killed by burns, by concussion and by vaporization, outside the city wall of Jerusalem, amid their iron weaponry. Their weapons, like the iron armor of the Greeks under Achilles and like the iron chariots of the Canaanites under Sisera, had served as excellent lightning rods, if nothing else.

Was Jonah's prayer in vain? If answered, it was not answered when he preferred. Nor was it answered where he preferred. Jonah would have preferred the blast to fall on Assyria's capital city rather than on its marauding military forces. Jonah instead went into depression, apparently a discredited prophet, and a very disappointed one. It might have been better had he prayed the prayer, "Lord, give me patience, and give it to me right now."

The preceding paragraph touched on a theological matter; this work is not a theological work. Ours is a historical work, with scientific overtones. But perhaps there is a deeper, more difficult question of a theological nature which should be raised. That question is, "What would have happened to Jerusalem if Sennacherib's army would have stayed at home?" Would Jerusalem have been zapped with the same amperage of lightning that hit the Assyrian armor? If so, would such have turned Jerusalem into a cauldron and signaled the end to Judah as a state and the end of Judaism as a culture? Was King Hezekiah fortunate that Sennacherib's iron armor was so close at hand on that particular night, despite the strong apprehensions of the citizenry?

Even farther afield, how did the magnificent Isaiah come to his conclusion that the Assyrian legionnaires were in greater danger than were the citizens of Jerusalem? Was he clairvoyant about Earth history in the sense that Emanuel Swedenborg wasn't? Did the Lord show Isaiah something, in some manner or other, that most cannot understand? How can those modern theologians, steeped in uniformitarian thinking, possibly understand Isaiah's theology?

The standard modern explanation for the demise of Sennacherib's army involves bubonic plague. It seems, allegedly, that there was a swarm of mice or rats, carrying fleas infected with bubonic plague, that swept through Sennacherib's bivouac. The fleas bit the soldiers, and miraculously, the incidence or curve of infection was all in one night. Such is the "pestilence" in modern thought, sometimes called modern rational thought.

What about Assurbanipal? What might have happened if he had really listened to the blond bombshell preacher from Galilee? Perhaps, had Assurbanipal listened and exchanged his predilection for violence, imperialism, butchering and slavery for more humanitarian values, the consequent history of Assyria might have been written by more humanitarian leaders, with more humanitarian ethics and values. Perhaps the Assyrian Empire would have been longer-lived, perhaps even for centuries.

What about Sennacherib's astrologers? Clearly, they had been about as accurate as were Calchas and Chryseis, seers in the time of Agamemnon and Achilles. When Sennacherib began to question their auguring abilities (as he surely must have done) and their crystal ball prognostications, what happened? Perhaps the Assyrian

court astrologers shifted their political favor to Sennacherib's sons (who hadn't suffered from their poor advice). Who knows? If so, then it might be easy to predict the kind of advice they would conjure up to his sons. (Historical accounts say that shortly after Sennacherib's return to Nineveh, he was assassinated by his two sons.)

THE OUTSIDE FLYBY

The text of Isaiah 38, as well as two other places in the Scripture, mention this angel-directed mass destruction. But only in the Book of Isaiah is it described as both a midnight flyby and one with falling thunderbolts, or celestial lightning. According to orbital mechanics, these two observations could mean only one thing, an uncharacteristic variant outside flyby.

Steinhauer, an associate, made a computer program charting a variety of possible orbits for Mars. The resonant orbit depicted in Figure 1 fits the best. Further computer analysis has indicated that an outside flyby destabilizes a resonance system and if sufficiently close and intense, unravels it. This seems to be what happened.

We understand from analyses and collages of data concerning paleomagnetic polarity reversals that there have been about 170 of them. This count is accepted as a working number, even if it is not precise.²⁶ If every close flyby (within 60,000 to 70,000 miles) caused a magnetic polarity reversal, which we believe to be also the case, then this was the 170th and last flyby of the catastrophic era. From other analysis to be presented in a more technical sequel, it is apparent that the cyclicism was 54 years between successive flybys, but 108 years between successive October (or mid-March) passovers.

From analysis based on astronomical atlases and an ephemeris, it is known that Jupiter was in Capricorn, and Saturn was 180° opposite in Cancer in 701 B.C. Both effected a narrowing of the "b" axis and a lengthening of the "a" axis of the orbit of Mars.

What caused this flyby to be on the nightside? We do not know. We have some insights. One insight is the Jupiter-Saturn geometry just mentioned. Either, Mars was two or three hours behind the standard schedule, or its orbit had been pushed outward an extra 60,000 or 75,000 miles. Was that accomplished by the hand of

the Lord? Was the change in the orbit of Mars accomplished by hitting an asteroid? Was it accomplished by the heavy catastrophes of 864 B.C., 809 B.C., and/or 756 B.C.? Certainly it was helped by Jupiter and Saturn, but that apparently would have been only contributory.

Figure 17 illustrates first, the general range of Mars trajectories which our model allows for Mars during the first 169 flybys. These ranged between 15,000 and 75,000 miles from the Earth, and as a group they may have formed a bell-shaped curve, averaging 40,000 to 45,000 miles. Figure 17 also illustrates the Roche Limit of the Earth for fragmentation. Any large body, with enough mass to have significant internal tides, if smaller than the Earth, will fragment somewhere around the 11,000-mile zone from the Earth's core.

Analysis to be presented in our sequel will give reasons why our conclusion is that the Flood Flyby of 2484 B.C. was the closest of them all, and is estimated at 15,000, or perhaps even 14,500 miles distant. This is extremely close, but then, that was an extremely destructive event. Several of the ancient flybys in the pre-Flood era were of the range of 17,000 to 20,000 miles, also extremely close. These close flybys deviated from the norm, as presented in Figure 17, by 25,000 and 30,000 miles. But the flyby of 701 B.C. deviated by a gigantic 75,000 or perhaps even 90,000 miles. Clearly we suspect something beyond the routine influences of Jupiter and Saturn. Our best answer to this question is "the Hand of the Lord." But how that hand worked is something the mechanics of which is not presently understood. Further, they may never be understood.

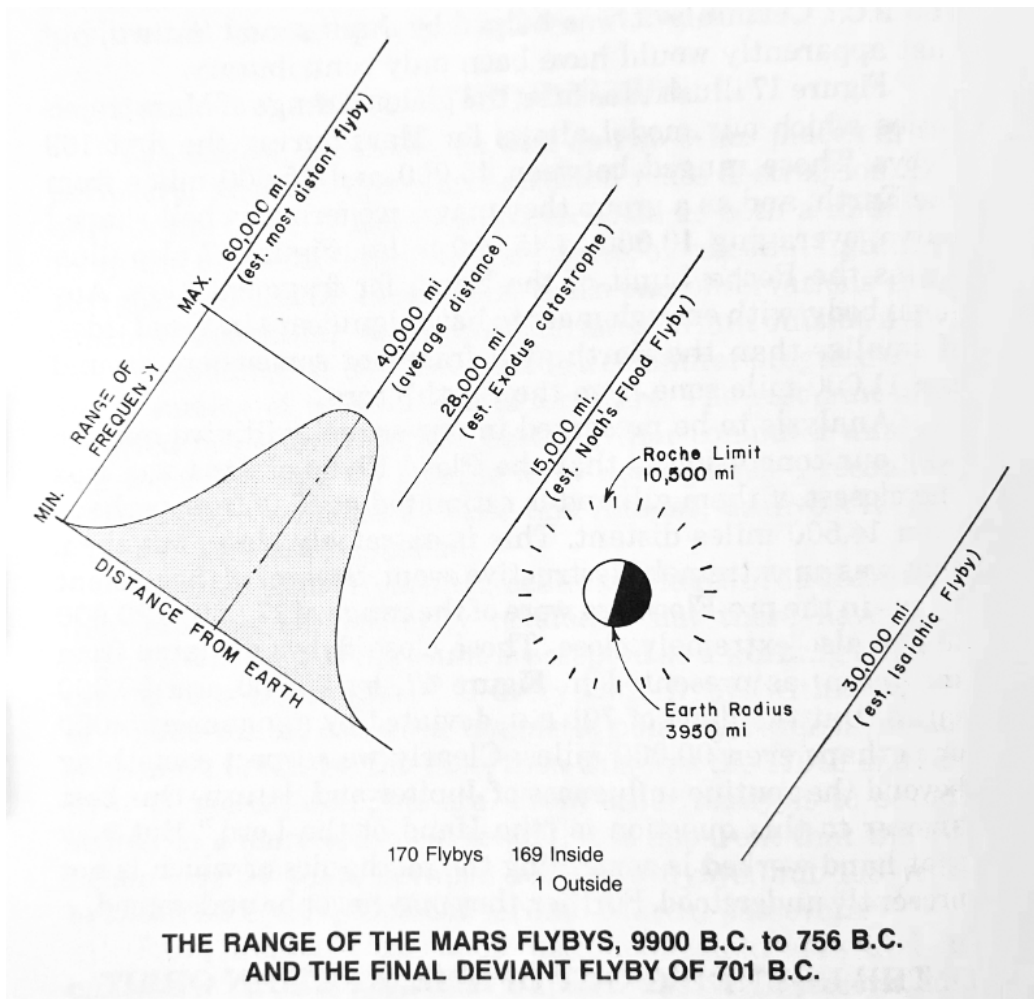


Figure-17

THE ROUNDING OUT OF THE MARTIAN ORBIT

By examining Figure 17, it will be evident that, in our model, the final flyby of 701 B.C. was different from all of the previous flybys. The previous inside or sunward side flybys had functioned to perpetuate the catastrophic orbit of Mars. But the last flyby functioned to unravel it, or perturb it in the opposite direction necessary for its maintenance. When Mars made inside flybys, the Earth tended to be pulled inward, and Mars tended to be pulled outward. With the final flyby, all of that was reversed.

But, did this flyby as illustrated in Figure 17 really cause the rounding out of the Martian orbit? There are two kinds of answers to this question, that of the historian and that of the engineer or physicist. To this question, a historian versed in catastrophism will attest that history finds no more catastrophes after 701 B.C. Furthermore, with the coming of the 7th century B.C. and then the 6th, ancient cultures revised their calendars to shift from the former 360 days to the more accurate 365. Plutarch's discourse on the gambling planets is an illustration, as is the Chinese new inter-calendric "Khe-ying," the Incan "Allcacanguis," and the Hebrew "Veadar," to name but three examples. In each case, 5 days were added, suggesting an expansion of the Earth's orbit, requiring an additional 1½% day-count per year. This matches the contraction of the Martian orbit from the ancient 720 days to the current 687 days. The circumstantial evidence might be construed by some as conclusive.

