

NASA Juno Could Explain Large Scale CMB Anisotropy

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Until recently, cosmologists have had little concern with the solar system, being focused primarily on the power spectrum of small angle temperature anisotropies in the Cosmic Microwave Background (CMB), which agrees remarkably well with the Λ CDM theory. However, studies of the WMAP sky data have revealed a number of large scale alignments: of the quadrupole and octopole moments with one another; with the ecliptic plane; the equinox; and the kinematic vector, suggesting an additive foreground event associated with the solar system. A similar conclusion is suggested in the more recent Planck reports (XV, XVIII) as a deficit in the low- l power spectrum, but no physical basis for such an alignment has been suggested based on the current 'standard model' of the solar system. The author predicts herein specific features on Jupiter, their locations and dating, proposed to corroborate a recent explosive event capable of causing these anomalies. The NASA Juno probe, due to begin a detailed study of Jupiter's interior in mid-2016, has the capability to detect and verify these, as yet unrecognized, features. Understanding the physical details of this event may aid in the removal of the foreground energy thus improving the understanding of the initial conditions of the universe.

I. ALIGNMENTS OF THE CMB WITH THE SOLAR SYSTEM

The combined WMAP alignments with the solar system are estimated to have a probability $< 0.008\%$ [[On the large-scale anomalies of the microwave sky, C. J. Cobi et al.](#)] "Particularly puzzling are the alignments with solar system features. CMB anisotropy should clearly not be correlated with our local habitat. While the observed correlations seem to hint that there is contamination by a foreground or perhaps by the scanning strategy of the telescope, closer inspection reveals that there is no obvious way to explain the observed correlations."

The improved resolution and systematics of the Planck 2013 results [[Planck 2013 results.XV.CMB power spectra and likelihood](#)] were anticipated to aid in the resolution of the large scale anomalies. Although the report does not specifically address the quadrupole and octopole alignments with the solar system, they are referred to as "a tension between the Planck best-fit Λ CDM model and the low- l spectrum in the form of a power deficit of 5-10% at $l > 40$ with a statistical significance of 2.5-3 σ . Without a theoretically motivated model for this deficit, we do not elaborate further on its cosmological implications, but note that this is our most puzzling finding in an otherwise remarkably consistent dataset." The large scale anisotropies in the Planck data are reflected in the low- l power spectrum, shown in Figure 37.of the above reference.

II. QUANTAVOLUTIONARY CYCLIC CATASTROPHISM

Cyclic catastrophism [1, 2] is a [quantavolution](#) paradigm, originally published in [[Firmament and Chaos \(@ 1996\)](#)] with many newer epistles posted as [cyclic catastrophism](#). This body of work provides a new, consistent view of the cosmogony, recent history, and makeup of all the planets in the solar system. It is based on interpretations of the most ancient texts, which reveal cycles of consuming astronomical events witnessed by the first one-hundred generations of mankind. It posits a 3,000 period of solar system chaos, from 5731 to 2701 BP (3717 to 687 BC), only at the end of which did the planets Mars, Venus and Mercury, settle in their current orbits. Cyclic catastrophism posits the complete reconfiguration of the inner solar system was initiated by an enormously energetic ($\sim 10^{33}$ j) impact on Jupiter from which proto-Venus, the agent of these changes, was formed. A combination of ancient and modern observations also suggest that a significant source of fusion energy initiated by the proposed impact event is still manifest on Jupiter - indeed, is the source of every feature of the giant planet to this day.

III. CMB ANISOTROPY VERSUS STANDARD MODEL OF THE SOLAR SYSTEM

The most crucial obstacle to deciphering any possible connection between the large scale CMB anisotropies and the solar system is the currently accepted 'standard model' - the assumption that the planets have been in their current orbits for 4.6

billion years. As such, this paradigm discounts any solar system event of the magnitude required to affect the large scale CMB anisotropies. In contrast to this unprovable assumption that 'nothing has happened', cyclic catastrophism is based on ancient texts in every library in the world which, when taken at face value, are observations of cosmic events easily interpreted in terms of modern astrophysics and geophysics. As confident as cosmologists are, of being able to look back in time via red shifts and general relativity, their tools focus on extremely distant events, while the differential equations currently used for short-term predictions of the positions of planets in the solar system are of no use in discovering past instances of catastrophic events involving high energy dissipation.

IV. JUPITER AND SATURN COMPOSITION

The proposed impact explosion on Jupiter from which proto-Venus was born suggests that: (a) Jupiter is a low average density, solid planet and; (b) The terrestrial planets were each created by unique high energy impacts on Jupiter and therefore have unique ages. The application of straight-forward astrophysical/geophysical concepts leads to the conclusion that Jupiter and Saturn are giant, solid, frozen, incompressible Methane Gas Hydrate (MGH) planets. These formed cold over 50 to 75 million years by the initial sticking together ('accretion') of snowflakes, which formed on the surfaces of dust particles at the radius of Jupiter. In this cosmogony the giant planets comprised the original solar system.

