

The Creator, Destroyer & Sustainer of Life

Oliver K. Manuel*

*Associate, Climate & Solar Science Institute
833 Broadway, #104, Cape Girardeau, MO 63701
Emeritus Professor, Nuclear and Space Studies
University of Missouri, Rolla, MO 65401
Former NASA Principal Investigator
For the Apollo Mission to the Moon
Websites: <http://www.omatumr.com>
<http://omanuel.wordpress.com/>*

(Submitted to *Space Science & Technology Committee*, House of Representatives, 17 July 2013)

Abstract: ***Fear** that the world might be destroyed by nuclear annihilation and **remorse** for having killed hundreds of thousands of innocent civilians convinced world leaders and scientists to build post-1945 science on falsehoods: 1. **Stars are made of hydrogen.** 2. **Neutrons attract neutrons.** Among scientific facts repressed: *Two forms of one fundamental particle, the neutron (n) and an expanded form of the neutron - the hydrogen atom (H) - comprise every atom in the universe (Figure 1). Invisible force fields among them produce vibrant changes; life and time as condensed nuclear matter fragments and fills interstellar space with dispersed atomic matter: Short-range forces of repulsion between neutrons oppose weak, long-range gravitational forces of attraction between H-atoms. The universe now expands because an interstellar H-atom occupies $\sim 10^{39}$ times more space than a neutron in the core of a galaxy, star or atom. Mass (energy) of a H-atom is $\sim 0.1\%$ less than that of a free neutron, but $\sim 1.2\%$ less than that of a neutron energized by neutron repulsion in the solar core where H-atoms are produced. Iron-56 (^{56}Fe) - the most stable combination of neutrons and hydrogen atoms - is the most abundant atom inside the Sun. **Neutron repulsion** triggered the *destruction of Hiroshima, synthesis of our elements, birthed the solar system, exposed meteorites to cosmic radiation, and continued to initiate the nuclear reactions that generate solar energy and solar neutrinos, deposited H and He in the photosphere to moderate cosmic rays from the pulsar until discharged by solar eruptions, flares and the solar wind.* Early solar radiation spiked when H-fusion ignited, melting early solids into glassy chondrules and then became less energetic and supportive of life ~ 3.5 Gyr ago. Recent half-life measurements at Purdue imply that other than gravitational, electrical, nuclear and magnetic force fields may invisibly connect atoms to the pulsar over vast regions of space filled with debris from the birth of the solar system and induce helio-spheric avalanches from self-organized criticality of material retained in the photosphere. Total solar irradiation (TSI), mostly from waste products, exhibits little variation; shorter wavelength radiation from the solar interior is more variable. Solar cycles and nuclear reactions at the base of solar flares sporadically heat the solar corona and cause more climate changes than the accumulation of combustion products in Earth's atmosphere. A solar pulsar sustains our lives and controls our fate. [**Boldface** is used to elucidate chronology.]**

*E-mail: omatumr@yahoo.com

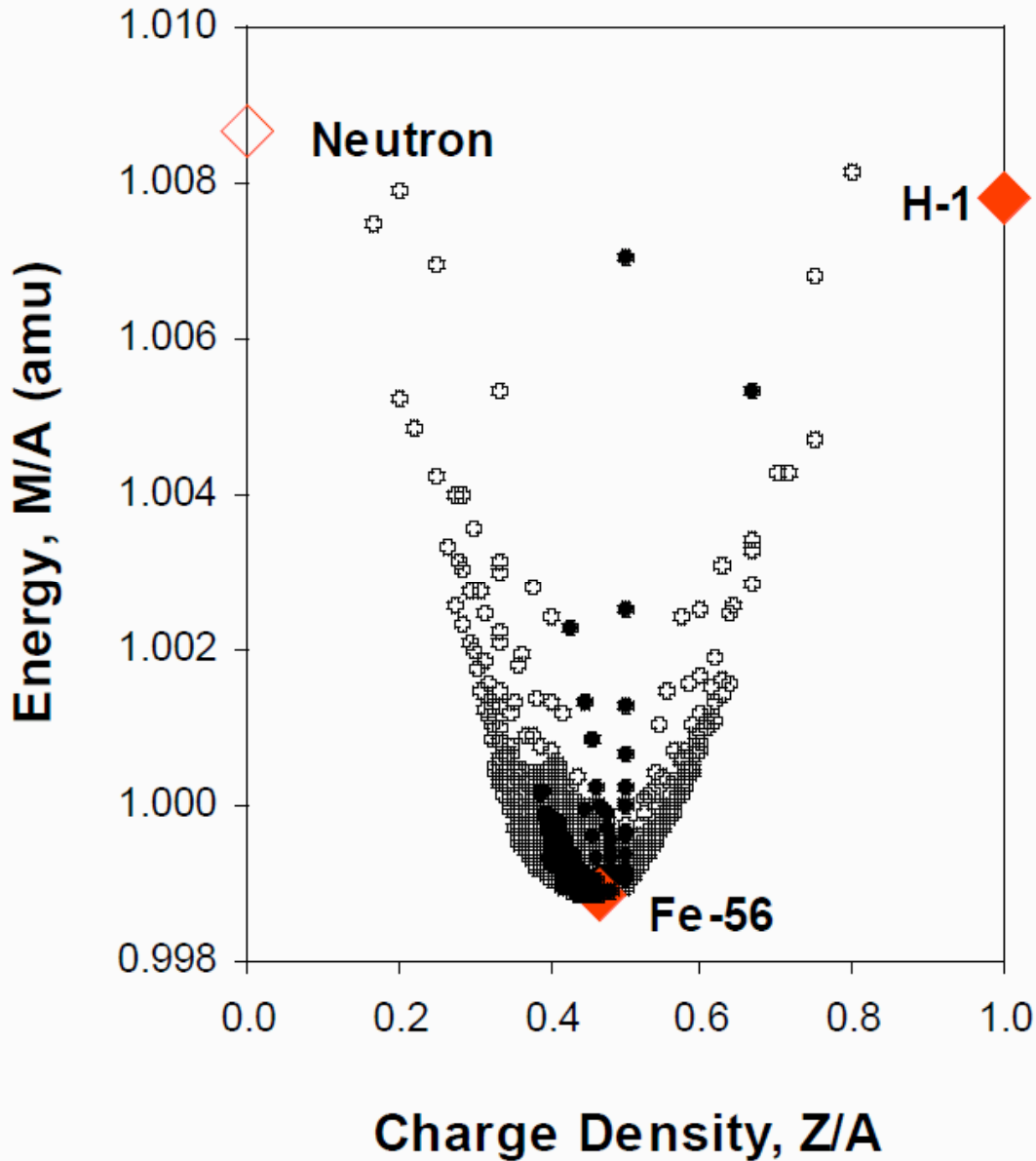


Figure 1a. Two forms of ONE fundamental particle are shown by red symbols on the left {neutrons (n)} and right {hydrogen atoms (H-1)}. H-1 is only slightly more stable on Earth. At high pressure, H-1 atoms collapse into neutrons. These are energized by neutron repulsion in neutron stars to a point high above the top of the graph. Energy (vertical scale) is increased by repulsion between neutrons (far left) and protons (far right), and decreased by the attraction between neutrons and protons (middle). The most stable combination of n and H, ^{56}Fe (in the middle), is the most abundant atom in the Sun, the Earth, and in ordinary meteorites. From left to right, the Sun's *core*, *mantle* and *atmosphere* consist mostly of neutrons (n), iron (Fe-56) and hydrogen (H-1). Different images of the Sun are produced γ -rays, x-rays, UV light and magnetic fields from its n-rich core and iron-rich mantle than visible light from the top of the photosphere.