On the other hand, one encounters astronomers, engineers, orbital analysts and physicists. They deal with energy and motion, and can be rather indifferent to history and ancient calendars. To the question posed above concerning the rounding out of the orbit of Mars, the engineer will point out that while the flyby of 701 B.C. may have been close, and it may have been on the "wrong" side, and it may have been the last, in any event Mars was within the range of the lunar orbit (240,000 miles in radius, 480,000 miles in diameter) for a rather brief time period, about 16 hours. Histories and mysteries aside, 16 hours is not sufficient time for Mars, a planet one-tenth as large as the Earth, to gain or add 4% or 5% to its energy. The accomplishment of such a monumental energy exchange, short of a fragmentation, could not be possible, in the eyes of a competent engineer or physicist. Whom is one to believe, the historian who says that such must have been the case or the engineer who says that such could not have been the case?

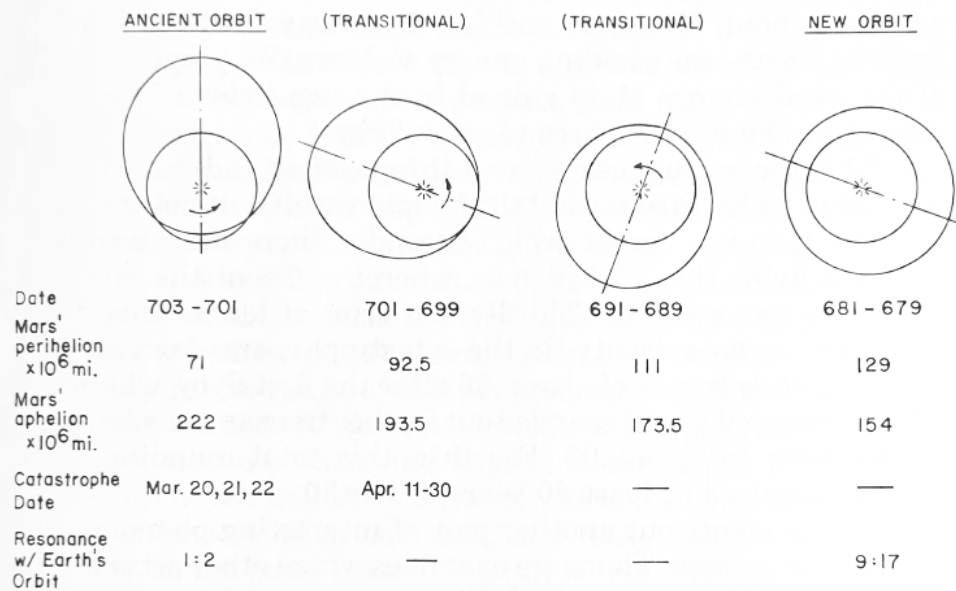
Our research team is fortunate to have among its members Ronald Hatch, a physicist and an orbital analyst, whose duties include research in satellite navigation systems. Hatch understands the characteristics and behavior of many kinds of orbits. This precise question has occurred to Hatch, who believes there is a solution, one in which neither the historian nor the engineer is mistaken as it turns out.

Hatch has conceived the following scenario, with which we concur. Mars went out of resonance during the flyby of 701 B.C. If a metaphor is appropriate, one might consider a grandmother, rocking a baby in a rocking chair. There are 85 rocks

backward and 85 rocks forward in this metaphor. During the 170th rock, a forward motion, the baby's brother sneaks in and pushes the rocking chair, along with the dozing grandma and baby. The rocking chair pitches forward, spilling the contents. In our metaphor, the rocking chair is the resonant behavior. Grandma is the long axis of the orbit of Mars. Grandma gets up and in so doing continues in a forward course. So it was with the long axis of the Martian orbit; it began to plunge forward in a counter-clock wise direction. Figure 18 illustrates. In our metaphor, the question is: What is grandma going to do when she gets up? In our scientific analysis, the question is: What is going to be the change in the line of apsides (the long axis) of the orbit of Mars?

With considerable insight, Hatch proposes that the big issue was the very next flyby of Mars, in 699 B.C. Due to the flyby of 701 B.C., Mars may have gained 309% of the energy needed to round out its orbit, but certainly not enough. In April of 699 B.C., 25 months later (and one month later than the March 20-21 anniversary), Mars once again approached the Earth and for the second successive time, on the outside. This time the distance was in the range of 80,000 to 90,000 miles. No violent catastrophes happened to the Earth.

However, partly by rounding out its orbit, and partly by rotating its long axis, Mars had slowed down. Its historic flyby speed was 78,000 m.p.h., compared to the Earth's velocity of 67,000 m.p.h. faster. Now, Mars had slowed to 67,500 m.p.h. and the Earth had slowed to 66,500 m.p.h., only 1000 m.p.h. slower. This time it took 320 hours rather than 18 hours for Mars to make a chord through the Moon's orbit. This was about 15 days, perhaps more.



MARS AND ITS JUMP OUT OF RESONANCE, 701 B.C. TO 679 B.C.

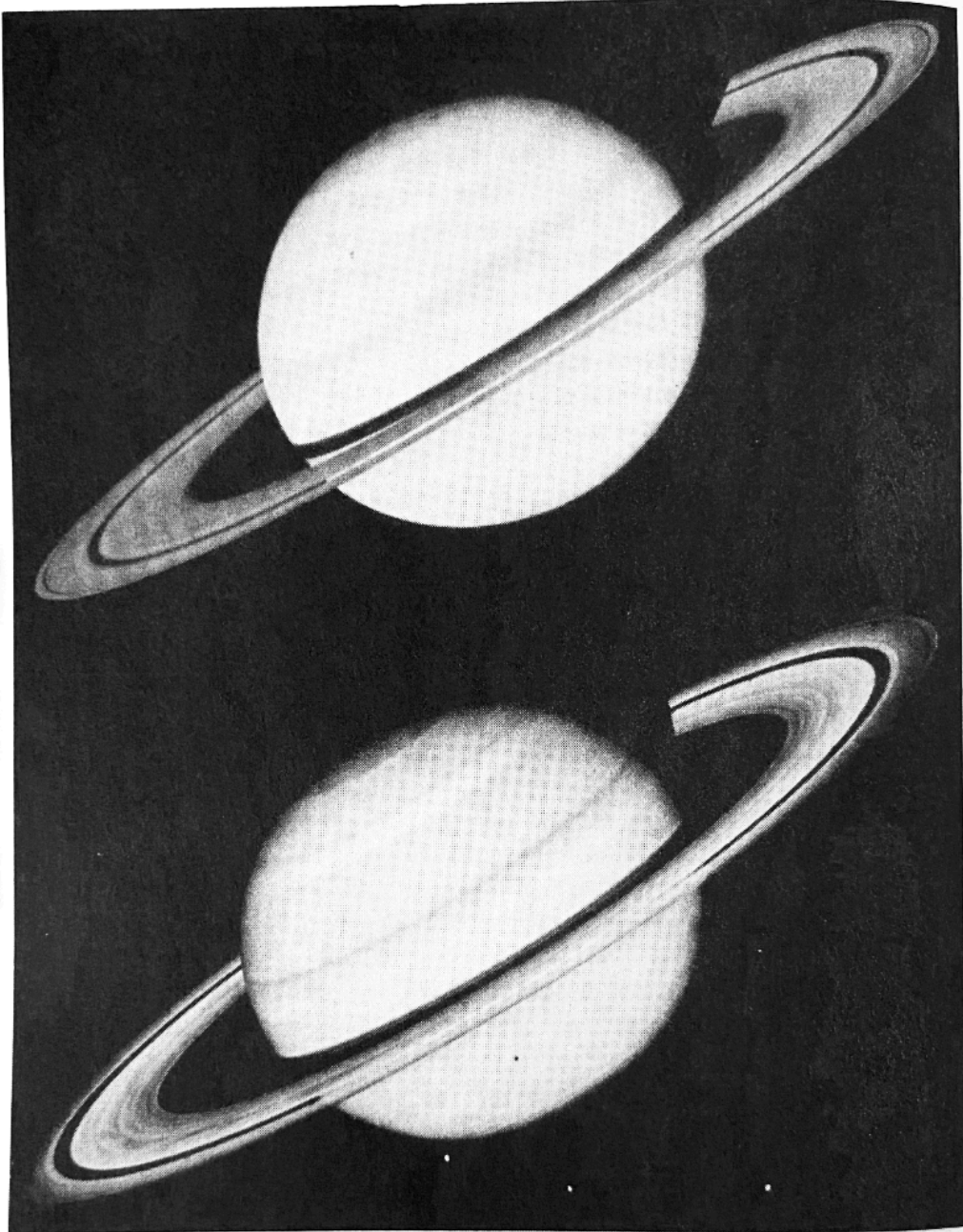
1. During the Period 9900 B.C. to March 701 B.C. Mars Perihelion Pointed to January 6
2. During the Orbit 701 B.C. to 699 B.C. Mars Perihelion Pointed to April 21
3. During the Orbit 691 B.C. to 689 B.C. Mars Perihelion Was Shifting Counterclockwise and Pointing Variously in June
4. By the Orbit 681 B.C. to 679 B.C., the Martian Perihelion had Arrived At a New Position Pointing to Approximately August 26, a New Location of Stability. During This Twenty to Thirty-Year Period, the orbit of Mars was Rounding Out Its Perihelion Shifted Outward in Distance and Counterclockwise in Rotation

Figure-18

It is proposed that indeed Mars did make a slow, distant flyby, coming in as close as 80,000 miles, passing on the nocturnal side. It may have taken Mars 2 or 3 weeks (not 18 hours) to pass through the Earth's gravitational field, and more specifically, through its gravitational "radius of action." During each and every hour, Mars was sucking up energy from the Earth, and the Earth was yielding energy to Mars. We propose that, of the total energy Mars gained in the two flybys, 70% was gained in 699 B.C., the second, slow flyby.

This theory suggests several things. First, indeed the 701 B.C. flyby tended to round out the Martian orbit (but not enough to bring it to its current orbit.) Secondly, there was an intermediate flyby, that of 699 B.C., wherein 70% of the energy exchange was achieved. Thirdly, the orbit of Mars converted over from an eccentricity (in the catastrophic era) from about .49 to an eccentricity of about .36 after the first flyby, whereas after the second one, it rounded out further from an eccentricity of .36 down to about .09. Fourthly, this total rounding out process required at least 20 years, if not 30 or 40.

Hatch points out another pair of interesting phenomena in our solar system. There are examples where other astronomical bodies have gone out of 2:1 resonance and into a non-resonant orbits. One example is in the Rings of Saturn. Saturn has rings because it has vacant areas, thoroughly swept out, as dividers between its rings. The biggest vacant zone is known as the Cassini Division. It is 2800 miles wide and is sandwiched between the B Ring and the A Ring. Presumably this empty region once was populated with icy fragments of an even distribution with the ring regions. The Cassini Division is centered precisely at the 2:1 orbital resonance location of Saturn's innermost satellite, Mimas. Evidently, perturbations generated by Mimas (and assisted by Tethys) have functioned as a broom, sweeping ice fragments out. The rings resume at a period both 4½% closer to Saturn, and 4 ½% more distant. When the fragments were swept out, they found their new stability 4½% away from their original period. These dark, empty regions between Saturn's sparkling icy rings illustrate going out of resonance, and how far a body usually goes before a new stability of orbit is achieved. Tethys, another satellite of Saturn, is in 1:2 resonance with Mimas, and therefore it is in 1:4 resonance with the Cassini Division. Tethys, perhaps more than Mimas, swept out this vacant zone, because of its greater mass and gravitational force. See Figure 19.



