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Review Article

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Earth Neutron Star Collision Mega Fauna Ice Age Extinction

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Abstract

Extreme conditions should be considered when considering Earth's weather being caused by collision with neutron stars and exploding star's debris streams because it could happen again in the same locations. A neutron star collision in conjunction with exploding star debris strikes at the end of the last ice age and cause the mega fauna extinctions of the Younger Dryas. The mega fauna extinctions have occurred in less than a day with Africa, Australia, Europe, and Asia being spared because Earth did not make a complete rotation in the gas without oxygen in the tail of the neutron star. The Jamaican Monkey extinction points to the western terminus of supernova G299-2.9 as the exterminator and the Symbols Musk Ox became extinct due to the eastern terminus of supernova Vela.

Keywords: Nova; Supernova; Climate change; Extinctions; Ice age; Neutron star; Younger Dryas; Mega fauna

Method

The method for exploding star extinctions will be to predict the year of debris stream impact and look for the extinction near the same time and longitude location of a terminus. When the longitude location of the hotspot in the calculation agrees with location on Earth and year for the extinction recorded by anthropologist, the extinction solution for one exploding star debris stream has been found.

Model Definition

The longitude of the western terminus, WT, is defined by the equation

$$L = 13W + 360(15 - RA) / 24. \quad (1)$$

When the right ascension, RA, of the remnant is greater than 15 the 13W point is to be shifted to the east and when the RA of the remnant is less than 15 the 13W point is to be shifted to the west. By definition the longitude of the eastern terminus, ET is 180 degrees away from the WT longitude located on the other side of our planet.

When calculating the real longitudes for the hotspot location, the theoretical value is shifted 30 degrees west in the Arctic of the northern hemisphere and 50 degrees east in the Antarctic of the southern hemisphere. These shifts occur due to the effects on the trajectory of an incoming positive particle stream moving through the Earth's magnetic field.

The hotspot or focal point for the debris stream moves between the two termini locations at a constant velocity. When it encounters the longitude of a terminus, it reverses direction. The hotspot returns to the same terminus where it started in one year. Therefore the hotspot travels 360 longitude degrees in 365 days and this is an approximation called the one degree per day rule, ODPDR.

The equation for the year of impact, ETA, is obtained by eliminating distance algebraically from the velocity, time, and distance equations for debris and light between the remnant and Earth.

$$ETA = \text{Constant}\ \Delta T_L + T_L \quad (2)$$

Where ΔT_L = light years to remnant

T_L = years ago -- age of remnant or year of explosion

$$\text{Constant} = (0.13337 - 0.119)(\Delta T_L - 147) / (7543 - 147) + 0.119 \quad (3)$$

To simplify calculations equations (2) and (3) may be combined to give

$$T_L - (1.94294(\Delta T_L/10^3)^2 + 0.118414\,\Delta T_L) = ETA \quad (4)$$

When the result of equation (4) is positive the answer is years ago and when the result of equation (4) is negative the answer is years in the future. In the beginning of the work, the constant was fixed, but when the distance and travel time became known for SN1006 and WZ Sagittae 2017 debris streams, the linear variation in the constant was found to be represented by equation (3). An order of magnitude analysis for equation (4) allows for the case when the exploding star's distance, ΔT_L, is below 1000 light years the squared term may be neglected and the new constant becomes 0.118414.

$$S = 360ETA\ (5.5) / (100 \times 60 \times 24) \quad (5)$$

When considering the time of collision or impact years in the past the termini must always be shifted to the west S degrees due to the changing value of RA with time where ETA is the time of impact years ago.

Ice Age Extinctions

Since Dr. J. Kennet nano-diamond meteor impact theory has been discredited, the theory presentation will be maintained by the author as presented in the section, Destruction of Last Ice Age, in reference 1; but the meteor will be changed to a neutron star of diameter of 12 miles [2, 3]. The neutron star cited could penetrate the Earth's diameter, 7,926.3 miles, travelling at 2.5 million miles per hour in 11.4 seconds, but the collision at the end of the last ice age was a glancing strike and did not pierce the center of the Earth so less time is required for penetration. High velocity neutron stars have existed in our universe since supernova have been exploding and since Earth is 4.5 billion years old, probability dictates the planet has been penetrated by a neutron star more than once. For the case under consideration, the meteor would leave a large exit crater but none of its material, and all debris would be composed of Earth or moon materials.