The Cradle of the Nuclides

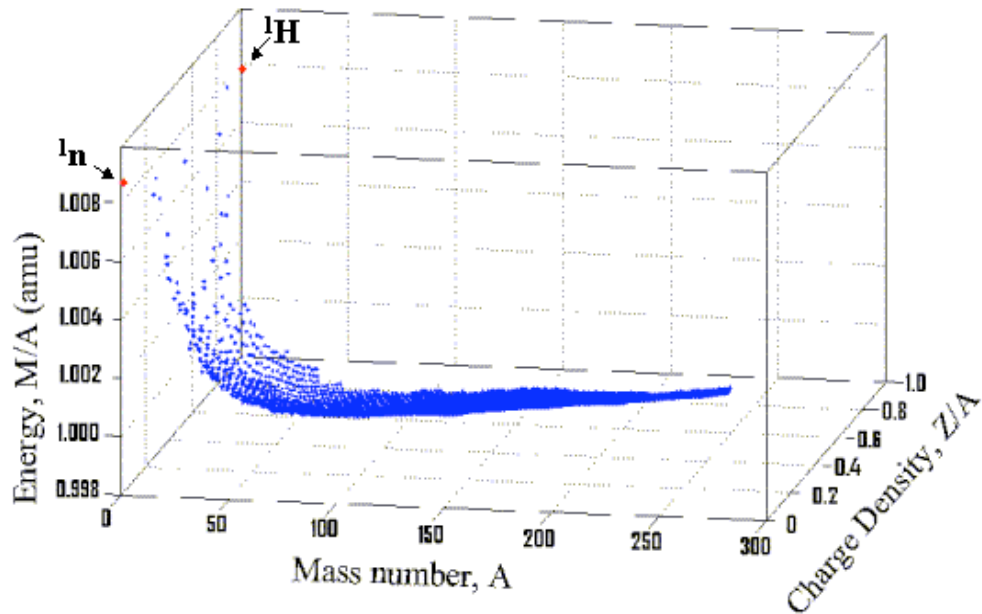


Figure 1b. Two forms of ONE fundamental particle - red symbols on the left {neutrons (n)} and right {hydrogen atoms (H-1)}- comprise every atom, separated above by mass number (A)

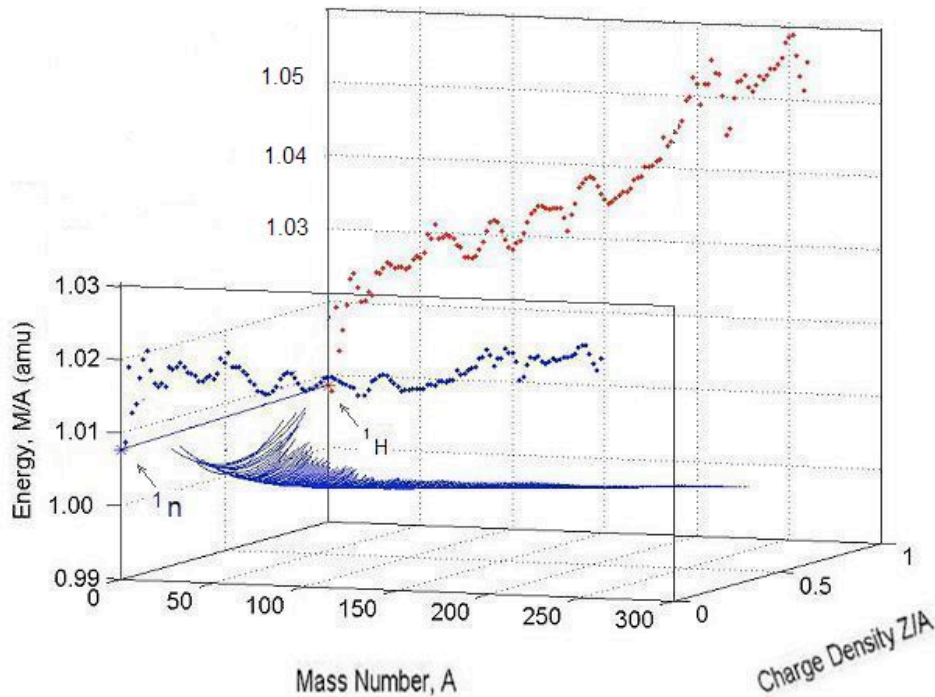


Figure 1c. Mass parabolas through the data points reveal neutron repulsion at $Z/A = 0$ on the front panel (for nuclei made of neutrons) and proton repulsion at $Z/A = 1.0$ on the back panel.

The Record of Manipulated Science

I am grateful for the invitation to contribute a paper on a subject so closely related to the research topic the late Professor Paul Kazuo Kuroda assigned me as his graduate student in **1960**: "*The origin of the solar system and its elements.*" I did not know Kuroda's research assignment would lead to such controversy, but Kuroda perhaps knew the Sun's origin, composition, source of energy and sphere of influence had been purposely obscured after the Second World War out of fear and loathing that humans might use that forbidden knowledge to destroy life on Earth, as large sections of Hiroshima and Nagasaki had been destroyed by atomic bomb explosions on **6 and 9 August 1945**.

This paper presents only a few of many measurements and observations that confirmed the validity of Kuroda's insight [1] into the *birth* of the Solar System and the *creation* of its elements when viewing the ruins of Hiroshima later in **August 1945**:

*"The sight before my eyes was just like the end of the world, but I also felt that the **beginning of the world** may have been just like this"* [reference 1, p. 2].

The director of the Manhattan Project had instead focused on *death* and *destruction* in the first atomic bomb explosion at Alamogordo, New Mexico one month earlier, on **16 July 1945**:

*"Now I am become **Death, the destroyer of worlds.**"*

<http://quotationsbook.com/quote/47841/-sthash.zSTRKpVe.dpuf>

The demise of modern science and society are the direct result of post-war policies based on Oppenheimer's fears from Chapter 11, verse 32, rather than Kuroda's hopes from the remainder of the *Bhagavad-Gita's* description of the *Creator, Destroyer* and *Preserver*.

Kuroda was granted a special visa to enter the US for permanent residence after the war ended and continued research here on nuclear fission and element synthesis in the early solar system. In **1956** he reported that self-sustaining nuclear reactors burned on Earth and generated elements on Earth as recently as two billion years (~ 2 Gyr) ago. His calculations were correct, but fiercely opposed. They were limited to two, one-page reports in **1956** [2]. Fred Hoyle [3] and Hideki Yukawa [4] had already published the framework that would guide **post-1945** physical sciences.

In the **1960s** Kuroda suggested [5] and his students confirmed: ^{244}Pu was alive when the Earth [5] and meteorites [6] formed about four and a half billion years (~ 4.5 Gyr) ago, just like the short-lived radio-activities that are trapped in fallout particles after a nuclear explosion [7]. Astronomers gathered at the Bilderberg to formulate a consensus model of the Sun [8].

In the **1970s** Kuroda used xenon isotopes from the Moon and meteorites to calculate the temperature of their synthesis in the Sun [9]. Self-sustaining nuclear chain reactions in the Oklo uranium deposit 1800 million years ago [10, 11] confirmed the validity of Kuroda's **1956** papers [2]. Kuroda's former students published a series of papers [12-15] on local element synthesis

and the Sun's formation on a collapsed supernova core, a pulsar. A Hungarian astronomer, Peter Toth [16], interpreted the 160-minute solar pulse as evidence for a pulsar in the solar core. That pulse rate would increase ~0.027% [17] over the next twenty years, as global warming increased.