THE RINGS OF SATURN

Featuring the Cassini Division (the Mimas-Tethys Gap) at a 2:1 + 4:1 Resonance

The Swept Out Region is Between the A and the B Rings

The Swept Out Region is About 2750 to 2800 Miles Wide

The Swept Out Region is at the 2:1 Resonance with Mimas, and 4:1 with Tethys

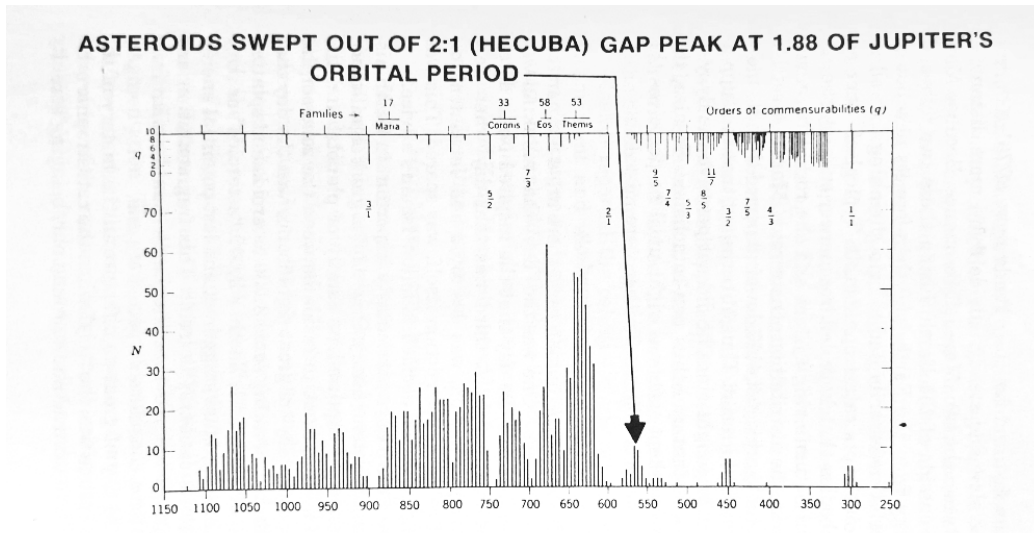
The Ring System is about 350 to 500 Feet Thick,
Composed of Icy Particles

Original Ice Particles in the Swept Out Region Have Shifted 5% or More to Either Side.
This Illustrates that a 5% Shift In An Orbit Leaving Resonance Is Normal.

Figure-19

There is a second example, less easily perceived. It concerns the Kirkwood Gaps, which are gaps in the distribution of the asteroids. In Figure 20, the distribution of the asteroids is given according to their periods. It is to be observed that there is a gap at 900 arc seconds, which is the 3:1 position. Some asteroids have piled up on either side of the gap. Of more significance is the 2:1 gap at 600 arc seconds. Here, asteroids have been swept out by Jupiter in considerable numbers. More have been swept outward than inward, but the inside hump is that to which we wish to bring attention. Here again, when asteroids were swept out of resonance, they found a new orbital stability in the range of 570 arc seconds, which is also a 4½% orbital contraction. We have viewed the Mimas-Tethys pair as the broom in one case, and Jupiter as the broom in the other case. We have cited the icy fragments of Saturn's rings as the "dirt to be swept" in one case, and rocky fragments, the asteroids, in the other case. The point is that when an astronomical body, be it an ice fragment, a rock fragment or a planet, is propelled out of resonance, the propulsion is not stabilized until it jumps a distance of about 4½% or 5%. At the root of the issue is harmonic perturbations versus non-harmonic perturbations.

Now observe our model of Mars, which also is considered to have "jumped out" of 2:1 resonance. Its former orbital period was 720 days. Its new orbital period is 687 days. This also is a 4½% "jump." More precisely, it is a 4.58% change. This may help us understand that Mars has behaved just like other astronomical bodies which have gone out of resonance. Figure 18 illustrates our best understanding of its sequences of line of apsides positions, as it rotated counter-clockwise for 20 or 30 years until the new stability was achieved. Figure 19 and 20 both illustrate a new energy level for a body having left 2:1 orbital resonance.



The Hestia Gap is at 900 arc seconds. The Hecuba Gap is at 600 arc seconds. The peak of the asteroids swept out of the Hecuba Gap toward Jupiter compares closely with the shift of the Martian orbit toward Earth in terms of orbital periods. From William M. Kaula, An Introduction to Planetary Physics, New York, John Wiley & Sons, 1968 p. 239. The source of the illustration is Dirk Brouwer, "The Problem of the Kirkwood Gaps in the Asteroid Belt, Astronomical Journal, Vol. 68, 1963, pp. 152-159.

Figure-20

Our model has it that the rounding out of the orbit of Mars was accomplished in two steps, not one. Those two steps were first, the fast and furious outside flyby of 701 B.C., and secondly, the slow and steady outside flyby, more distant, of 699 B.C. Between the two, Mars left resonance. Because Mars was on the outside of the Earth during these two flybys, it gained energy from the Earth, and therefore its new out-of-resonance orbit necessarily had to be a shrinking as well as a rounding out of its catastrophic orbit. Typical of other astronomical bodies that have left resonance, such as the icy fragments in Saturn's ring system and the rocky fragments which comprise the distribution of asteroids, Mars also settled into a new, stable orbit just 4½% lower in period than its more ancient, catastrophic orbit. Thus, it turns out that the supportive historian was right since he did not perceive the flyby of 699 B.C. was distant and thus non-cataclysmic. So also, the engineer in his skepticism was right until he perceives the intermediate orbit of 699 B.C. Neither were mistaken.

Historical Overview

In the history of the human race, there are a few particularly important "days." One was the "day" that mankind was created. A second was the day that the inspired Noah determined to build the Ark. A third was that day when Sennacherib's army,

urged on, was destroyed and Jerusalem, on the brink of celestial destruction itself, was spared. This was the day King Hezekiah decided to follow Isaiah's advice.

So there were 3 days particularly important in Earth history, and in solar system history. One "day" of great significance was when the Sun captured its family of planets, and the Earth-Moon system came to reside between the zones of fire and ice. A second "day" of great significance was the day that Astra fragmented, creating some 3,000 asteroids and splattering one side of Mars with another 3,000 "asteroids" or fragments. On this day, Mars staggered, and lost potential energy as it fell into its catastrophic orbit. This fragmentation and energy exchange insured that the Earth would suffer from Mars flybys for a considerable period of time.

The third day of great significance in the history of the Earth-Moon system was the "day" when the catastrophic orbit of Mars began to unravel and to round out, bringing serenity to the Earth-Moon system. This third day of great importance in Earth history coincides with the Long Night of Sennacherib. This night was especially long for Sennacherib for several reasons. One was that he lost most of his army. A second reason was that he apparently was flash-burned. And a third reason that this was a uniquely long night was for the same reason that the Long Day of Joshua was a uniquely long day. We suspect that there was another spin axis precession as well as a crustal skidding in the easterly direction, perhaps slightly south by east. This caused the shift in the shadow of the sun dial, a shortening of the shadow, changing the latitude of Jerusalem once again, but for the last time. Figure 21 is our perception of what happened. The ten "degrees" were more likely a measurement of ten "hand spans," or just spans. A span can be 7 or 8 inches. This would be 6 or 7 feet of shortening of the shadow, depending on the height of Ahaz' sun dial.

Isaiah reported the celestial discharge on the Assyrian encampment and wholesale, sudden slaughter. Next he reported the unique deviant outside flyby. Third, he reported the change on the shadow of the 80 or 90 foot sundial. As a reporter for Earth history, Isaiah merits three stars, perhaps more. He also advised King Hezekiah superbly when he advocated resistance rather than surrender.

Had Mars Come Within 11,000 Miles

Mars threatened to come within this deadly range of the Earth, and this threat was viewed by ancients as the end of the world. What would (not might) have happened had Mars fragmented on the Earth's Roche Limit zone? This question can be answered by reviewing another such scene. About 10,000 B.C., in our theory, a smaller planet (Astra, considerably smaller than the Moon) came too close to Mars. It fragmented. Perhaps 65% of its fragments hit one hemisphere of Mars. One hemisphere of Mars is seen to contain 91% of all of its craters, and the other contains a mere, serene 9%. Obviously there was a fragmentation. The geographical pattern is scattershot. That pattern has a circular edge or rim where craters abruptly cease. The center of the cratered hemisphere on Mars is 45°S. latitude and 320° W. longitude, just west of the massive Hellas Crater. This cratered hemisphere has over 2900 craters, each of which is over 20 miles in diameter. Other craters have been covered up by lava outflows and by bigger craters.