As suggested by Jupiter's average density, 1.33, compared to Saturn's, 0.7, (the density of pure MGH), Jupiter incorporated almost the entire complement of heavy elements in the nascent solar system as it accreted. The currently accepted 'gas giant' hypothesis, that Jupiter and Saturn, known to account for 92% of the mass of the planets, comprise primarily H and He, is in direct opposition to the theoretical (published) elemental abundance of the solar system based on stellar nucleogenesis, which demands that oxygen and carbon are the third and fourth most abundant elements. MGH, comprising primarily water and methane molecules, is consistent with these abundances, as is the continued presence of methane gas in their atmospheres, which is continually being released by fusion reactions in the impact crater. Methane Gas Hydrates are common on Earth in niches where high pressure, low temperature and methane are present,

consistent with the proposed conditions within the giant planets in the outer solar system. The known clathrate structure of MGH comprises rigid cells of twelve or more water molecules, each encapsulating a methane molecule or other foreign atoms or molecules.

V. OBSERVATIONS OF VENUS CREATION

The observations of the creation of proto-Venus with cosmological implications are primarily from the Rig Veda and Greek myth. The Rig Veda states that Aditi (proto-Venus) was born from Dyauspitar, the Heaven Father (Jupiter), describing the rebounded plasma cloud (mrtnnda) as having the shape of an elephant. Given that Jupiter remains between 4 and 6 AU from the Earth, the identification of such a shape suggests that a plasma cloud > 4 million km in diameter rebounded from the impact. Even more significant, Greek myth suggests a comparable magnitude explosion in independent astrophysical terms: "When Pallas Athene (Young Athena or proto-Venus) was born, the earth round about cried fearfully" - implying that the entire Earth reacted to a gravitational impulse initiated by the impact at a distance > 4 AU, over half an hour later.

VI. FUSION-BOOSTED IMPACT ON JUPITER

The further application of astrophysics to these observations and others (see below), suggests that high kinetic energy impacts on Jupiter momentarily raise local surface temperatures to several 100 million K, triggering enormous nuclear fusion explosions, exponentially magnifying the impact energy beyond any currently conceivable level and thereby have created the terrestrial planets. The fusion explosions are fueled by the compression of already densely packed H, D (p-p), C, N, and O in the form of water, methane and ammonia molecules at the impact site, and are maintained by the high atmospheric pressure at depths > 600 km below the cloud-tops.

Reinforcing the enormous power and uniqueness of the 'recent' impact on Jupiter, a combination of ancient and modern observations further suggest that a significant source of energy, initiated by the primary impact event, is still manifest on Jupiter, indeed, it is the source of every feature of the giant planet to this day. The impact explosion initiated a continuing fusion conflagration in the crater manifested as a great jet of hot gases which

continued to shoot millions of km into space, only gradually diminishing over some six millennia. Evidence of the magnitude and longevity of the jet comes in the form of a drawing of the planet Jupiter in an Arabic epistle dated around the 9th century, along with the appearances of the other planets at that date which, incidentally, suggests that the reknown Arabic culture of Baghdad at that date had astronomical telescopes (Fig.1).

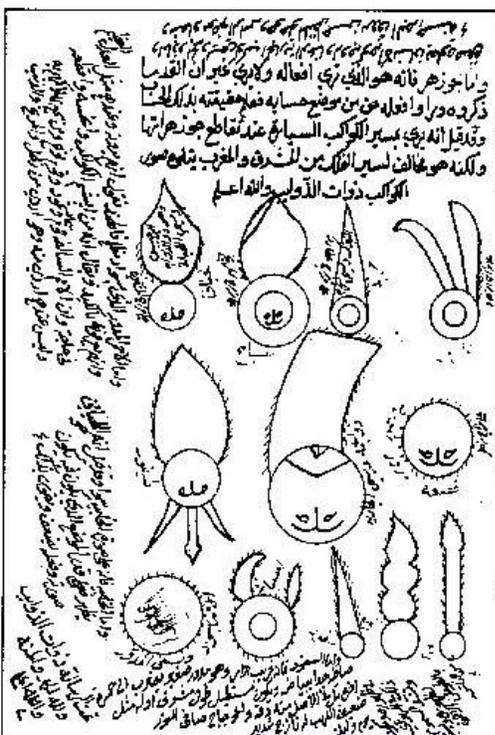


FIG. 1. A 9th century A.D. Arabic document in which the upper left figure is labeled “the Long-Bearded” .”with the temperament of Jupiter”. (Translation courtesy of Everett K. Rowson, Director, The Middle East Center, The University of Pennsylvania, Philadelphia PA, 1995)