In the 1980s, Kuroda published additional information on continuing element synthesis in self-sustaining nuclear reactors [1, 18] that burned spontaneously on Earth about 1,800 million years (1.8 Gyr) ago. Los Alamos physicists, Brown and Gritzko [19], showed that fragmentation generates solar systems. An astrophysics graduate of Caltech, Dr. Carl A. Rouse, detected the Sun's small, iron-rich core [20]. Science and news organizations criticized Professors Martin Fleischmann and Stanley Pons [21] for reporting another path to nuclear energy in 1989-90:

<http://coldfusionnow.org/martin-fleischmann-and-stanley-pons-in-their-own-words/>

In the 1990s, Wolszczan and Frail [22] reported a planetary system orbiting the pulsar, PSR1257 + 12. J. M. Herndon, a second-generation former student of Kuroda, reported self-sustaining nuclear fission reactors heat cores of planets [23]. Kuroda and Myers [24] combined ²³⁸U-Pb and ²⁴⁴Pu-Xe dating to pinpoint the supernova event that made our elements and birthed the solar system [12] five billion (~ 5 Gyr) ago. Kotov [17] reported additional information on the pulse rate of the Sun's pulsar core [16]. Cronin and Pizzarello [25] noted *d-* and *l-* forms of amino acids in the Murchison meteorite had experienced "*an asymmetric influence on organic chemical evolution before the origin of life*" - a force that might be circular polarized light from a pulsar.

In the 2000s neutron repulsion [26] was identified in atomic rest mass data [27] as energy that heats and fragments heavy atoms, planets, stars and galaxies. It was noted that Earth's climate and solar eruptions are influenced by the Sun's core [28] and atomic decay rates [29] depend on distance from it. A 2006 drawing (Figure 2) of a planetary disk around pulsar, PSR 4U 0142+61 shows how the early solar system [30] would have appeared if the beginning of the world was an astronomical version of the atomic bomb explosion Kuroda [1] imagined in August 1945:

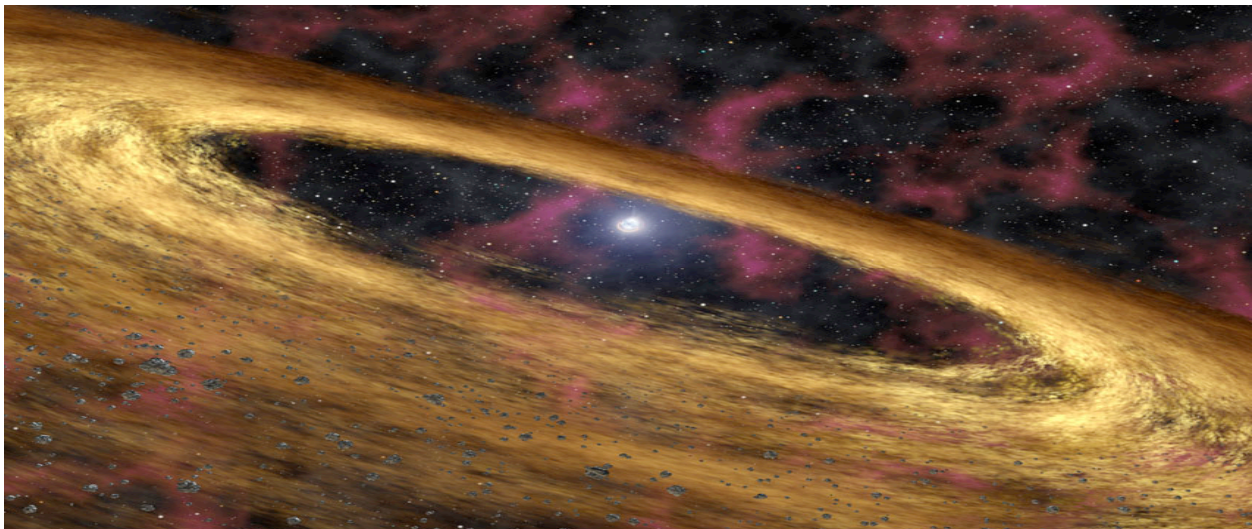


Figure 2. A schematic drawing of the birth of another planetary system around a pulsar [30].
http://upload.wikimedia.org/wikipedia/commons/archive/b/b3/20070403130005%214U_0142+61_paint.jpg

Figure 3 (below) is an artist's conception of the pulsar that might have exerted "an asymmetric influence on organic chemical evolution before the origin of life," by separating *d*- and *l*-amino acids in the Murchison meteorite [25] at the birth of solar system.

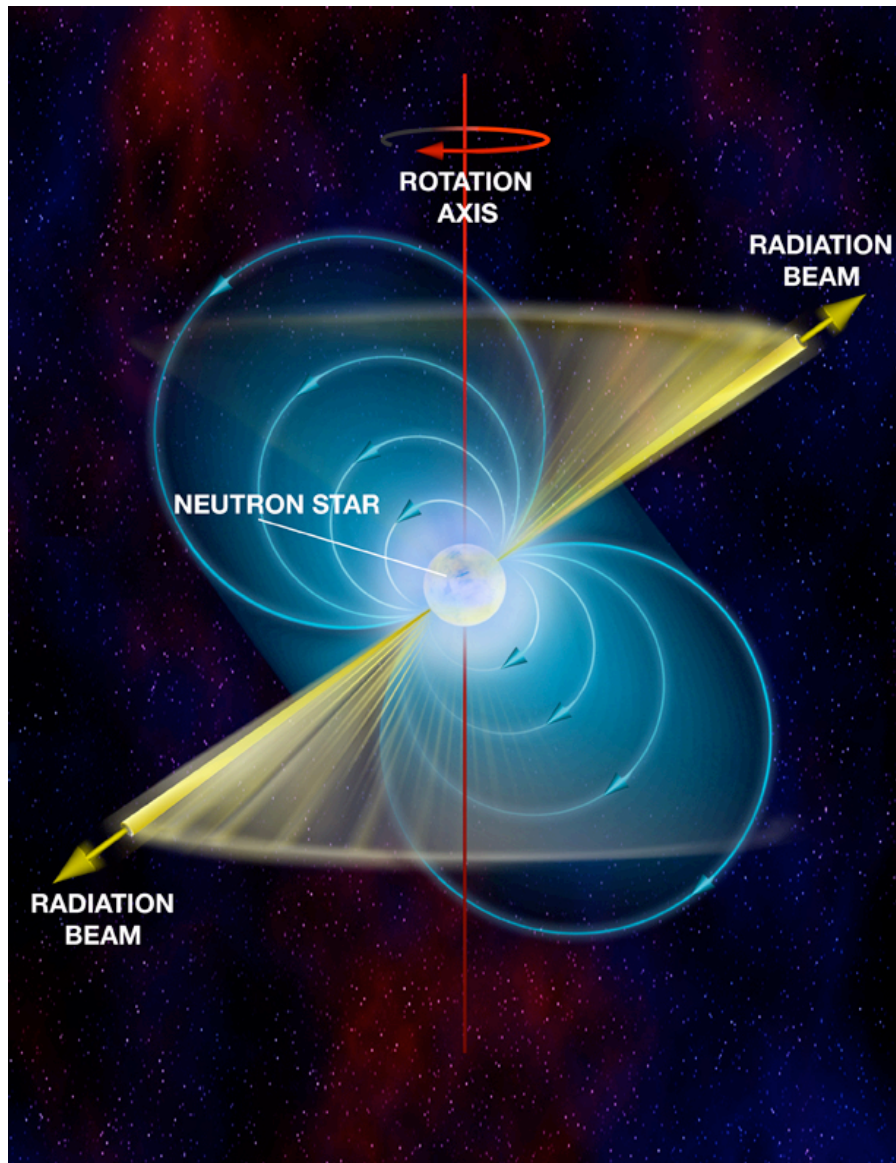


Figure 3. This artist's recent impression of a neutron star shows both its axis and its rotation.
<http://www.astron.nl/about-astron/press-public/news/neutron-stars-laboratory/neutron-stars-laboratory>