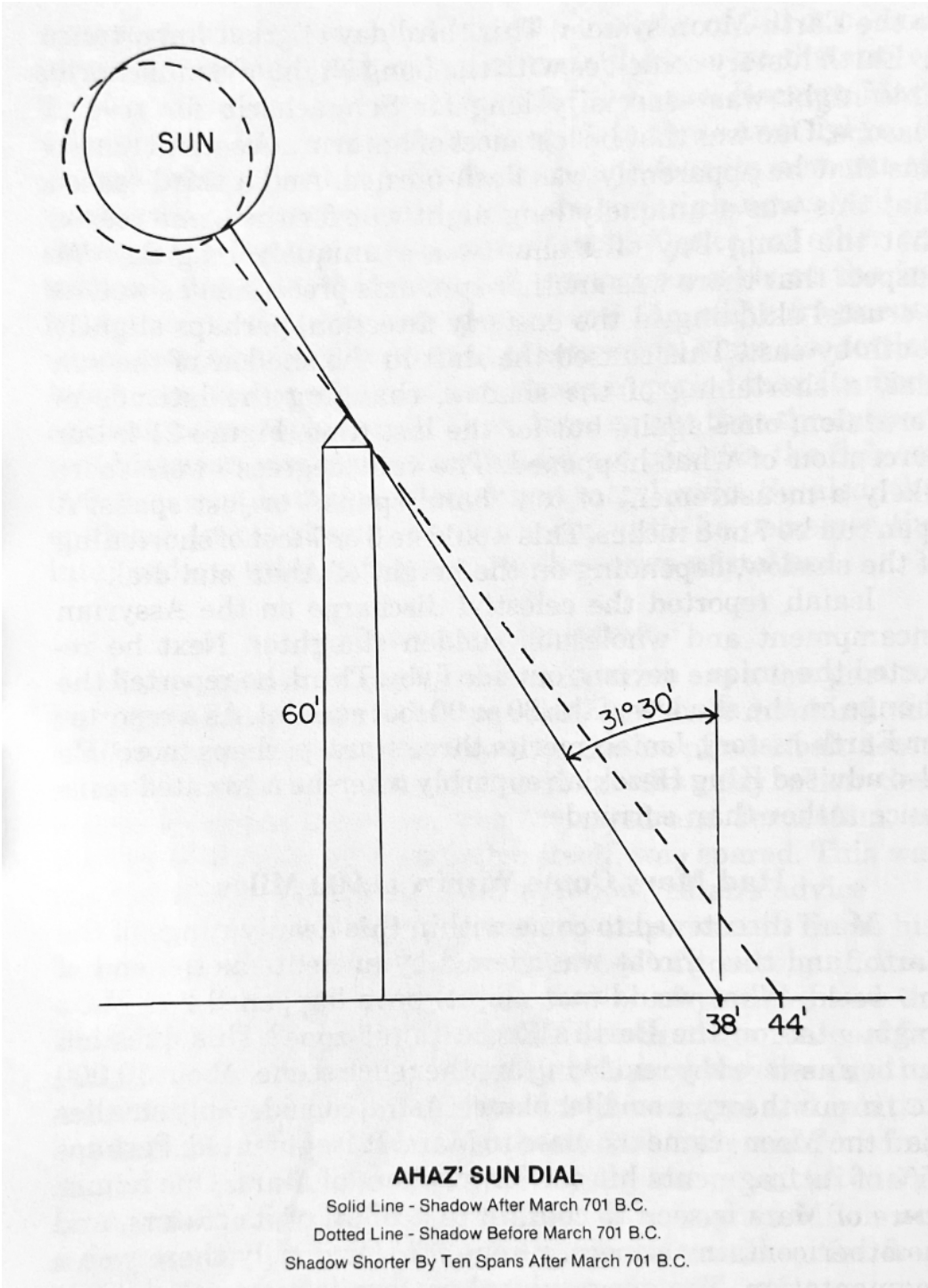


Figure-21

THE RATIO. Our estimate of the ratio of the fragments of Astra is 65% to 34% to 1%. Some 65% hit Mars and formed craters. Some 34% missed Mars and formed the asteroids. About 1% remained in the gravitational control of Mars and settled down into a ring system, revolving around the Martian equator. That ring system has been almost cleaned out by the subsequent Mars-Earth flybys, but the cratered up Deimos and Phobos still remain.

The Comparison. If Mars had fragmented, first, the Earth would have one serene hemisphere, almost devoid of craters, and the other hemisphere would have had perhaps 10,000 craters, each larger than 20 miles in diameter. Secondly, the Earth would have a ring of rocky debris, including chunks of irregular size with diameters of 40, 60 and 80 miles. There might be thousands, even tens of thousands of tiny meteorite-like fragments in such a ring system. Thirdly, there would be a second zone of asteroids, those fragments of Mars which missed the Earth and escaped its gravity. Many of their perihelions would be in the 90 million and 95 million mile range.

The Bulges. Opposite to the giant Hellas Crater (990 miles in diameter on such a small planet with a 4200 mile-diameter) in the serene hemisphere, one finds the Tharsis Bulge. It is as if the fragment creating the Hellas Crater also punched outward and upward on the opposite side the Tharsis Bulge. This bulge is about 2,500 to 3,000 miles broad in diameter in the serene hemisphere, and it is 20,000 to 25,000 feet in elevation above mean crust level of Mars.

Fourthly, the Earth would have a bulge in its serene hemisphere opposite where the largest of the Mars fragments hit. The largest of these bulges might be 50,000 feet high and as large as a continent such as Africa or Australia in area.

Fifthly, if the Earth ingested 65% or 75% of the mass of Mars, it would become more massive and it would gain a greater diameter. Today the Earth's diameter is between 7900 and 7926 miles depending on where it is measured. That diameter would increase to about 8,000 miles.

Sixthly, as in the case of Mars, there would be regions where the Earth's crust (with a new diameter) would need to expand, especially in equatorial regions featuring block-like uplifts separated by deep and narrow chasms rifts and valleys. The preponderance of these chasms and rifts would be in a north-south direction.

Seventhly, depending on the geometry of the fragment impacts, probably the Earth would lose momentum, and stagger. Its orbit would shift into a somewhat shrunken orbit, closer to Venus. Temperatures on the Earth would be accordingly higher, but hopefully not high enough to trigger a runaway evaporation of the oceans into steam similar to the condition of Venus.

Eighthly, in the hemisphere of craters, almost no biota would survive, and the serene hemisphere would suffer from suddenly uplifted shields, well beyond the 15,000-foot limit of breathing. Oceans would slosh in tidal waves with dimensions ranging in the tens of thousands of feet. Continents would be rinsed, and a completely new series of sedimentary strata would emerge from the settling silts, sands and precipitates.

Ninthly, most of the fragments would hit the oceans of the Earth, which comprise 70% of the Earth's surface. Hitting at velocities of 25,000 to 27,000 m.p.h., their energies too would be converted to heat, vaporizing millions of cubic miles of water. The increased barometric pressure (and consequent rise in temperature) might well be lethal to all biota.

Tenthly, the Moon would probably get several dozen if not a few hundred new craters if it were in the path of those Mars fragments which missed the Earth, or if it were in their paths on subsequent orbits of those same fragments.

In summary, three things could have happened to Mars. One is that it could have stayed in its resonance orbit, or catastrophic orbit as depicted in Figure 1. This will be discussed shortly. Statistically, this case was likely. A second thing that could have happened is that, sooner or later, a flyby would have come within 11,000 miles of the Earth (and the Earth's Roche Limit.) Mars would have fragmented and that case, a possibility that might have happened, was just discussed.

The third case is that Mars might have overshot the Earth and made a close flyby, successfully missing Roche's Limit. This case is depicted in Figure 17, and this is what apparently did happen although, statistically, it was least likely. In this, Saturn played some small, secondary role. The major role in the deviant orbit of 701 B.C. we attribute to the Hand of the Lord, the mechanics of which are unknown.

The human mind, so imbued (subconsciously) with uniformitarianism, is shocked by how close and how often the ancient flybys were. The modern mind tends to recoil from astronomical interaction and geological action so sudden, so cyclic and so violent. Figure 17 portrays how fortunate the Earth was to experience an outside flyby by Mars rather than to experience a Mars fragmentation, which seems the more likely, statistically.

As it was, within a century or two after the disengagement or divorce of the Earth and Mars, certain other changes subtly occurred in human history. As catastrophes became a thing of the ever more distant past, historians (like theologians) no longer understood them very well. There appeared fewer and fewer prophets in Israel, but more and more rabbis. In Greece, there were fewer and fewer sooth-sayers and seers, but more philosophers. In the world of politics, city states prospered and some grew handsomely both in city size and in regional power. Empires appeared such as the Persian, the Greek and the Roman, unconcerned about having their armies or their capital cities zapped any longer. Astrology declined as did the worshipping of Mars and Jupiter, Baal and Ashtarte, Ares and Zeus. The ravages of foreign armies continued but the ravages of Mars and its celestial lightning along with accompanying earthquakes ceased. Many ancient historians have sensed such changes after the 8th century B.C., but heretofore few have been able to articulate why.

Had Mars Remained in Its Catastrophic Orbit

We have examined what did happen after the catastrophic orbit of Mars unraveled. We have assessed what could have happened had Mars pierced the Earth's Roche Limit and fragmented. Now we shall turn to the final case. What if Mars had remained in its catastrophic orbit for another 9,000 years?

Had Mars remained as it was for another 9,000 catastrophic years, the Earth would have continued to experience October catastrophes in 108-year cycles, as well as mid-March catastrophes also in 108-year cycles. Furthermore, mega-catastrophes (when Jupiter and Saturn were in 180° opposite position during catastrophic years) would have continued every 540 years for each case, the mid-March case and the October case.

Mega-catastrophes such as The Long Day of Joshua would have recurred in October of such years as 324 B.C., 220 A.D., 740 A.D., 1280 A.D. and 1820 A.D., the era of Cuvier, Gauss, Bohnenberger, Faraday, and Lyell. Had they lived under such catastrophic conditions, perhaps their research and discoveries would have had an entirely new dimension.

Mega-catastrophes such as Gideon's Midnight Bash would have recurred in mid-March in such years as 161 B.C., 383 A.D., 923 A.D., 1463 A.D. and 2003 A.D. Contemporary man probably would not have experienced World Wars I and II. Rather he would have experienced World Wars of another sort, the flybys of 1895 A.D. and 1936 A.D. Furthermore, he would be apprehensive of the appointed time of mid-March in 2003 A.D., when Saturn would be in Cancer, an ominous 180° from Jupiter in Capricorn, both narrowing the orbit of Mars menacingly once again.

Such would be the negative aspects of history as it might have been. But there are positive aspects also. Every time the generator Mars made a flyby, the Earth's geomagnetic field would be boosted, as well as having experienced a polarity reversal. Were this in the catastrophic age, the strength of the Earth's geomagnetic field would be a very healthy 1.0 to 1.5 Gauss, and the Earth's geomagnetic sheath would extend even farther out into space. It would experience recharging (like an iron nail experiencing periodic electric charges) with minimal decay. Today, 27 centuries after the last flyby, the Earth's geomagnetic field strength has decayed to a .307 Gauss level, and is decaying 5% per century, which is 50% in 1350 years. Mutations caused by the solar wind would be virtually nil, and the prospect of future mutations also would be nearly nil.

As it is with every coin, there are two sides to examine before coming to a conclusion. And as it is with every contention, there are at least two sides to hear before arriving at an opinion. The first 150 generations after Sennacherib and Isaiah (until 3400 A.D.) would live under a geomagnetic sheath that would decline from 1.2 Gauss to .075 Gauss and would enjoy the serenity of The Second Age of Uniformitarianism. However, the next 150 generations might never exist as the alpha particles of the Sun would sweep the face of the Earth daily, virtually unimpeded, destroying all biota at the cellular level. (And such it must have been in the First Primordial Age of Uniformitarianism, with no periodic cable-jumping, recharging flybys.)

Figure 3 (in Chapter I) portrays the differences between the catastrophic orbit of Mars and the uniformitarian orbit of Mars, the current orbit. Observe that it has rounded out. The length of the "a" axis (the line of apsides) has shrunk from 293 to 283 million miles. Its "b" axis lengthened by a comparable figure. Its orbit now precesses freely, and is no longer frozen or aligned perpendicularly to the apsides of Jupiter. Its day count per year has shrunk from 720 to 687. Its orbital eccentricity dropped from about .49 down to the present .093, a function of the rounding out of its orbit.