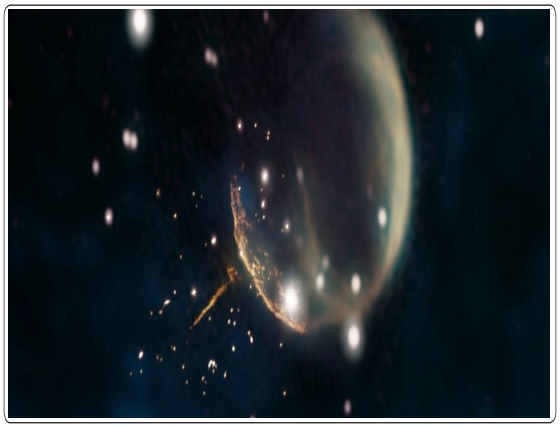

Figure 1: Velocity 2.5 million MPH Neutron Star with Tail [4]

One problem baffling scientist is why the large animals died so suddenly during the Younger Dyras ice age shown in Figure 3. The answer is in Figure 1 in the tail of the neutron star. One major part of the problem is how the woolly mammoth could have frozen so fast 10 to 15 thousand years ago [5]. When considering the impact of the neutron star, the account of the space gas atmosphere trailing the massive core of the star must be considered. Some of the Earth's atmosphere is replaced by the gases following the star for as long as the planet remains in the visible stream of gas following the star. The Earth becomes very cold very fast in the new colder atmosphere and animals like the woolly mammoth would freeze instantly. The oxygen content of the new atmosphere causes the Earth's atmospheric oxygen to drop instantly and the large animals needing a high percentage of oxygen content to breathe choke to death in minutes. The initial killings by freezing and suffocation would be in the hemisphere where the neutron star's gases replaced Earth's atmosphere, and away from the impact crater; Tonle Sap Lake Cambodia; and will not be the center of the killing region. Frozen woolly mammoth have been discovered in Northern Siberia and Canada indicating the ice sheets do not reach so far south in the eastern hemisphere 12,800 years ago [6].

Figure 2 indicates a large decrease of oxygen in our atmosphere at the time of the Permian Extinction which may indicate the Earth has had another neutron star collision at the time of the great dying and this neutron star went through the center of the planet causing the Bratskove Reservoir or Dragon Lake as the exit crater.

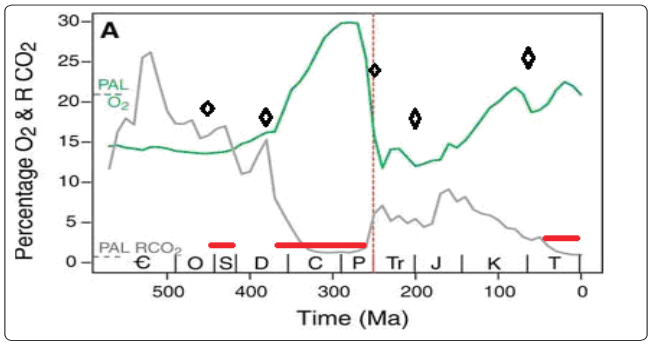

Figure 2: Oxygen and CO_2 Atmospheric Percentage [7, 18]

The late Devonian extinction matches the beginning of a large decrease in atmospheric CO_2 and a large increase in atmospheric oxygen as shown in Figure 2 and the event had an extreme effect on marine life and reef building organisms [13]. It is known that the addition of iron to our oceans causes algae blooms some of which are toxic and destroy marine life. Algae blooms absorb CO_2 from our atmosphere and emit oxygen just like most vegetation. Banned Iron Formations, BIFs, are not know to have occurred since 541 million years ago or the end of Precambrian time and most were restricted to billions of years ago, but the increase in oxygen and decrease of CO_2 at the late Devonian extinction appears to be the result of a neutron star's tail containing many iron atoms that seeded the oceans [14]. All of the other major extinctions located in Figure 2 by the black diamonds show a decrease in oxygen concentration. The by far most severe extinction was the end Permian extinction shown by the large arrow in Figure 3. This period of time was before the Karoo Ice Age and ocean levels were very high reducing the possibility of a BIF [15]. The red lines of Figure 2 shows the times of major ice ages the longest being the Karoo. CO_2 atmospheric content decreases at the beginning of each ice age and oxygen shows an increase. A natural conclusion is something changed forbidding BIFs and when a neutron star's tail impacted our planet with a high iron atom content seeding the oceans an ice age resulted. The change could have been a new abundant bacteria life form in the oceans that devoured iron and CO_2 to produce oxygen creating an ice age.