Solar images using light of different wavelengths (γ -, x-, UV-rays and visible light) partially reveal this inner structure: http://www.nasa.gov/mission_pages/sunearth/multimedia/Solar-Events.html

Compare, for example, the following images of the Sun. The image on the left was made with visible light that comes primarily from the hydrogen-rich material at the top of the photosphere. The image on the right was made with shorter wavelength (extreme ultra-violet) radiation emitted by iron-rich material: <http://svs.gsfc.nasa.gov/vis/a010000/a011000/a011071/index.html>

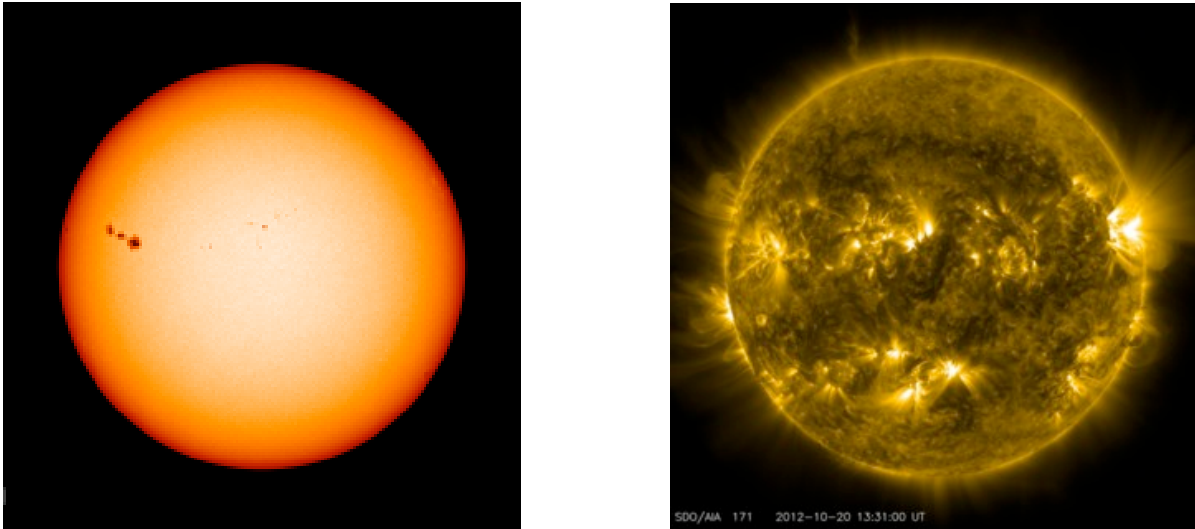


Figure 4. Solar images in visible light from hydrogen (left) and extreme UV light from iron (right)

On **28 August 2000** the TRACE satellite used UV light from iron ions (Fe IX/Fe X) to record "running difference" images during a solar eruption and mass ejection from active region AR 9142.

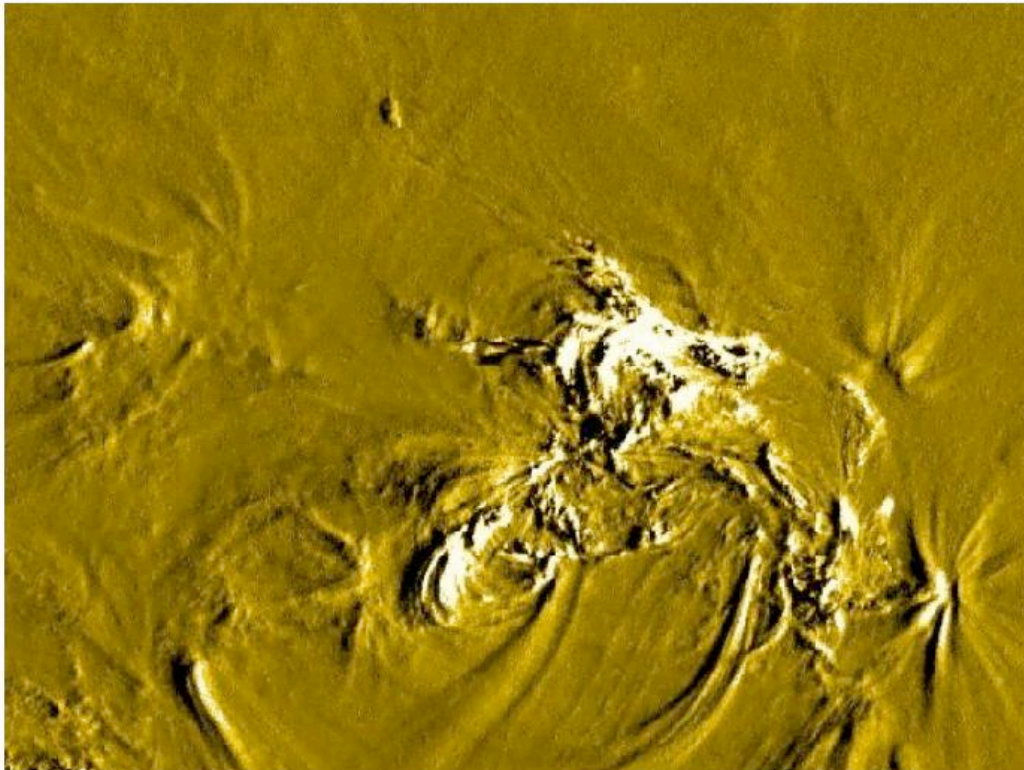


Figure 5. The Sun's rigid iron-rich sub-structure (above) can be seen venting material in a movie of the "running difference" images: http://trace.lmsal.com/POD/movies/T171_000828.avi NASA has changed the link to this movie several times, but this one works today (15 July 2013)

On **26 September 2000**, NASA's Goddard Spaceflight Center released the following image of the Sun's surface with a news release [31], "*Fountains of fire illuminate solar mystery, overturn 30 year old theory.*" The news story explained the mechanism that makes the solar corona three hundred (300) times hotter than the top of the photosphere, the so-called "surface of the Sun."