Conclusion

In Chapter I, a triad of world views on the origin of the Earth were cited, including the Evolutionary Uniformitarian, the Fiat Creationist and the Theistic Evolution views. The first and last of this triad are similar in most aspects. Along side this traditional three were placed perspectives from a Mars Planetary Catastrophist view. Five cases were cited in order to grasp the assumptions buried in each world view. These five cases shall be cited from Chapter I and briefly re-examined.

THE CHANGE IN LATITUDE FOR JERUSALEM. The traditional triad of views agrees unanimously that the ancient latitude of Jerusalem and the entire Near East was the same as it is today, even though the foundation of the First Temple is found to be 6° out of plumb to the cardinal points of the compass.

Our view is that there were repeated shifts of a few dozen miles and up to a couple of hundred miles variously. Most (though not all) of them had geometries of mid-day flybys in the October cases, which pushed Palestine farther south (and pushed Alaska farther north). Those changes in latitude were caused by a combination of two forces, (1) spin axis shift and (2) crustal skid. The proportions of this combination are not understood, but the directions are somewhat. Spin axis shift can only be understood when one views the Earth as an active gyroscope subject to tipping and torques ... and to planet flybys. Crustal skid is an issue that depends on whether the interface between the bottom of the crust and the top of the mantle (known as the Moho) is slippery and lubricious. The greater the lubricity, the greater was the skidding. The greater the viscosity or stickiness, the greater was the friction and the recharging of the geomagnetic field. It was this combination, and not Continental Drift, that brought subtropical fossils to the high latitudes, to such places as Alaska, Greenland, Canada, Siberia, Spitzbergen and even Antarctica.

THE LONG DAY OF JOSHUA. The traditional triad have been making guesses as to how that day was reported as being lengthened. The evolutionary duet suggests mass hallucinations occurred in Joshua, Chapter 10, and in Josephus, Book V, Chapter 1. However, when hallucinations do occur, they are restricted to individuals and are not en masse. The Fiat Creationists handle theoretical science in this case much as a magician handles a silk handkerchief which appears and disappears at the will of the magician. In this case it is the Earth's spin rather than a magician's handkerchief which appears and disappears at will. All three of these world views, for different reasons, are flawed. All three of these world views fail to consider the gyroscopic nature of our planet, to say nothing of the electric generating nature of Mars flybys.

NOAH'S FLOOD. Noah's Flood was not "Santa Claus stuff" as the Evolutionary Uniformitarians favor. The Flood was not caused by a particularly severe hurricane or typhoon, blowing up the Persian Gulf toward the mountains of Ararat, a view Theistic Evolutionists commonly hold. Neither was Noah's Flood caused by a secret cache of subcrustal water, in the region of the Moho, which God suddenly unzipped, released and then called back after the appropriate number of days or months. Once more, the explanation of the Fiat Creationists resembles the magician, who this time makes glasses of water appear and disappear at will, sometimes even two at a time.

Noah's Flood is best understood as the most intense of a long series of Mars flybys, a very close one at about 15,000 miles (core to core.) To this scenario is the added feature of an icy satellite of Mars, perhaps 10,000 miles distant. On this close occasion, it pierced the Earth's Roche Limit, fragmented, and it sprayed both planets with ice fragments, including perhaps some traces of the rare element, iridium. Even the Moon got a tiny skiff. Thus the Planetary Catastrophist diagnoses both global floods as being simultaneous. One icy spray created the dry river beds of Mars and the other (greater) icy spray created for the Earth first, a hot rain and secondly, a glacial age, with icy flour spiraling down over both magnetic polar regions. In October of 2484 B.C., "Glacis" fragmented, as had Astra some 7500 years earlier.

God's initiative in warning Noah and in providing Noah and his sons with various skills, including that of boatwright and other needed assets, should not be overlooked. This warning may have happened 40 years or so before the Watery

Disaster, and some 14 years after a mid-March flyby which our model suggests occurred in March of 2537 B.C.

THE HISTORY OF THE SUN. The two evolutionary views hold to the idea of the two Emmanuels, Swedenborg and Kant, who theorized some 250 years ago. It is known as the "nebular hypothesis," a dame who has been dressed up regally and liberally sprayed with the best of Paris perfumes. Yet none of these attentions cover up her warts; they merely focus attention on her beautiful attire. Focus can be drawn away from those warts, but that lady does not belong in any beauty contest.

The Fiat Creationists once more appeal to theo-magical explanations which tend to torture scientific data. They hold that the Sun, with all of its family, and the galaxy materialized some 7,000 to 10,000 years ago. When Fiat Creationists call attention to the warts on the evolutionary lady, they in fact do "wax eloquent." But when attention is drawn to the blemishes in their system, they deny vociferously that such defects exist and quickly change the subject to one more comfortable.

There are seven or eight lines of reasoning which support a recent capture theory for the Sun's family and for its sunspot cycles. These include the near universal planetary ecliptic plane (for all planets except the distant Pluto, and including the vanished Astra.) There is a case for the origin of the asteroids which was due to too close a flyby between Astra and Mars, rather recently it would seem. There is the distribution of mass in our solar system, heavy in the "distant" regions, circa $\frac{1}{2}$ to 1 billion miles but scant in the inner regions within $\frac{1}{4}$ billion miles. There is the distribution of the elements, the lighter ones (helium and hydrogen) prominent in the Sun while heavier elements are prominent in the inner planets. There is the shrinking Sun, which is shrinking at least 8 miles per year in diameter, which is 125 feet per day and is 6 inches of shrinkage per hour. The Sun could not have been shrinking very long because it has not engulfed the asteroid Icarus or the planet Mercury. Furthermore, spiral arms of the Milky Way galaxy deny any logic to the propagandists of uniformitarianism, who hold that the Sun with its Orion Arm have made 25 such galactic orbits without the Orion Arm dispersing.

THE LOCATION OF THE EARTH-MOON SYSTEM BETWEEN THE ZONES OF FIRE AND ICE. The Evolutionary View holds that the Earth was established in its present orbit 4.6 billions of years ago through planetesimal accretions and condensations. They hold that neither God nor any other power has been detected rearranging any

orbit. Its adherents do not understand the catastrophic geography of Mars (and its pocked satellites), nor do they allow that one planet has disappeared, leaving asteroids and craters on one side only of Mars. Advocates of Evolutionary Uniformitarianism have no idea what caused pan-continental layers of sediments, or strata, and they have no idea why mountain cycles are in swath-like (read flyby) patterns. They maintain that time accommodates almost anything, and there have been hundreds of millions of years of "recent" i.e. biological Earth time.

The concept that the orbit of Mars has been radically altered not once but twice in the last 12,000 years (once by Astra and once by its over-shot of the Earth) is an idea of which the Evolutionary duet is largely unaware. However those evidences are solid, and they are increasing rapidly with the increase in space mission data, available only in the last two or three decades.

This writer prefers the idea that God spun the Earth-Moon system out of an ancient binary when Jupiter and Saturn were also captured by the Sun. That was when the Sun was cable-jumped by the new planetary tides, and when the Sun began to radiate at a new and higher level. And that was when He, the Lord of Hosts, placed the Earth-Moon system very nicely between the regions of fire and ice. Within His providential government of space, the Mars flybys began to occur, with their consequent crustal deformations, stratigraphical depositions, spin axis precessions, crustal skids and a recharged geomagnetic sheath.²⁷

This view presupposes that there was a paleomagnetic polarity reversal on each and every Mars flyby occasion, but that cannot presently be proved. It can be proved that the Sun experiences a general polarity reversal every time the center of mass of the solar system wanders outside the rim of the Sun, which cases average once every $11\frac{1}{2}$ years. Suppose that it turned out that paleomagnetic polarity reversals occurred only during mega-catastrophes, one in five. That might place the origin of the Earth's geomagnetic sheath (and life-enabling environment) somewhere within the last 45,000 years. Would such make a major difference?

WISHFUL THINKING, NEGATIVE AND POSITIVE. Fiat Creationists have a remarkably interesting approach to paleomagnetic history. They strongly endorse the valid data which indicates that the Earth's geomagnetic field is decaying about 5% per century. Their half-life for the geomagnetic field is 1400 years; ours is 1350

years. They interpret this in a retroactive or back ward projection to 100,000 B.C. when the Earth's magnetic field would have been greater than a black hole, an impossibility. Their only alternative suggestion (naturally) is Fiat Creation.

However, when the subject of paleomagnetic polarity reversals occurs, which is demonstrated on a global scale, Fiat Creationists reject the data. (There is no place for polarity reversals in their world view.) Our prediction is that this curious posture of Fiat Creationists will be emotionally defended. The practice of defending such an incongruity may cast aspersions and may compromise their claim to veracity. Their behavior is to deny as facts any harmful evidence which most scientists find to be indisputable.

Such is similar to an evolutionary dilemma, where both existing data (along two lines) as well as logic suggest that the Sun is shrinking. The data indicates a rapid shrinkage as viewed by uniformitarian time standards. Without a shred of evidence and without logic, Evolutionists claim there are "solar oscillations" and that our Sun just happens to be in a "down phase", one of a long series of waves. This is similar wishful thinking, but of the positive variety; it imagines "facts" for which no data exists, for which no logic exists, but which is badly needed to bolster a shaky posture. Such academic waffling betrays a fragility which we detect in each world view.

For all five of these selected key issues, the Planetary Catastrophist world view offers the most in the way of solid explanations, answers which seem to integrate well with the most recent discoveries of our space age. Such recent discoveries include the pitlets of Deimos and Phobos, the dry river beds of Mars, the Io-Jupiter flux tube of ions and charged particles, the relatively weak planetary magnetic field of Saturn, and the wildly offset magnetic axis of Uranus. To all this, what will Voyager add in February of 1989? Our prediction is on record.

Good theory has the trait of growing fruitful predictions. As mentioned in previous chapters, one such prediction is a *third flux tube between Triton and Neptune*, to compliment the ancient Mars-Earth flux tube and the ongoing Io-Jupiter flux tube. A second prediction is that *friction generated by tides will be recognized as the generator of planetary magnetic fields*. Thirdly, the person who demonstrates this to the satisfaction of the scientific community will be a Planetary Catastrophist. (Mars was that generator of the Earth's field.)

Finally, any good theory bears certain characteristics. As mentioned above, one measure of any theory is its success in accurate predictions. A second is horizontal consistency with the facts of history. A third is a vertical consistency with the known laws of science. A fourth trait is simplicity of premise, such as one icy fragmentation simultaneously spraying two planets (not two icy fragmentations). A fifth trait must involve general fruitfulness of thought. With respect to these traits, the Mars-Earth Catastrophic Model provides crucial insights to old issues and new evidence with which the modern cosmologist must reckon.