This continuing fusion remains the source of Jupiter’s atmospheric temperature excess to this day. Its presence is now marked by the Great Red Spot (GRS) - the top of a column (vortex) of rising hot gases (an atmospheric high), which still carries ionized particles through its core into space. The path of this vortex, through Jupiter’s > 600 km thick atmosphere, is extended horizontally due to the rapid rotation of Jupiter (< 10 hrs.), spawning adjacent multiple zonal vortices of opposite chirality to its north and south. These are similar to the trade winds on the Earth, which are known to require a solid surface boundary below the cloud layer. The

temperature excess exists only in Jupiter’s atmosphere while the body of the planet remains frozen MGH.

VII. UNDETECTED MASS IN SOLAR SYSTEM

During some 500 orbits, Jupiter had been spinning off hot gas in all ecliptic longitude directions from the crater at 22 degrees south latitude, which condensed into unique dark bodies and dust. The ejected material comprises the outer layers of the Galilean moons, explaining their observed differences. It also formed the main belt asteroids and the > 2,000 recently discovered (since 1995) Kreutz sun grazers. The asteroids formed from the jet have essentially the same complete elemental abundance (nucleogenic) as Jupiter, but not the MGH structure, which requires high pressure. The Kreutz sun grazers have extremely low albedos, consistent with the few measured main belt asteroids and recently ‘comet’ Churyumov-Gerasimenko (albedos compared with charcoal briquettes). As a result, they have only been observed by SOHO and STEREO probes just as they approached the Sun. Moreover, the SOHO data indicates that none of these thousands of bodies have survived perihelion passage, implying that their impacts are the source of sunspots and the resulting Coronal Mass Ejections and have been, for the last 6,000 years. This is consistent with the finding of iron, considerable water within, and only within, sunspots, and their downward velocities of 3,000 mph into the Sun. Amazingly, all the > 2,000 [Kreutz asteroids](#) observed by SOHO and STEREO as of Dec. 2011, have been found to have the same inclination, ~ 144 degrees, consistent with their ejection from the location of the Great Red Spot at 22 degrees south latitude.[4]

VIII. POSSIBLE EFFECTS ON THE CMB

The initial orbit of proto-Venus, which rebounded into the inner solar system implies that the impacting body passed through the system and impacted the Sun-facing side of Jupiter releasing ~ 10³³ joules, the binding energy of the Earth. The resulting explosion created a gravitational/heat wave with origin at the impact point 6,000 years BP. The alignment of the quadrupole and octupole moments normal to the currently accepted kinetic vector suggests two possible situations: (1) that the impact blast was oriented close to the direction of motion of the solar system, indeed, this may have been a factor in the relative velocity of the impacting (galactic?)

body; or (2) that the determination of the kinetic vector is being completely biased by the Jupiter impact, suggesting that the true kinetic vector should be determined by a different strategy.

The impact, marked by the location of the Great Red Spot at 22 degrees south latitude is consistent with the greater heat in the southern ecliptic hemisphere, but the instantaneous expanding gravitational/heat wave would probably have been directed opposite to the velocity of the impactor. This would have resulted in a broad hot spot in the direction of the blast and a cold spot approximately in the direction opposite the blast, due to the absorption of the wave by the body of Jupiter. The primary effect of the gravitational/radiation wave in the CMB data today would be the heat reflected from cosmic dust, an additive foreground surface, ~ 3000 light years distant with a dipole-like distribution mimicking a kinetic vector.

In contrast to the radiated heat-wave, a great mass of material spun off by the Jupiter jet over some 5,000 years, sufficient to increase Jupiter's rotational period by several hours, (the tail end of which was recorded as the 'drift of the Great Red Spot', which ended in 1930) was ejected predominantly 22 degrees south of the ecliptic plane. This now forms a 'shell' of undetected cool dark matter, evidenced by the Kreutz bodies, which orbits the Sun and 'envelopes' the inner solar system. The residual heat of any dust ejected by the original blast and the subsequent spun-off cool dark matter still within the solar system may contribute to the measured temperature anisotropy between the northern and southern ecliptic hemispheres.