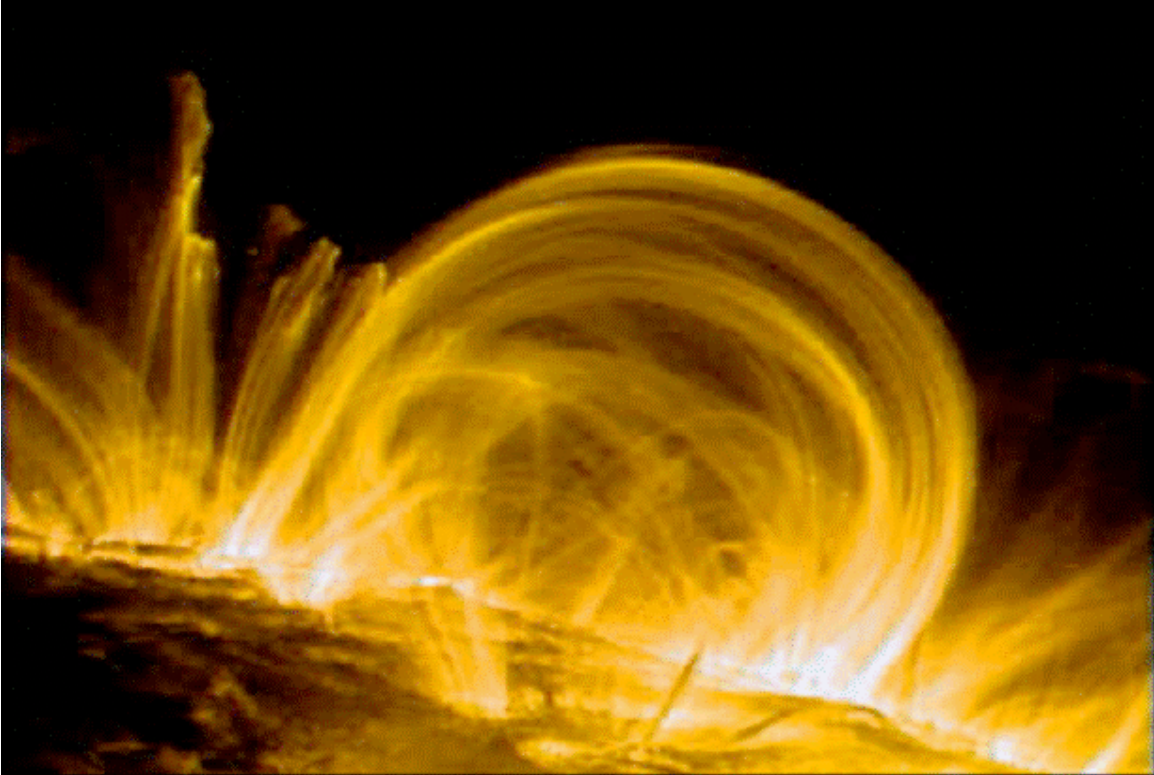


Figure 6. Nuclear reactions at the "surface of the Sun" heat the solar corona high above it [31]

On **July 23, 2002** the RHESSI spacecraft took this series of photographs of high energy γ and x-rays released during a solar flare at Active Region 10039, color-coded in red and violet to show the production of 0.511 MeV (from electron/positron annihilation) and 2.223 MeV γ -rays (from neutron-capture on hydrogen) at the "surface of the Sun."

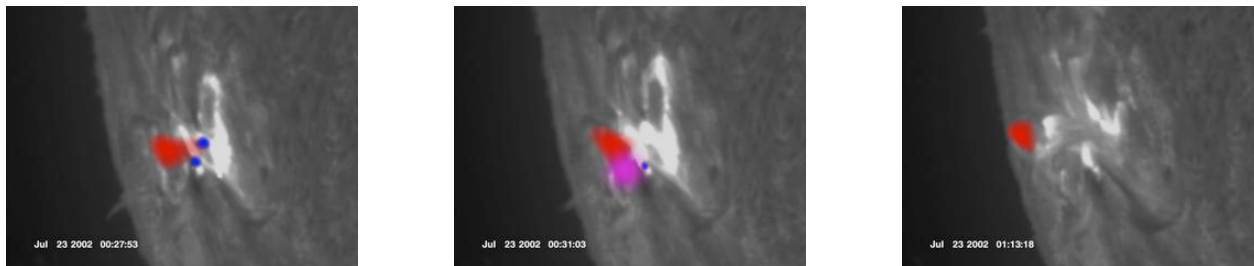


Figure 7. Three, successive color-coded images of high energy γ -rays emitted from nuclear reactions during a solar flare at times = 00:27:53; 00:31:03 and 01:13:18, respectively, in the early hours of 23 July 2003. The CNO [32] cycle is induced by deep-seated magnetic fields protruding through the "solar surface." <http://svs.gsfc.nasa.gov/vis/a000000/a002700/a002750/>

The above images of the Sun are consistent with the scenario shown in **Figure 2** for formation of the solar system. They are consistent with Kuroda's understanding of the overwhelming power of nuclear energy (neutron repulsion) while standing in the ruins of Hiroshima in **August 1945** [1]. They are also all consistent with prevailing opinions among astronomers and astrophysicists on the internal composition of the Sun until the **Second World War ended** - later in **1945** [33].

But opinions of astronomers and astrophysicists abruptly changed in **1946**, and these changes [3] were unanimously adopted without discussion or debate. The British astronomer, Sir Fred Hoyle, explained how this happened in his **1994** autobiography [33]. Describing a meeting with Sir Arthur Eddington in **1940**:

1. *"We both believed that the Sun was made mostly of iron, two parts iron to one part of hydrogen, more or less. The spectrum of sunlight, chock-a-block with lines of iron, had made this belief seem natural to astronomers **for more than fifty years.**" . . . [Reference 33, p. 153],*
2. *"The high-iron solution continued to reign supreme in the interim (at any rate, in the astronomical circles to which I was privy) until after the Second World War," . . .*
3. *"when I was able to show, to my surprise, that the high-hydrogen, low iron solution was to be preferred for the interiors as well as for the atmospheres." [33, pp. 153-154]*
4. *"My paper on the matter confounded a doctrine of (Raymond) Lyttleton, who used to say there are three stages in the acceptance by the world of a new idea.
_ a. The idea is nonsense.
_ b. Somebody thought of it before you did.
_ c. We believed it all the time.*

This matter of the high-hydrogen solution was the only occasion, in my experience, when the first and second of these stages were missing." [33, p. 154].

Thus prevailing opinions on the internal composition of the Sun and its source of energy changed abruptly, without discussion or debate, in **1946** when Fred Hoyle adopted the nebular model for the formation of the Sun from an interstellar cloud of hydrogen. Hoyle's [3] and Yukawa's [4] papers have been shielded from experimental measurements and observations for sixty-seven years. They form the foundation for five, public-financed but highly unlikely scientific dogmas:

1. Hoyle's **1946** Standard Solar Model of H-filled stars heated by H-fusion
2. Yukawa's model: Attractive nuclear forces [4] produce dead neutron stars
3. **BBM** (Big Bang Model) of hydrogen creation at the birth of the universe
4. The **BHM** (Black Hole Model) for storing imaginary stellar end products
5. **AGC/AGW** models of **Anthropologic Global Cooling** and/or **Warming**

Shortly after Hoyle laid the base for the edifice of post-war science in **1946**, he personally started tearing it down with derisive use of the term "*Big Bang*" to describe dogma #3 in a **1949** BBC radio broadcast. But dogma reigned supreme until **May 1983**, when *Nature* published a report by a young researcher on the demise of established dogmas on the formation of the solar system [34]. That report *might have* replaced the standard dogma for the origin of the solar system from an interstellar cloud with the realistic scenario revealed by experimental measurements (Figure 2).

For by that time measurements had revealed the Sun as the source of our elements [9, 13-15, 35-36] and its core as a pulsar remnant [16, 35] from the explosive birth of the solar system. Later in **September 1983**, analysis of lunar soils further confirmed the Sun's iron-rich interior [37] beyond any reasonable doubt.