NOTES

1. Richard Lattimore, *Hesiod*. Ann Arbor: Univ. of Michigan Press, 1959, p. 199, lines 141 - 145, Shield of Herakles.
2. *Op. cit.*, p. 12 (Introduction.)
3. *Op. cit.*, p. 109, lines 765 -767.
4. Immanuel Velikovsky, *Worlds in Collision*. New York: Doubleday, 1950, p. 334-355. Many of the citations of ancient 360-day years are taken from Velikovsky's excellent 8th chapter.
5. *Op. cit.*, p. 337.
6. Lattimore, *op. cit.*, p. 175. Lines 857 - 865, Theogony.
7. *Op. cit.*, p. 164 - 165. Lines 695 - 700 and 705 - 712, Theogony.
8. *Op. cit.*, p. 194. Shield of Herakles.
9. *Op. cit.*, p. 197. Shield of Herakles.
10. *Op. cit.*, p. 197. Shield of Herakles.
11. *Op. cit.*, p. 200. Shield of Herakles.
12. *Op. cit.*, p. 202 - 203. Shield of Herakles.
13. *Op. cit.*, p. 217 - 218. Shield of Herakles.
14. Immanuel Velikovsky, "Beyond the Mountains of Darkness: The Search for the 10 Lost Tribes." *Kronos*, VII-4, Summer 1982, pp. 40- 47.
15. Reena L. Zeidman, "Deportations in the New Assyrian Empire." *Catastrophism & Ancient History*, Vol. VII, Part I, Jan. 1985, p. 25 ff.
16. Louis Ginzberg, *Legends of the Jews*. Philadelphia, Jewish Publication Society, Vol. IV., p. 268. "In the following night, which was the Passover night, when Hezekiah and the people began to sing the Hallel Psalms, the giant host was

annihilated. The archangel Gabriel.. "

17. James R. Newman, *Harper's Encyclopedia of Science*. New York, Harper & Row, 1967, p. 1079.
18. John Baxter and Thomas Atkins, *The Fire Came By: The Riddle of the Great Siberian Explosion*. New York, Warner Books, 1976, p. 21 ff.
19. *Op. cit.*, p. 103."Knowing the basic parameters of the Tunguska explosion, its temperature can be calculated. It turns out that the temperature was several tens of millions of degrees."
20. A. Hallam, *Great Geological Controversies*. Oxford, Oxford Univ. Press, 1983, p. 51.
21. Charles Lyell is viewed by such authoritative sources as geological faculty members and encyclopedias as having authored the most important work ever written in geology in his *Principles of Geology* (1830-1833.) It revived the uniformitarian theories of Hutton and vigorously attacked the catastrophic school.

While Lyell's book has been widely acclaimed as the most influential of all geological literature, our opinion is that this work is not a great work, nor is it even a good work. The truth of the matter is that for geological circles, a truly great book has yet to be written.

22. Ginzberg, *op. cit.*, Vol. IV, p. 267 - 268. "With his vast army Sennacherib hastened onward, in accordance with the disclosure of the astrologers, who warned him that he would fail in his object of capturing Jerusalem, if he arrived there later than the day set by them.
23. *Op. cit.*, p 269.
24. *Op. cit.*, Vol. V., p. 363. The latter states that Jewish tradition considers Hamon, "noise" (comp. Is. 33.3), to be the name of the angel Gabriel. This is corroborated by Aggadat Shir 5, 39. According to Sanhedrin, the angel clapped together his wings, and the noise caused by it was so terrific that the Assyrians gave up their ghosts. Another view given in Sanhedrin is that the angel blew out the breath of the Assyrians. This means that he took their souls without injuring their bodies."
25. Edwin R. Thiele, *The Mysterious Numbers of the Hebrew Kings*. Grand Rapids, Wm. B. Eerdmans, 1965, p. 209. Thiele's The Assyrian Eponym List begins with the year 892 B.C. and ends in 648 B.C.

26. Ronald T. Merrill and Michael W. McElhinny, *The Earth's Magnetic Field*. New York, Academic Press, pages 153 and 198. "The reversal chronology for the past 170 Ma is now well determined from analyses of marine magnetic anomalies.... One of the features of the reversal time-scale for the past 170 Ma (Fig. 5.9) is that the character of the reversal pattern changes markedly with time." Merrill cites some geologists who suggest there were up to 320 paleomagnetic reversals.
27. For further details, see Donald W. Patten and Samuel R. Windsor, "The Organization of the Solar System," *Aeon*. Part I July, 1988. Part II Sept. 1988. Portland. David Talbott, editor.

Chapter VIII

An Overview of Catastrophism

At this point in time (1988), it appears that two books, much less one, cannot do justice to the topic of catastrophism during the Old Testament era, and earlier. "Earlier" could include a span of seven thousand years of continuous cyclic catastrophes preceding the Noachian Flood. Following are some of the issues which need treatment, not in a popular vein so much as treatment on a technical level.

THE 108-YEAR CYCLICISM OF CATASTROPHES. In this present thematic, historical treatment of catastrophism, the technical aspects have not been explained; yet they need to be. A technical treatment of cyclicism needs to begin with a general discussion of resonance orbits and how they behave, which behavior is different than that of non-resonant orbits.

Of interest, for instance, is the behavior of the asteroid Alinda, which is in 8:1 orbital resonance with Jupiter. Its line of apsides (the long axis of the ellipse) is perpendicular to Jupiter's line of apsides. Alinda's present behavior mirrors certain aspects of that of the Martian orbit during the catastrophic era, when it was in 6:1 (not 3:1) resonance with Jupiter's orbit. Of even more interest is the behavior of a trio of asteroids in 2:1 orbital resonance with Jupiter's orbit. Their lines of apsides have parallel alignment with the apsides of Jupiter, even as the orbits of Mars and the Earth had parallel apsides in the catastrophic era when the Earth was in 2:1 resonance with the Martian orbit. The presentation of 3:1 and 2:1 resonance behavior is merely for background, the setting of the stage.

In our pursuit of the understanding of ancient catastrophism, Ron Hatch (an orbital analyst) and myself faced the issue of resolving (1) the anniversary aspect of ancient catastrophism with (2) a theoretical model within the framework of Newtonian mechanics. For non-resonant orbits, such modeling was found to be impossible. But within the framework and behavior of resonant orbits, it was possible. The resonant orbit break-through (with Earth and Mars at 2:1) was Hatch's.

Including this breakthrough, there were some 25 steps of analysis, data compilation, reasoning and "cause and effect" logic which were climbed in our effort to arrive at an understanding. These 25 steps need to be laid out (not necessarily in our order of climbing) so that other serious students may understand it, evaluate it, and save much time in their search.

We found, first, a 108-year cyclicism for the long series of October catastrophes. Next we found a parallel 108-year cyclicism for the alternating mid-March catastrophes. Thirdly, we found that each 108-year cycle (and catastrophe) was a component of a greater cycle, a cycle of 540 years (or every fifth catastrophe.) Mega-cycles of catastrophism were found to apply to both the October case and the mid-March case equally. It so happens that four successive mega-catastrophes of the October case are described in the Old Testament. They are (1) Noah's Flood, (2) The Tower of Babel Discharge, (3) The Long Day of Joshua and (4) the Mt. Carmel Barbecue. Their respective dates are 2484 B.C., 1944 B.C., 1404 B.C. and 864 B.C.

On each of these four dates, the following six planets had repeating, identical positions (if the Moon had a 30-day period as the ancients claimed.) Those six planets were Mars (in a flyby posture), Earth, Jupiter, Saturn, the Moon and even Venus. Understanding these 25 steps, and the battery of problems encountered, leaves one with a mega-perspective of ancient catastrophic flybys.

A CATASTROPHIC THEORY FOR THE ORGANIZATION OF THE SOLAR SYSTEM. This subject needs technical discussion on each of two levels, the negative and the positive. On the negative side, the 250-year old antique theory, currently still in vogue, the nebular hypothesis, needs to be discredited for the unworkable idea which it is and always has been, an 18th century idea advocated by the two Emmanuels. There are about ten technical astronomical reasons, any two of which should be sufficient to undermine the blithe confidence with which the nebular theory has been affirmed.

On the positive side is the catastrophic approach, one involving the Sun capturing pre-existing planets with pre-existing spin rates. The acquisition of spin is a major issue, and as it so happens, the planets of our solar system display spin rates in

pairs (just as it is said in Genesis that the animals were created in pairs, albeit in a different time frame.) How did the planets acquire spin (in pairs)? The answer leads directly to a larger issue: how did the Sun acquire its spin.

How did the planets acquire their present orbits? Were satellites acquired or were they stripped? Satellite acquisition needs to be framed with the dual concept of satellite stripping. Was the Sun once a dark star before its acquisition of its planets (and its acquisition of planet-driven tides)? We think so. Was the Sun "cable-jumped" or "turned on" with the acquisition of its family? Did it have to begin working harder (like most new parents)?

How does the issue of a "shrinking Sun" fit in and what is the supporting evidence? How does such evidence conflict with evolutionary theories such as the one just mentioned. Much of this material is being typeset at the present time for Aeon by its publisher, David Talbott. Samuel R. Windsor is the co-author with myself.

THE RISE AND DECLINE OF THE EARTH'S GEO MAGNETIC FIELD. In what way is the earth's geomagnetic field like the Roman Empire? Knowledge of just exactly where and what is the generator of the Earth's geomagnetic field is crucial to scientific advancement. Traditionalists have held the generator location to be in the Earth's core region, hot and unseen. We hold that the generator was external and it was Mars, through the friction generated during its flybys.

This subject is incomplete unless one also addresses the crucial issue of whether or not the geomagnetic field is decaying or not. Data over the last 150 years indicates its decline is steady and is at the astronomically-shocking rate of 4½% per century. This means that the Earth's geomagnetic sheath (like the Roman Empire) is predestined to expire, much like the magnetization of an iron nail whose tiny field also decays in time, albeit a much shorter duration of time.

Of further interest are two additional issues. One is exactly where is the Earth's geomagnetic field housed. We (Windsor and myself) affirm it is in the cool-iron crust or shell of the Earth; traditionalists have assumed it is in the ultra-hot core region. The other issue is why the spin axis and the geomagnetic axis are offset. We propose a solution. This polar offset has puzzled geographers and physicists alike

for over a century. In summary, we predict that the person who convinces the scientific community as to the precise origin of the Earth's geomagnetic field will be a Planetary Catastrophist. It cannot be otherwise.

THE CATASTROPHIC GEOGRAPHY OF MARS, PART-I: As previously mentioned, Mars has experienced a fragmentation by a rocky planet, probably smaller than the Moon. Our name for that planet is Astra." Evidence abounds. One side of Mars is splattered with 91% of the total count of Martian craters, while the other serene hemisphere has but 9%. The crater pattern is scattershot, but with a distinct edge or rim. Where the largest fragment hit (the core of Astra, the Hellas fragment), there is a crater 990 miles in diameter on Mars, over 20% of that planet's diameter. Some 170° opposite the Hellas Crater is the Tharsis Bulge, a continent-sized uplift the size of Australia, averaging between 20,000 and 25,000 feet above the surrounding mean ground level. It is logical to conclude that the massive Hellas fragment, hitting Mars at a velocity between 40,000 and 60,000 m.p.h., punched Tharsis up and out on the opposite side.