IX. JUNO OBSERVATIONS

In 2016 Juno will enter a highly eccentric polar orbit (Figure 2) which passes between Jupiter's cloud-tops and its radiation belts around perigee to study its gravitational and radiation fields during 33 orbits as the planet rotates. The coverage of the entire planet will take about a year. The Juno gravity system is designed to use Doppler changes in the probe's transmissions to determine Jupiter's internal structure - currently imagined to comprise hydrogen and helium with a ~ 25 earth-mass core deep inside the planet. If, as proposed herein, Jupiter instead comprises a solid frozen methane gas hydrate surface some 600 km below the cloud-tops, three

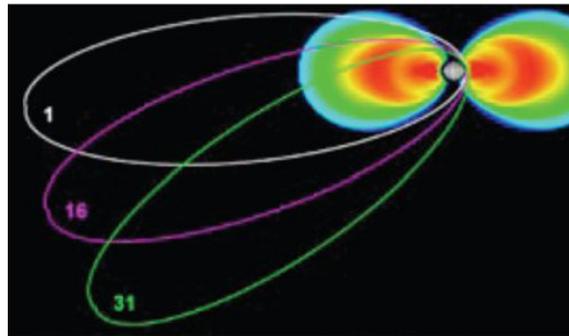


Figure 2. Planned Orbit of Juno at Jupiter.

enormous craters associated with the creations of Mars (4.6 by), Earth (3.9 by) and proto-Venus (6,000 y) BP, should be sensed. Although the ancient craters, from the creation of Mars and Earth, may be partially filled with water - the ultimate product of melted MGH, the still active proto-Venus crater if present, will certainly be detected by this experiment at 22 degrees south latitude, some 5,000 km to the east of the Great Red Spot, due to Jupiter's rapid rotation. Juno also carries a number of microwave radiometer channels to study emissions from different depths in the putative gaseous interior. Several of these channels should detect strong emissions from the fusion furnace coincident with the location of the Venus crater and perhaps the rising plume.

Although some cosmologists might look forward to the Juno data as corroboration of a potential foreground source, which is masking large scale CMB anisotropies, a very real possibility exists that, if the 'ludicrous' predictions proposed herein are indeed observed, they will be 'interpreted' by the Juno team, and therefore the scientific community, as instrument malfunctions, and discarded. Since both disciplines, essentially all of academia, hold strong 'evolutionist' and elitist views not readily or frankly communicated to the public, there remains a strong possibility that the predicted features on Jupiter will be declared irrelevant, or even consistent with the current 'standard model' of the solar system.

This is exactly what occurred with the Pioneer Venus (PV) mission (of particular relevance in the current context), in which radiometer data from all four probes and the orbiter showed that Venus radiates (on both day and night sides) an amazing 20 W/m^2 more than it receives from the Sun. However, twenty-six years later the standard (Pollack) model remains that the high surface temperature, 872 F (467 C), is due to a greenhouse effect supplemented by an undefined 'global dynamics' - which

incidentally constitutes a primary scientific support of the 'global warming' scare on Earth. Even more to the point, data from the sensitive radiometer on the Pioneer Venus main probe, designed to detect red and near infrared radiation from the surface as it descended through the lower cloud layer, was discarded - never made available, even to the scientific community at large, because "signals in all channels increased unreasonably". (See "[An Alternate View of Venus](#)"). Is it possible that the same mentality still prevails in the highly regarded scientific community?

X. CONCLUSIONS

...The motion of the solar system relative to the CMB results in a well known dipole temperature anisotropy, producing both an aberration and a modulation, a boosting, of the CMB temperature anisotropies. The process of correcting for this slight temperature increase in the direction of motion is known as deboosting. The exact direction of the temperature boost is considered well established over some 30 years, and has been 'confirmed' based on the full sky data sets WMAP and Planck ([Planck 2013 results. XXVII. Doppler boosting of the CMB: Eppur si muove](#)). However, any foreground source which affects the measured boost has been present for millennia, long before the COBE measurements.

The temperature and direction of the proposed blast from the impact on Jupiter may be causing an error in the exact direction of β_{\parallel} , the CMB dipole

direction used for the deboosting correction. Indeed, it is the 'boosting' paper cited above (XXVII), which states in Section 7. Conclusions: "tests with component separated maps shown in Figure 5. provide a strong indication that our 217 GHz map has slight residual foreground contamination."

However, the overwhelming significance and tenacity of the multiple "axis of evil" alignments with the solar system suggest that the proposed impact explosion has resulted in a large-scale asymmetry that completely dominates the true boost and distorts the large angle values of many points, thereby influencing the power spectrum at low-l values. Fortunately the WMAP and Planck data imply that this is not affecting the small-angle power spectrum.

The purpose herein is not to suggest fixes to the "axis of evil" problem, since many (hundreds?) of competent people are hard at work on this. It is only to describe a physical event which may have caused the problem, and in doing so prompt new approaches to its solution. Based on the fact that the entire cyclic catastrophism scenario is a 'foreground' period, completely unknown to the scientific 'consensus' community, it would be folly to submit it here, were it not for the author's sincere belief that proof of the impact on Jupiter will be independently revealed by the NASA Juno mission in the near future. Eppura Si accaduto.