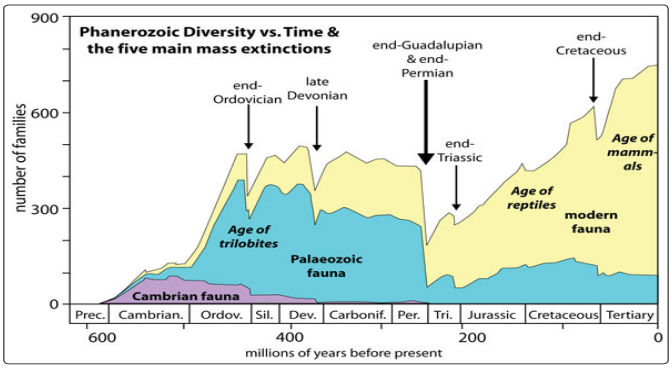

Figure 3: Five Great Extinctions Earth History [12]

Figure 3 shows the locations in time for the five major extinctions.

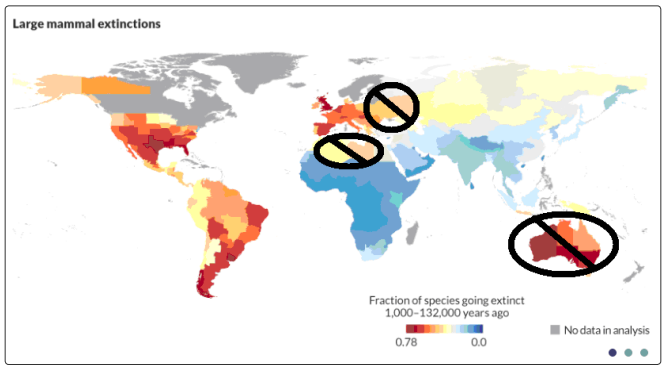

Figure 4: Areas of Extinctions for Mega Fauna Younger Dryas Ice Age [8]

The last extraordinary claim for the swift loss of mega fauna at the end of the last ice age is the changing atmosphere imposed by the tail of the neutron star could have lasted for a time span of less than a day allowing for Africa, Asia, Europe, and Australia to be protected in a pocket of normal Earth atmosphere that was not replaced by the atmosphere in the tail of the star and due to having a normal oxygen content was immune from the mega fauna extinction of 12,000 years ago as shown in Figure 4. The areas crossed out by black circle and slash have extinctions of large animals, but they are for other time periods. The gases in the tail following the neutron star may be detached from the star because the neutron star is traveling at a very high velocity and impact of the gases would lag the impact of the star. The neutron star impacted at Tonle Sap Lake in Cambodia and the Earth rotated 110 degrees before the gases of the tail mixed and replaced our atmosphere over North and South America. The impact of the killing atmosphere begins with North and South America where the most severe mega fauna dying occurred near 30W and moves west around the planet but does not include Wrangle Island at 180W due to the Earth's rotation according to Figure 4 where the Earth escapes the atmosphere in the tail following the star. The major area of direct gas from the tail of the star replacing our atmosphere was 150 longitude degrees or equivalent to 10 hours of the fatal day.

Supernova Ice Age Extinctions

Figure 5 shows three possible supernova debris stream impacts and the neutron star penetration impact spreading exit crater debris over North and South America and Europe. Debris raining down from the sky can cause extinctions, but supernova debris streams particularly at WT and ET can also cause extinctions due to the two locations of high incoming particle density separated by 180 longitude degrees. The times in Figure 5 for the noted strikes are from 17,000 to 12,000 years before present, and one of the supernova strikes is the Vela 800 light years away our third closest supernova with shifted termini 97E and 83W and impact time at the end of the Younger Dryas ice age, 11,150 years ago. The SN Vela termini range covers North and South America and Europe and could be an awesome killing mechanism for large animals and the Clovis People. SN G109.1-1.0 has shifted termini 81E and 99W and impact time 14,957 years ago. SN W50 has shifted termini 168E and 12W and impact time 17,600 years ago. The termini of the unknown impact are not available, but all three known Supernovas have termini locations in the western and eastern hemispheres that align with the extinction regions. The time range of the three known supernovas is 15,600 to 9,000 BC.