But the Royal Swedish Academy of Sciences announced Nobel Prize awards in **October 1983** for extensions of Hoyle's **1946** papers [3]: Thus the scientific community escaped reality in **1983**, as it had in **1977** when *Science* published a debate [14/14] and *Nature* published additional evidence [15] that the Sun birthed the solar system and then formed directly on the supernova core.

Yukawa received the **1949** Nobel Prize in physics for a model of attractive forces between neutrons [4]. Fowler and Chandrasekhar received the **1983** Nobel Prize in physics for work built on Hoyle's **1946** papers [3]. Hoyle was excluded, despite public outcry [38]. By then measurements and observations that disagreed with Hoyle's [3] and Yukawa's [4] papers had been successfully ignored for thirty-seven years (**1983 - 1946 = 37 yrs**). This practice continued for another thirty years (**2013 - 1983 = 30 yrs**) despite overwhelming experimental evidence published in peer-reviewed reports [e.g., 39-50 and references therein]: a.) *Iron is the most element in the Sun*, and b.) *Neutron repulsion is the Sun's source of energy*.

There was no explanation for this behavior in the scientific community until the surreptitious release of flawed global temperature data, on **17 November 2009** [51], followed by incredibly strange responses from world leaders, mainstream news media and leaders of nations and scientific organizations worldwide - including the US National Academy of Sciences, the UK's Royal Society, the UN's IPCC, the Swedish and Norwegian Nobel Prize Committees.

Except for Dr. Vaclav Klaus [52], the Czech President, most of those responsible for protecting the integrity of public-financed science seemed unconcerned, if not outright defensive of the right of scientists to manipulate global temperature data. The reason for this finally became clear on carefully reading the writings of Paul K. Kuroda [1], Fred Hoyle [33], David Snell [53], Robert Jungk [54] and George Orwell [55] about the traumatic ending of the Second World War in **1945**.

This paper is dedicated to Paul K. Kuroda, Fred Hoyle, David Snell, Robert Jungk and George Orwell. The conclusions reached here would not have been possible if these five writers had not described so vividly and so honestly the motivation to elevate scientific models above scientific measurements after the tragic events that ended the Second World War in **1945**.

Conclusions

Well-intentioned agreements to save mankind from the threat of nuclear annihilation - by obscuring energy (E) stored as mass (m) in cores of atoms, planets, stars and galaxies - instead destroyed the integrity of science, education, faith in the Creator-endowed rights of citizens to self-governance, and the credibility of post-1945 governments worldwide.

Fear of nuclear annihilation and remorse for killing hundreds of thousands of innocent civilians drove world leaders and leaders of the scientific community to unite nations on **24 Oct 1945** and to misrepresent the source of energy released by three atomic bombs on **6, 9 and 12 Aug 1945**:

1. Neutron repulsion generates energy in the cores of atoms, planets, stars and galaxies
2. The Sun and other stars generate hydrogen and discard hydrogen as a waste product

Hundreds of nuclear and space age measurements summarized above, images of the Sun shown in the above figures, and video images of solar eruptions leave no doubt that: *The Father of Light* - the *Creator, Destroyer* and *Preserver* of every atom, life and world in the solar system - lurks beneath the Sun's mostly placid surface and controls our life, its earlier origin, and evolution [56].

http://www.nasa.gov/mission_pages/sunearth/multimedia/Solar-Events.html

Acceptance of reality - our life and fate are totally controlled by a pulsar at the core of the Sun - can still restore sanity to society and to world leaders, if we can avoid the mistakes made in **1945**:

The damage of these two seemingly justified falsehoods to society, to our educational system, and to almost every field of physical science - astronomy, astrophysics, climatology, cosmology, geology, nuclear, particle, planetary, solar, and space science - is almost beyond imagination. But retaliation against world leaders and leaders of the news media and scientific organizations for past mistakes will further damage our fragmented society. If we can now fully accept reality - nobody can protect us from the pulsar, *the Father of Light*, at the core of the Sun - and let go of the illusion of human control over Nature, we can work to promote world peace and be grateful that modern society has been spared, in our life-time, from past violent solar eruptions that:

1. Disrupted telegraph systems around the world on **1 September 1859** [57]
2. Bombarded Earth with a high dose of cosmic radiation in about **AD 775** [58]

By accepting reality, world governments and leaders of the scientific community will be able to restore value to education by - for example - publishing Figure 1a in every science textbook and Figures 1b and 1c in every advanced (college/university) textbook of science and technology in order to rebuild the physical sciences and to use science and technology to minimize human vulnerability from the next solar eruption. On the other hand, failure to end official deception or to accept reality will not reduce the probability of another such event: It will only increase the future vulnerability of humans to the forces of Nature.

References (Probably valid scientific reports are numbered in **bold red**)

- [01] P. K. Kuroda, *The Origin of the Chemical Elements and the Oklo Phenomenon* (Springer Publishing, 165 pages, 1982) <http://www.amazon.com/Origin-Chemical-Elements-Oklo-Phenomenon/dp/3540116796>
- [02] P. K. Kuroda, "On the nuclear physical stability of the uranium minerals," *J. Chem. Physics* **25**, 781 (1956); "On the infinite multiplication constant and the age of the uranium minerals," *J. Chem. Physics* **25**, 1256 (1956).
- [03] Fred Hoyle, "The chemical composition of the stars," *Monthly Notices Royal Astronomical Society* **106**, 255-259 (1946); "The synthesis of elements from hydrogen," *Monthly Notices Royal Astronomical Society* **106**, 343-383 (1946).
- [04] Hideki Yukawa, *Introduction to Quantum Mechanics* (1946); *Introduction to the Theory of Elementary Particles* (1948) <http://www.ndb.com/people/759/000099462>
- [05] P. K. Kuroda, "Nuclear fission in the early history of the Earth", *Nature* **187**, 36-38 (1960).
- [06] M. W. Rowe and P. K. Kuroda, "Fissionogenic xenon from the Pasamonte meteorite," *J. Geophys. Res.* **70**, 709-714 (1965): <http://onlinelibrary.wiley.com/doi/10.1029/JZ070i003p00709/abstract>
- [07] R. S. Clark, K. Yoshikawa, M. N. Rao, B. D. Palmer, Myint Thein, and P. K. Kuroda. "Time interval between nuclear detonation and formation of single fallout particles." *J. Geophysical Research* **72**, 1793-1796 (15 March 1967): <http://onlinelibrary.wiley.com/doi/10.1029/JZ072i006p01793/abstract>
- [08] O. Gingerich and Cees De Jager, "The Bilderberg model of the photosphere and low chromosphere," *Solar Physics* **3**, issue 1, 5-25 (1968):
<http://link.springer.com/article/10.1007%2FBF00154238>
- [09] P. K. Kuroda, "The temperature of the Sun in the early history of the Solar System," *Nature* **230**, 40-42 (1971):
<http://www.nature.com/nature-physci/journal/v230/n10/abs/physci230040a0.html>
- [10] R. Bodu, H. Bouzigues, N. Mirin and J. P. Pfiffelmann, *C. R. Acad. Sci. Paris* **275**, D:1731 (1972)
- [11] M. Neuilly, J. Bussac, C. Frejacques, G. Nief, G. Vendryes and J. Yvon, *C. R. Acad. Sci. Paris* **275**, D:1847 (1977)
- [12] O. K. Manuel, E. W. Hennecke, and D. D. Sabu, "Xenon in carbonaceous chondrites," *Nature* **240**, 99-101 (1972): <http://www.omaturn.com/archive/XenonInCarbonaceousChondrites.pdf>
- [13] O. K. Manuel and D. D. Sabu, "Elemental and isotopic inhomogeneities in noble gases: The case for local synthesis of the chemical elements," *Transactions Missouri Academy Sciences* **9**, 104-122 (1975)