In addition, there are thousands of fragments which missed Mars. Most became asteroids but some continued to orbit around Mars in an ancient ring system. (Evolution teaches that somehow Jupiter is responsible for organizing the asteroids.) Recently discovered (and numerous) craterlets on tiny Deimos and Phobos are testimony to the ancient ring system of Mars. The fact that only two are left is testimony to the catastrophic orbit of Mars and the sweeping out done by the Earth's gravitational field (the broom) during repeated flybys. Yet other aspects of the catastrophic geography of Mars and its satellites need examination.

THE CATASTROPHIC GEOGRAPHY OF MARS, PART-II: As previously mentioned, Mars is a small planet, one-tenth the mass of the Earth. It cannot retain oxygen, nitrogen or water vapor. It never has had a climate in the Earth sense. Yet it displays numerous dry river beds in one of its hemispheres. Detailed analysis of those river beds indicate that the water ran torrentially, at velocities of 20, 30 and 40 m.p.h. on a planet whose ability to pull those running waters downward is but one-third that of our planet. Some of the craters exhibit dry river beds both entering and exiting. This is evidence that Mars suffered a solid planet fragmentation (with rocky projectiles) first, and then the explosion of icy fragments of a former ice-ball later.

In our theory, that ice-ball (Glacis) splattered one side of Mars with about 1 million cubic miles of ice. When the icy fragments hit, their motion in energy instantly converted to heat energy; melting, vaporizing, condensing and being reconstituted into a scattering of sudden, once-only rivers.

Moreover, our theory is that the fragmentation of that ice-ball (Gracis) was on the Roche Limit of the Earth (not Mars) while Mars was making a flyby. Both planets were sprayed by ice simultaneously. One immediate effect in the Earth's atmosphere was a massive, hot, intense, hemisphere-wide rain. A second effect, briefly delayed, was the particles of ice fragments that were captured, which particles like an icy super-cooled flour, sifted down generally, spiraling down like the wild hairdo of Gorgon, through the vortices of the Van Allen belts, landing generally in the magnetic polar regions. A third long-term affect was an addition of about 7% to the Earth's hydrosphere, its oceans. Yet a fourth affect was a general cooling, by about 25° to 30° F of the average temperature of the pre-Flood oceans. Thus we hold that Mars has suffered two fragmentations, the first rocky and the second an icy one. By comparison, Saturn has experienced but one, an icy one, while both Jupiter and Uranus have also experienced but one each, rocky ones.

THE CRUSTAL DEFORMATION OF THE EARTH. Mountain cycles happen to parallel flyby patterns. Evolutionary geologists know this, but do not perceive the significance. Fiat creation scientists are also aware of this but prefer to practice a form of tunnel-vision; its acceptance (and planetary catastrophism) would disturb their comfortable, simplistic, doctrinaire posture.

Figure 22 illustrates two flyby patterns which coincide with each of the two "recent" cycles of mountain uplifts. There are the Alpine-Himalayan Cycle and at least one sector of the Circum-Pacific Cycle. Our theory holds that the Alpine-Himalayan Cycle (12,500 miles long) was uplifted in one day, the day of Noah's Flood when Mars made a flyby between 14,500 and 15,000 miles close. The age of the Alpine-Himalayan Cycle is 2½% million minutes (not years). Its swath-like pattern of crustal deformation coincides perfectly with a flyby pattern providing that one understands that a spin axis shift occurred at the height of the flyby.

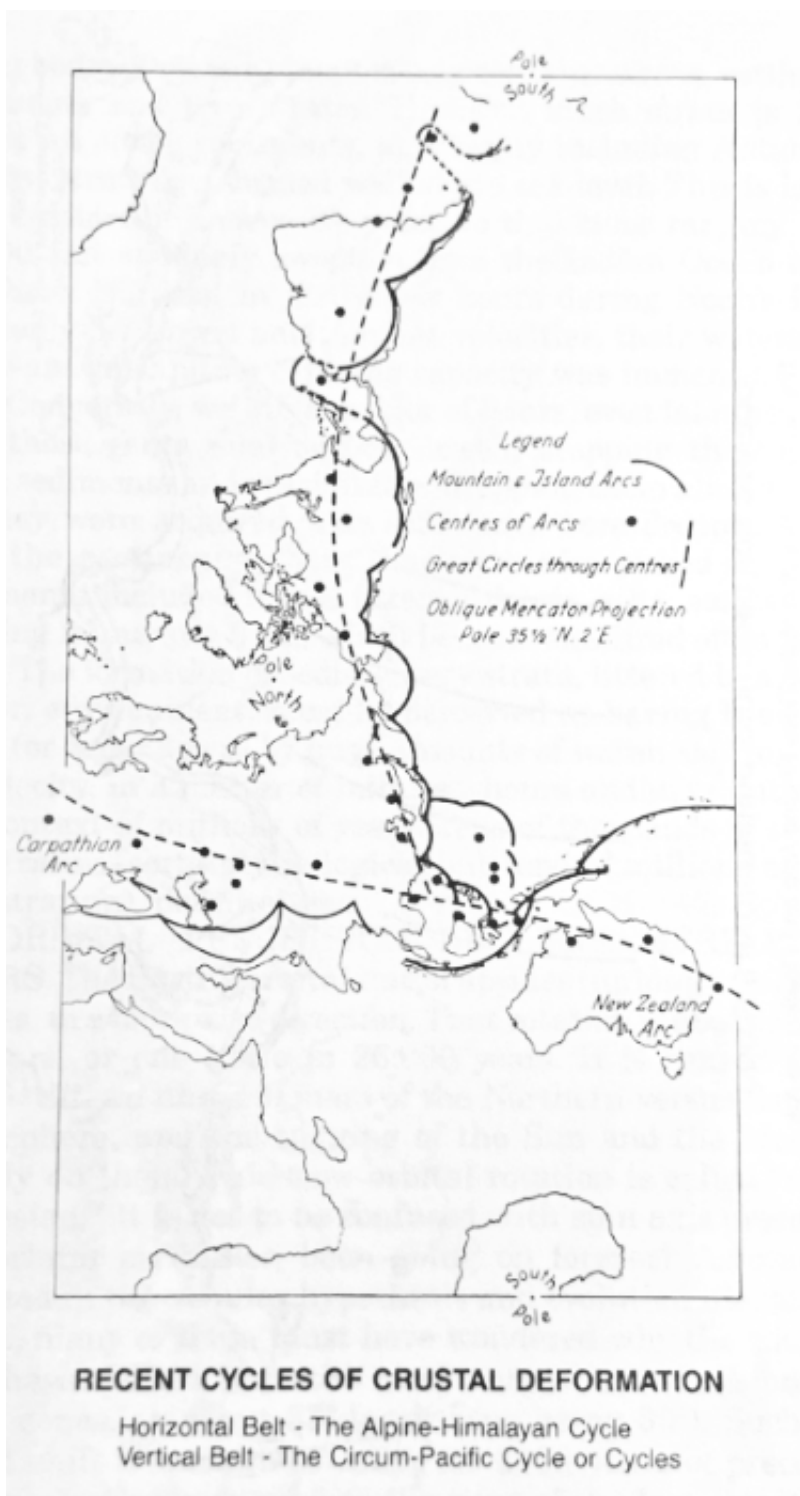


Figure-22

SUDDEN DEPOSITION OF SEQUENTIAL LAYERS OF STRATA. Figure 23 portrays our understanding of massive tides (as referred to in *The Epic of Gilgamesh*) which swept into, upon and over the Near East, and all of Southern Eurasia during Noah's Flood. The source of the flood waters was the Indian Ocean, an ocean which contains 70 to 75 million cubic miles of water. In our theory, some 4% to 6% of the water in the Indian Ocean swept across the face of Southern Eurasia.

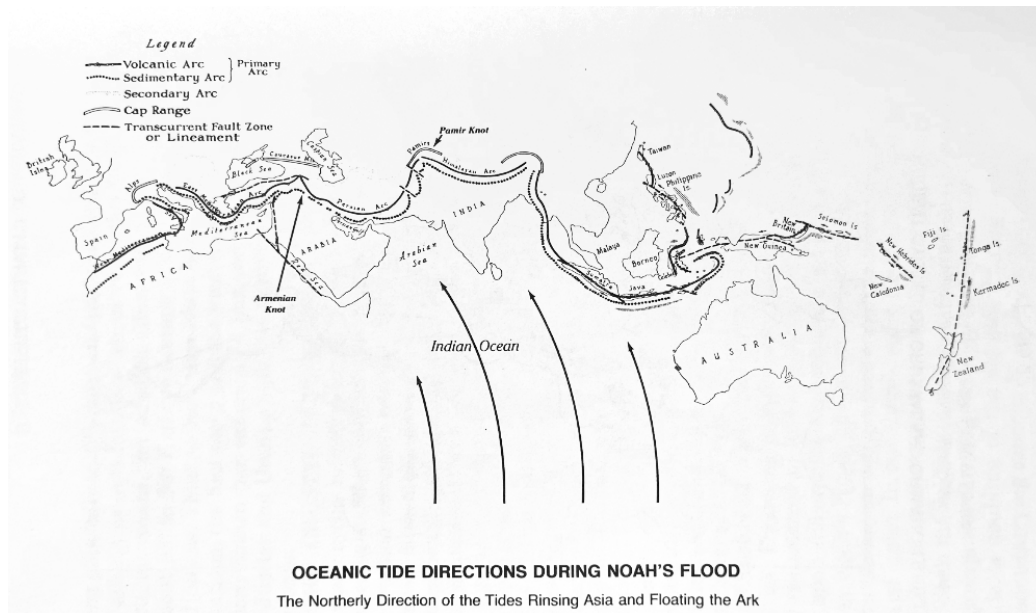


Figure-23

When the velocity of running water doubles, its sediment-and-precipitate carrying capacity increases to the sixth power. That is, a doubling of the velocity produces an increase in sediment-carrying capacity by 64 times. It so happens that the ocean bedrock on our planet rarely contains strata, settled out sediments and precipitates. However, much strata is found across all of the continents, apparently including Antarctica. Mostly, strata has formed well above sea level. This is logical in a catastrophic view. We perceive that tides ranging up to 10,000 feet suddenly swept in from the Indian Ocean across Southern Eurasia, in just a few hours during Noah's Flood. Suddenly-developed and in great velocities, their waters sediment-and-precipitate carrying capacity was immense.