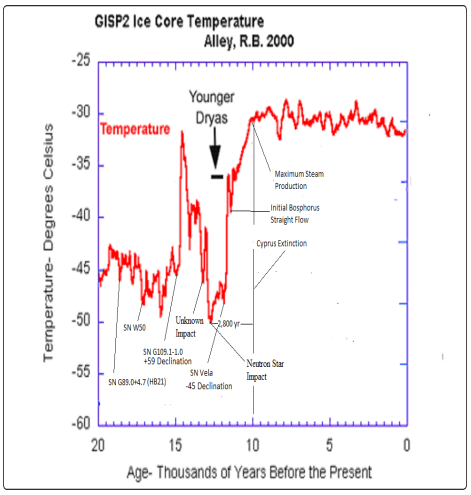

Figure 5: Ice Age Transition Greenland Ice Core Temperatures

Symbols Musk Ox Extinction

The type II Vela supernova left a pulsar, J0835-4510, with an age of 11,300 years ago in the constellation Vela and a distance of 959 ly from Earth [16, 17]. Using equation (4) gives an impact time of 9,167 BCE and the symbols musk ox became extinct in 9,150 BCE [9]. The RA of the Vela pulsar is 8.59h giving an unshifted WT of 109W. The shifted WT of the Vela supernova is 97E longitude and a shifted ET of 83W. The longitude of Michigan is 86W. This is a mega fauna extinction at the end of the Younger Dryas ice age.

Jamaica Monkey Extinction

A type 1a supernova in the Musca constellation known as G299.2-2.9 or the Eye of God is responsible for the extinction of the Jamaica Monkey, Xenothrix Mcgregori, surviving to the year 195 BCE [9]. The supernova input data for our calculations are RA equals 12h 15m 33.80s, Age approximately equals 2500 BCE, and Distance equals 16,000 ly [10, 11]. Using equation (4), the ETA is 108 BCE. Using equations (1) and the RA of 12.26h the theoretical location for the WT is 54W. Applying equation (5) with ETA 2127 years ago gives a shift of 29 degrees west and the real location of 83W longitude degrees. Jamaica's longitude is 78W. No magnetic shift is necessary for the calculated longitude because Jamaica is near the USA latitude where equation (1) was derived.

Most extinction theories attribute extinctions of primates to the arrival of humans that occurred in Jamaica between 687 and 929AD [12]. Our calculation claims the supernova debris stream killed the Jamaican monkeys in 108BC a full 795 years before mankind arrived. The differences between the numbers 78W and 83W is negligible because the hotspot diameter of incoming particles may be 25 degrees and the differences in the dates 195 and 108 BCE could simply be in the accuracy tolerances.

Conclusions

The described gas flow problems involved with a neutron star collision with our planet and the changing atmosphere would be an excellent thesis for a bright PhD candidate.

It will be impossible to defend against a neutron star collision, but it may be possible to deflect the gases in the tail. Incoming exploding star debris streams that could destroy nations may be avoided in the same fashion.

Most extinctions are located on islands because the range of mobility for the specie is limited. The Jamaican Monkey extinction conforms to this rule.

Addendum

The various papers on the SNIT theory are located at https://independent.academia.edu/WilliamSokeland. Please send financial support for this research in USA dollars to the Good Shepherd United Methodist Church, 210 W. Harrison Street, PO Box 336, Oakland City, IN 47660. If you have any questions, the author can be reached by email at wpsokeland@gmail.com. Good Luck!

References

1. Sokeland, W. P., 2018, Global warming and cooling: friend and foe to mankind, Environmental Risk Assessment and Remediation, Allied Academies, Vol. 2 Issue 2, DOI: 10.4066/2529-8046.100036
   https://independent.academia.edu/WilliamSokeland
   https://www.journals.uchicago.edu/doi/full/10.1086/695704
2. https://www.sciencealert.com/a-cannonball-pulsar-is-careening-through-the-milky-way-at-2-5-million-miles-per-hour?limitstart=1
3. https://www.britannica.com/science/neutron-star
4. https://www.sciencealert.com/a-cannonball-pulsar-is-careening-through-the-milky-way-at-2-5-million-miles-per-hour?limitstart=1
5. https://www.smithsonianmag.com/smart-news/scientists-just-found-a-woolly-mammoth-that-still-had-liquid-blood-85103183/
6. https://en.wikipedia.org/wiki/Woolly_mammoth#Frozen_specimens
7. http://alfin2100.blogspot.com/2012/01/basic-understanding-of-oil.html
8. http://benedante.blogspot.com/2014/07/people-not-climate-change-caused-last.html
9. https://en.wikipedia.org/wiki/Timeline_of_extinctions_in_the_Holocene
10. http://chandra.harvard.edu/photo/2015/g299/
11. https://en.wikipedia.org/wiki/List_of_supernova_remnants
12. https://www.zmescience.com/ecology/animals-ecology/mass-extinction-humans-14122014/
13. https://en.wikipedia.org/wiki/Late_Devonian_extinction
14. https://www.britannica.com/science/banded-iron-formation
15. https://www.worldatlas.com/articles/the-glaciation-timeline.html
16. https://en.wikipedia.org/wiki/Pulsar
17. https://en.wikipedia.org/wiki/Vela_Pulsar
18. https://en.wikipedia.org/wiki/Timeline_of_glaciation