- [14/14] O. K. Manuel, D. D. Sabu and Roy S. Lewis, B. Srinivasan and Edward Anders, "Strange xenon, extinct super-heavy elements, and the solar neutrino puzzle", *Science* **195**, 208-210 (1977): <http://www.omatmr.com/archive/StrangeXenon.pdf>
- [15] R. V. Ballard, L. L. Oliver, R. G. Downing and O. K. Manuel, "Isotopes of tellurium, xenon and krypton in the Allende meteorite retain record of nucleosynthesis", *Nature* **277**, 615-620 (1979): <http://www.nature.com/nature/journal/v277/n5698/abs/277615a0.html>
- [16] Peter Toth, "Is the Sun a pulsar?" *Nature* **270**, 159-160 (1977): <http://www.nature.com/nature/journal/v270/n5633/abs/270159a0.html>
- [17] V. A. Kotov, "A pulsar inside the Sun?" *Radiophysics and Quantum Electronics* **39**, 811-814 (1996): <http://link.springer.com/article/10.1007%2FBF02120961>
- [18] P. K. Kuroda, "The Oklo phenomenon," *Naturwissenschaften* **70**, no. 11, pp. 536-539 (1983): <http://www.springerlink.com/content/n556224311414604/>
- [19] W. K. Brown and L. A. Gritzko, "The supernovae fragmentation model of solar system formation", *Astrophysics and Space Science* **123**, 161-181 (1986): <http://link.springer.com/content/pdf/10.1007%2FBF00116638.pdf>; Wilbur K. Brown, "Possible mass distributions in the nebulae of other solar systems," *Earth, Moon, Planets* **37**, 225-239 (1987): <http://link.springer.com/content/pdf/10.1007%2FBF00116638.pdf>
- [20] Carl A. Rouse, "Evidence for a small, high-Z, iron-like solar core", *Solar Physics* **110**, 211-235 (1987): <http://www.springerlink.com/content/k26825872rv64411/>
http://www.math.buffalo.edu/mad/physics/rouse_carla.html
- [21] Martin Fleischmann and Stanley Pons, "Electrochemically induced nuclear fusion of deuterium", *Journal of Electro-analytical Chemistry* **261**, 301-308 (1989): <http://www.sciencedirect.com/science/article/pii/0022072889800063>; M. Fleischmann *et al.*, "Calorimetry of the palladium-deuterium-heavy water system", *ibid.* **287**, 293-348 (1990): <http://www.sciencedirect.com/science/article/pii/002207289080009U>
- [22] A. Wolszczan and D. A. Frail, "A planetary system around the millisecond pulsar PSR1257 + 12," *Nature* **355**, 145-147 (09 January 1992): <http://www.nature.com/nature/journal/v355/n6356/abs/355145a0.html>
- [23] J. M. Herndon, "Nuclear fission reactors as energy sources for the giant outer planets," *Naturwissenschaften* **79**, 7-14 (1992); J. M. Herndon, "Feasibility of a nuclear fission reactor at the center of the Earth as the energy source for the geomagnetic field," *Journal of Geomagnetism and Geoelectricity* **45**, 423-437 (1993): <http://link.springer.com/article/10.1007%2FBF01132272>
<http://www.nuclearplanet.com/Herndon JGG93.pdf>
- [24] P. K. Kuroda, and W. A. Myers, W.A., "Iodine-129 and plutonium-244 in the early solar system," *Radiochimica Acta* **77**, 15-2035 (1997): http://www.garfield.library.upenn.edu/histcomp/urey-hc_w-citing/node/6182.html

- [25] John R. Cronin and Sandra Pizzarello, "Enantiomeric excesses in meteoritic amino acids" (from the Murchison meteorite), *Science* **275**, 951-955 (14 February 1997) <http://www.sciencemag.org/content/275/5302/951.abstract>
- [26] O. Manuel, C. Bolon, A. Katragada, and M. Insall, "Attraction and repulsion of nucleons: Sources of stellar energy," *Journal of Fusion Energy* **19**, 93-98 (2001). <http://www.ingentaconnect.com/content/klu/jofe/2000/00000019/00000001/00346708?crawler=true>
Preprint: <http://www.omatumr.com/abstracts/jfeinterbetnuc.pdf>
- [27] J. K. Tuli. *Nuclear Wallet Cards*, sixth edition (Upton, New York: National Nuclear Data Center, Bookhaven National Laboratory, 2000) 74 pages
- [28] Oliver K. Manuel, Barry W. Ninham and Stig E. Friberg, "Superfluidity in the solar interior: Implications for solar eruptions and climate," *J. Fusion Energy* **21**, 193-198 (2002): <http://link.springer.com/article/10.1023%2FA%3A1026250731672> Preprint: <http://arxiv.org/pdf/astro-ph/0501441.pdf>
- [29] J.H. Jenkins and E. Fischbach, "Perturbation of nuclear decay rates during the solar flare of 2006 December 13," *Astroparticle Physics* **31**, 407-411 (2009): <http://www.sciencedirect.com/science/article/pii/S092765050900070X>; Preprint: <http://arxiv.org/pdf/0808.3156.pdf>
- [30] NASA News, "Planets around dead stars" (5 April 2006): http://science.nasa.gov/science-news/science-at-nasa/2006/05apr_pulsarplanets/; See also Z. Wang, D. Chakrabarty and D. Kaplan, "A debris disk around an isolated young neutron star," *Nature* **440**, 772-775 (2006): <http://www.nature.com/nature/journal/v440/n7085/full/nature04669.html>
- [31] NASA News, "Fountains of fire illuminate solar mystery, overturn 30 year old theory" (26 Sept 2000): <http://www.gsfc.nasa.gov/gsfsc/spacesci/sunearth/tracecl.htm> (The original report seems to have disappeared, but a copy of the figure is available here.) <http://spaceflightnow.com/news/n0009/27trace/>
- [32] Michael Mozina, Hilton Ratcliffe and O. Manuel, "Observational confirmation of the Sun's CNO cycle," *Journal of Fusion Energy* **25**, 141-144 (2006):
Preprint: <http://www.omatumr.com/abstracts2006/OCofSunsCNOCycle.pdf>
Reprint: <http://link.springer.com/article/10.1007%2Fs10894-006-9003-z>
- [33] Fred Hoyle, *Home Is Where the Wind Blows* (University Science Books, 441 pages, published on April 1, 1994): <http://www.amazon.com/Home-Where-Wind-Blows-Cosmologists/dp/093570227X>
- [34] P. K. Swart, "The demise of established dogmas on the formation of the Solar System," *Nature* **303**, 286 (1983): https://dl.dropbox.com/u/10640850/Demise_of_Solar_Dogma.pdf
- [35] Golden Hwaung, "Origin of the solar system," *MS thesis* (The University of Missouri - Rolla, 1982).
- [36] O. K. Manuel and G. Hwaung, "Information of astrophysical interest in the isotopes of solar wind implanted noble gases," *14th Lunar Planetary Science Conference*, Houston, TX, pp. 458-459 (March 1983): <http://tinyurl.com/lfgscp>