Conversely, within a matter of hours, even late that same day, those same tidal surges slowed, dropping their debris, their sediments and precipitates, dropping them almost as fast as they were acquired. The sediments were dropped mostly over the continents where they were also picked up. Those sediments included a vast litter of debris, silts, sands, rocks, floating fauna and flora, which became fossilized often within days. The formation of sedimentary strata, littered in a debris-strewn environment, must be perceived as having been deposited (or laid down) by huge amounts of water, slowing down in velocity, in a matter of minutes, hours and days but not in the context of millions of years. Tens of thousands of seconds per stratum certainly is logical but tens of millions of years (per stratum), definitely no.

ORBITAL PRECESSION BUT FOR MERELY 2700 YEARS. The Earth's orbital line of apsides (its long axis) slowly rotates, in a clockwise direction. That rotation is about 1° every 72 years, or one circle in 26,000 years. It is caused by the earth's tilt, an unequal mass of the Northern versus Southern Hemisphere, and the tugging of the Sun and the Moon unequally on them. This slow orbital rotation is called "orbital precession." It is not to be confused with spin axis precession. Has orbital precession been going on forever? Astronomers educated in the nebular hypothesis and evolution like to think so. Yet, many of them must have wondered why the constellations have shifted from the most ancient moorings only $1\frac{1}{4}$ zodiac zones, or about 37° (each zone being 30°). Such a 37° orbital shift is enough to allow for 2700 years of precession, back interestingly enough to the time of the last catastrophe, the last Mars flyby.

However, the zodiac (with its myriad of constellations) is far older than 2700 years. The zodiac was a primary concept in ancient Sumer, Chaldea, India and the Levant. The Zodiac as an ancient star map is older than recorded history by far. If the Sumerians existed 5,000 years ago, why hasn't the zodiac shifted 50° . If the Sumerians existed 8,000 years ago (as some think), why hasn't the zodiac shifted 110° from its ancient mooring, the first Point of Aries? Why has the zodiacal zone shifted only about 35° ? Many astronomers, physicists and engineers must have wondered about this discrepancy of actual orbital precession versus what evolutionary precession ought to be.

Our theory is that during the catastrophic era, the line of apsides (the long axis of the Earth's orbit), like the apsides of Mars, was locked onto the perpendicular of Jupiters apsides, just like Alinda's is today. Alinda is in 3:1 orbital resonance with

Jupiter. We hold that Mars was in 6:1 resonance and the Earth was in 12:1 resonance in the catastrophic era. The behavior of the asteroid Alinda is of much import. It is an example that resonant orbits do not precess whereas non-resonant orbits do precess. The trio of asteroids in 2:1 resonance with Jupiter (China, Clematis and Griqua by name) also serve as examples of orbital non-precession.

We propose that the Earth's orbit converted from a resonant status to a non-resonant status in the year 701 B.C. That change was caused by a mechanism as described and as illustrated in Chapter VII. It involved the outside flyby of Mars, which was visually seen and reported by Isaiah and, less clearly, by Hesiod and his "Shield of Herakles." If this is not the solution, where is another solution to this obvious zodiacal dilemma? Credit for perceiving this issue goes to Samuel Windsor, my co-author of the two-part essay concerning the catastrophic organization of the solar system. When this issue is analyzed in greater detail, its significance will be seen as damaging to all societies of astrologers, to their assumptions and to their hypothetical and superstitious 'Age of Aquarius."

GULLIVER'S TRAVELS AND THE LAPUTAN ASTRONOMERS. In 1726, Jonathan Swift wrote of the world travels of one Lemuel Gulliver in a brilliant satire on English society of his time. One of his satire scenes was on the Island of Laputa, off the coast of China. There, astronomers knew all about the two satellites of Mars which Europeans (with their poor telescopes) were unable to see. Swift, through his Laputan astronomers, proceeded to describe the following:

1. The correct number of the satellites of Mars.
2. Correctly, the tiny sizes of the Martian satellites.
3. In Mars diameters, the correct distances of the satellites.
4. Correctly, the orbital periods of those two tiny trabants.

(He did not call them Deimos and Phobos.) So precise were Swift's Laputan astronomers that they offered the opinion that, were there a man on Mars, to him the inner satellite (Phobos) would rise in the west and set in the east. Such would be due to the speed of Phobos in its revolving, faster than the rotation of Mars itself (at 24 hours 37 minutes.)

In 1875, an American astronomer at the Naval Observatory (Asaph Hall) discovered two tiny satellites of Mars. What has astounded the society of modern astronomers is that Swift's description was very, very close to the scene Hall discovered 150 years later. Astronomers, educated in the uniformitarian idea (including the nebular hypothesis) have been deeply puzzled. Astounded is not too strong an adjective. Several have called Swift's description "the luckiest guess in the history of science." Many other astronomers have concurred.

We doubt it was such a lucky guess. Swift's description was couched in terms of the Newtonian system, then a system only 38 years old. Did Swift have a source who interpreted Mars from ancient records, or from ancient star charts, or from other historical relics (such as Byzantine flags). A team member in London presently is researching the papers of "Dean Swift" (as he calls him.) Presently we do not have the solution, but we have knowledge of two other Europeans of the same vintage on the continent who also discussed the moons of Mars, also a century or more before their modern discovery.

We suspect that Swift's satire was related to the opinions of someone he knew, and that person understood astronomy, mathematics and ancient history to a significant level. Swift was a satirist. One of his friends at the Scriblerus Club invented John Bull. Another was the Queen's physician. We surmise that he knew Flamsteed, Halley, Newton and Whiston. It is suspected that his account of the Laputan astronomers will be found to contain cryptic clues.

For Swift, this story became a laugh situation either way it might come out. If Mars would be discovered without satellites, no one would ever be the wiser. However, if it were indeed discovered with two tiny ones (larger ones would have been already discovered), it would be a mirthful coup, even a celestial joke upon the society of astronomers. For satirist Swift, a pundit and a lover of jokes, no doubt he had numerous laughs, and perhaps some of those from beyond the grave. The bewilderment of science has been total. Our position is that the last laugh has yet to occur, and when it comes, it will be the best of them all. Such will occur when the source of Swift's information is identified, and perhaps in concert, when Swift's cryptic clues woven into the story of the Laputan astronomers are also unravelled.

ARCHETYPES OF MARS IN ANCIENT GREEK LITERATURE. In Chapter II, we identified ten of these in Hebrew literature and four in ancient Greek literature (Apollo, Ares, Gorgon and Typhon.) We are led to understand that there are at least another dozen in ancient Greek literature. Beyond that are archetypes of Mars in other ancient literatures and lores on all continents. This is a topic which needs research. Thus, one and even two or three books on Mars catastrophism are inadequate for such a far-ranging subject. A sequel is planned, one considerable more technical than the work in hand.

Biography

Donald Wesley Patten was born on 1929 in Conrad, Montana. He attended the University of Montana (1947-1950) and the University of Washington (1950-1952, 1960-1961.) In addition to having a minor in History, he has two degrees in Geography, the B.A. and the M.A., both from the University of Washington.

He is a veteran of the Korean War. Married, he is the father of one daughter and six sons, and the proud grandfather of 13. He is the founder of both Microfilm Service Company (Seattle and Portland), and Patten Corporation (Seattle). Recently retired, he serves as Chairman of the Board of both firms. His hobbies include basketball, chess and gardening.

His two major publications include:

- *The Biblical Flood and the Ice Epoch* (1966)
- *The Long Day of Joshua and Six other Catastrophes* (1973)

This last work was co-authored with Ronald Hatch and Loren Steinhauer. He has also served as editor of the six-volume series entitled *Symposium on Creation*. (1968-1977.)

He is a regular contributor to the periodical *Catastrophism and Ancient History*, and he has been an occasional contributor to *The Creation Research Society Quarterly*, *Kronos and Aeon*. Among his essays are the following:

- (*Catastrophism and Ancient History*)
 - "The Scars of Mars, Parts I and II"
 - "The Origin and Decay of the Earth's geomagnetic Field"
 - "The Flood of Mars" (The Scars of Mars Part II)
- (*Creation Research Society Quarterly*)
 - "A Comprehensive Theory on Aging, Gigantism and Longevity"
- (*Creation Research Society Quarterly*)
 - "Symposium on the Origin of Mountain Systems"

- (*Kronos and Aeon*)
 - "The Organization of the Solar System, Parts I and II"

The last issue published by Aeon is co-authored with Samuel R., Windsor, an engineer. It proposes a catastrophic model of capture of the planets by the Sun and also a theory as to how the planets acquired spin rates, by pairs as it so happens. It also addresses the themes of the shrinking Sun and the Sun's acquisition of spin. Part I of this two-part essay is a refutation of the widely-taught nebular hypothesis.

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Donald Wesley Patten is a geographer by training and avocation. He received the B.A. degree (1952) and the M.A. degree (1961) in Geography from the University of Washington. Married, he is the father of 7 children and the proud grandfather of 13.

Most notably, he is the author of ***The Biblical Flood and the Ice Epoch*** (1966) and ***The Long Day of Joshua*** (1973). In addition, he was the editor of a six-volume series, Symposium on Creation. He is a frequent contributor of articles on catastrophism to the periodical *Catastrophism and Ancient History*, and other periodicals.

A creationist, Patten concludes that ancient catastrophes were astronomical in nature, were cyclic in timing and were global in impact. He has found that an integrated understanding of their scope, intensity and cyclicism produces a more comprehensive understanding of the geography and history of our planet.

In contrast to many advocates of catastrophism, Patten proposes a model. That model accords with Newtonian mechanics, geomagnetic principles, gyroscopic theory and historical accounts.

Catastrophism and the Old Testament

Does Mars show evidence of once having a global flood? If so, could it have occurred the same day as Noah's Flood?

What did Sennacherib (a survivor of the catastrophe in 701 B.C.) have in common with survivors of Hiroshima in 1945?

Why would the ancient poet Plutarch choose the metaphor of a celestial dice game, held among the planets, in describing an addition of 5 days to the old 360-day calendar?

At the picnic at the edge of Mt. Carmel in October, 864 B.C., why was Elijah's beef so well done?

Since the Sun is shrinking in diameter at a rate of 2 inch per hour, what does that imply about the age of the solar system?

Mass hallucination? Divine Hand intervention of planet spin? What is the real explanation for the Long Day of Joshua, when the Sun and Moon "stood still?"

Was there an astronomical aspect to the original "Passover" event in Egypt? If not, why were later catastrophes on the nights of its anniversary?

What could an Olympic discus-thrower tell an evolutionist about the distribution of mass in our solar system?

Did Jonah preach imminent fire and brimstone in pagan Ninevah? From commoner to king, why did they respond so well to the begrudging foreigner?

When Voyager makes a flyby of Neptune and its inner satellite Triton in February, 1989, what will be discovered there that a Planetary Catastrophist has already predicted!

What prompted King David to take two successive national censuses, which bracketed the "Passover" of 972 B.C.

Why did the pioneers of Early Rome (8th century B.C.) build temples to venerate Mars, Jupiter and Saturn within a scant 50 years of Rome's founding?

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