- [37] O. K. Manuel and Golden Hwaung, "Solar abundances of the elements", *Meteoritics* **18**, 209-222 (1983): <http://tinyurl.com/224kz4>
- [38] Robin McKie, "Fred Hoyle: the scientist whose rudeness cost him a Nobel prize," *The Guardian* (2 October 2010): <http://www.guardian.co.uk/science/2010/oct/03/fred-hoyle-nobel-prize>
- [39] O. Manuel, "Isotope ratios in Jupiter confirm intra-solar diffusion," *Meteoritics and Planetary Science* **33**, A97, paper #5011 (1998): <http://www.lpi.usra.edu/meetings/metsoc98/pdf/5011.pdf>
<http://www.omatumr.com/abstracts2001/windleranalysis.pdf>
- [40] O. Manuel, "Origin of elements in the Solar System", in *The Origin of the Elements in the Solar System: Implications of Post 1957 Observations - Proceedings of the 1999 ACS Symposium organized by Glenn T. Seaborg and Oliver K. Manuel* (O. K. Manuel, editor, Kluwer Academic/Plenum Publishers, New York, NY, 2000). pp. 589-643: http://www.omatumr.com/abstracts2001/origin_solar_system_book.pdf
- [41] O. Manuel, C. Bolon, M. Zhong and P. Jangam, "The Sun's origin, composition and source of energy", *32nd Lunar and Planetary Science Conf.*, paper 1041, Houston, TX, March 12-16, 2001, LPI Contribution 1080 (2001): <http://www.omatumr.com/lpsc.prn.pdf>
- [42] O. Manuel, E. Miller, A. Katragada, "Neutron repulsion confirmed as energy source", *Journal of Fusion Energy* **20**, 197-201 (2002): <http://www.springerlink.com/content/x1n87370x6685079/>
- [43] O. Manuel, C. Bolon and M. Zhong, "Nuclear systematics: III. The source of solar luminosity," *Journal of Radioanalytical & Nuclear Chemistry* **252**, 3-7 (2002).
http://www.omatumr.com/abstracts2001/nuc_sym3.pdf
<http://www.springerlink.com/content/kg8emwb74ak3lyrc/>
- [44] O. Manuel and Stig Friberg, *Proceedings of the SOHO 12/GONG Conference on Local and Global Helioseismology: The Present and the Future*, 27 Oct - 1 Nov 2002, Big Bear Lake, CA, U.S.A., *ESA SP-517* (editor: Huguette Lacoste) pp. 345-348 (2003): <http://arxiv.org/pdf/astro-ph/0410717v1>
- [45] O. Manuel and A. Katragada, "The Sun's origin and composition: Implications from meteorite studies", *Proceedings of the 2002 Conference on Asteroids, Comets and Meteors (ACM 2002)*, 29 July - 2 Aug 2002, Technical University of Berlin, Berlin, GERMANY, *ESA SP-500* (editor: Barbara Warmbein), pp. 787-790 (2003): <http://www.omatumr.com/abstracts/ACM-2002.pdf>
- [46] O. Manuel, "The standard solar model versus experimental observations", *Proceedings of the Third International Conference on Beyond Standard Model Physics – BEYOND 2002* (IOP, Bristol, editor: H. V. Klapdor-Kleingrothaus) pp. 307-316 (2003): <http://arxiv.org/pdf/hep-ph/0404064>
<http://www.omatumr.com/abstracts/beyond2002.pdf>
- [47] O. Manuel and Aditya Katragada, "Is there a deficit of solar neutrinos?" *Proceedings Second International Workshop on Neutrino Oscillations*, Istituto Veneto di Scienze ed Arti, Venice, Italy, 3-5 Dec 2003: <http://arxiv.org/pdf/astro-ph/0410460.pdf>

- [48] O. Manuel, "The need to measure low energy, anti-neutrinos ($E < 0.782$ MeV) from the Sun," *Physics of Atomic Nuclei* **67**, 1959-1962 (2004); *Yadernaya Fizika* **67**, 1983-1988 (2004): Manuscript: <http://www.omatumr.com/abstracts2004/anti-neutrinos.pdf>;
Overheads: <http://www.omatumr.com/abstracts2004/manuel.pdf>
- [49] Oliver Manuel and Adita Katragada, "An iron-rich Sun and its source of energy", *Proceedings of the 8th International Symposium on Nuclei in the Cosmos*, Vancouver, BC, Canada, 19-23 July 2004 (Manuscript submitted for publication) <http://www.omatumr.com/abstracts2005/IronRichSun.pdf>
- [50] O. Manuel, William A. Myers, Yashmeet Singh and Marcel Pleess, "The oxygen to carbon ratio in the solar interior: Information from nuclear reaction cross-sections," *Journal of Fusion Energy* **23**, 55-62 (2004): <http://link.springer.com/article/10.1007%2Fs10894-004-1872-4>
- [51] Mohib Ebrahim, "Climategate: 30 Years in the making," re-published as the *Climategate Timeline* by Jo Nova, aka Joanne Codling (Dec 2009 and Jan 2010): <http://joannenova.com.au/global-warming-2/climategate-30-year-timeline/>
http://jonova.s3.amazonaws.com/climategate/history/climategate_timeline_banner.pdf
http://jonova.s3.amazonaws.com/climategate/history/climategate_timeline_banner.gif
- [52] Vaclav Klaus, *Blue Planet in Green Shackles* (Competitive Enterprise Institute, 2007, 100 pp.) <http://www.amazon.com/Planet-Green-Shackles-Vaclav-Klaus/dp/B001A3W3BK>;
<http://tinyurl.com/5z4j6g>
- [53] David Snell, "Japan developed atomic bomb; Russians grabbed scientists," *The Atlanta Constitution* (Headlines, page 1, 3 October 1946) http://www.my-jia.com/The_Flight_of_the_Hog_Wild/Atlanta_Constitution_David_Snell_atomic_bomb_Korea.htm
- [54] Robert Jungk, *Brighter than a Thousand Suns: A personal history of the Atomic Scientists* (translated by James Cleugh), Mariner Books; 5th Printing edition (October 21, 1970) 384 pages. Originally published in 1956 by Alfred Scherz Verlag as *Heller als Tausend Sonnen* (German): <http://www.amazon.com/Brighter-than-Thousand-Suns-Scientists/dp/0156141507>
- [55] George Orwell (Eric Blair) *1984*, Signet Classic (July 1, 1950) 328 pages <http://www.amazon.com/1984-Signet-Classics-George-Orwell/dp/0451524934>
- [56] Karo Michaelian and Oliver K. Manuel, "Origin and Evolution of Life Constraints on the Solar Model", *Journal Modern Physics* **2**, 587-594 (2011) http://dl.dropbox.com/u/10640850/JMP20112600007_31445079.pdf
- [57] Stuart Clark, *The Sun Kings: The unexpected tragedy of Richard Carrington and the tale of how modern astronomy began* (Princeton University Press, 2007) 224 pages <http://www.amazon.com/books/dp/0691141266>
http://www.bookslut.com/nonfiction/2007_07_011472.php
- [58] I. G. Usoskin, B. Kromer, F. Ludlow, J. Beer, M. Friedrich, G. A. Kovaltsov, S. K. Solanki and L. Wacker, "The AD775 cosmic event revisited: The Sun is to blame," *Astronomy & Astrophysics Letters* **552**, L3 (2013): <http://dx.doi.org/10.1051/0004-6361/201321080>