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Review Article

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Open Northeast Passage Record - NGC 40 New Global Warming Energy Source

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Abstract

In 2018 and 2019, the Arctic ice volume was increasing due to the reduction of SN1006 and V606 Aquilae heat delivering incoming debris stream particles or a decrease in strength. When the volume of ice on our planet was increasing in 2018-19, the planet was impacted by the new heat source of planetary nebula, PN, NGC 40. Currently the strength of PN NGC 40 is overcoming the loss of strength of the SN 1006 and V606 Aquilae and the Arctic ice volume started decreasing in March 2019. Particular longitude locations moving eastward from the initial impact point of PN NGC 40 show the effects of the PN NGC 40 hotspot passing over their locations. Shipping time through the Northeast Passage will increase for 2019 and for years thereafter. The ten-year measles outbreak that occurred from 1981 to 1991 will repeat for the period 2019 to 2029.

Keywords: Planetary Nebula; Nares Strait; Ice volume; Sea ice; Heat Waves; Northeast Passage

Introduction

The year of impact for PN NGC 40 debris stream is 2019 and according to the equations (1) and (2) it takes 439 years after a visible outburst or explosion of the white dwarf star for the debris stream to reach Earth [1, 2]. The outburst causing our current impact could have been seen in 1580, which was 208 years before William Herschel discovered the remnant in 1788 giving just reason why astronomers would not have recorded the outburst. PN NGC 40 was formed by a white dwarf neutron star 3,500 light years, lys, from Earth.

$$\text{Constant} = (0.13337 - 0.119)(\text{NRD} - 147) / (7543 - 147) + 0.119 \quad (1)$$

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

Where
NRD = New remnant distance, lys
ETA = Estimated Time of Arrival, year
ΔTL = Light years to remnant
TL = time of Outburst, year

The SNIT theory proposes the path of the hotspot of the exploding star on Earth cycles between an eastern terminus, ET, and a western terminus, WT, that are separated by 180 degrees longitude. The full cycle for the path of the hotspot takes one year or 365 days and the hotspots constant velocity is one longitude degree per day. The velocity gives us the one degree per day rule, ODPDR, to move the longitude locations of the hotspot at different dates. The location of the hotspot is assumed to be at constant latitude and because the declination of PN NGC 40 is so far north, +72.5 degrees, it may cause heating in both east and west hemispheres of the North Pole region.

The right ascension, RA, of the remnant of PN NGC 40 is 0h 13m or 0.217h. Using equation [3].

$$\text{RA} = 24(\text{DOY}-79)/365 \quad (3)$$

Calculate the eastern terminus CAM day of the year, DOY. The CAM DOY equals 82 or March 23 for the ET. By definition, the CAM date for the WT is 182.5 days away from the ET CAM date or DOY 265 or September 22. The equation for the WT longitude, L, is

$$\text{L} = 13\text{W} + 360(15 - \text{RA}) / 24 \quad (4)$$

If 24h is added to the RA value of 0.217h, it is equivalent to adding zero and it simplifies the calculation of the WT longitude. The part of the equation to the right of the plus sign equals -138 degrees. The minus sign means the remnant RA + 24 is larger than 15 indicating the 13W longitude point must be moved 138 degrees to the east or 125E is the theoretical longitude for PN NGC 40's WT. By definition, the ET is 180 degrees away on the other side of the planet or 55W is the theoretical longitude for PN NGC 40's ET.

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

Discussion

Everything except the theoretical location for the deflection area, DA, hotspot longitude for PN NGC 40 has been calculated by the simple equations of the SNIT theory. The location of the DA longitude is determined by the 180-degree sector through which the hotspot cycles.

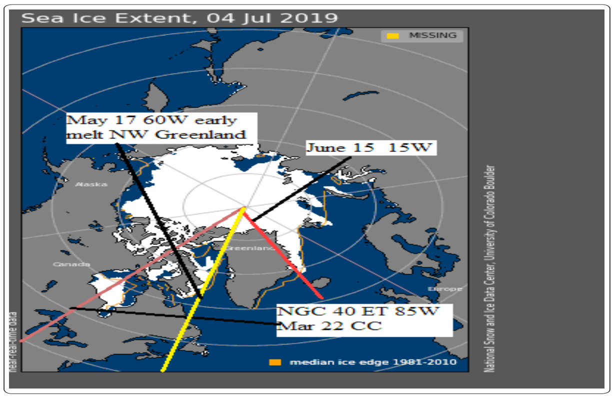

Figure 1: Arctic Eastern Terminus and Sea Ice melt July 4, 2019 [4].

The brown line in Figure 1 is the shifted, real longitude location of the ET for PN NGC 40's hotspot on March 22. The leading edge of the hotspot has moved 70 days or degrees by the ODPDR to a new location on May 31 to 15W longitude shown by the red line were it is stalled until June 15. The motion of the hotspot is suggested by the loss of sea ice area to the east of the red line, counter clockwise or CC, in Hudson Bay, the North Waters Polyanya and south west Greenland Sea. The Nares Strait opened two months early in March 2019 rather than the normal June or July opening due to the new energy source of PN NGC 40's hotspot [5]. All the early sea ice melts are east of the ET suggesting the motion of the hotspot is to the east.

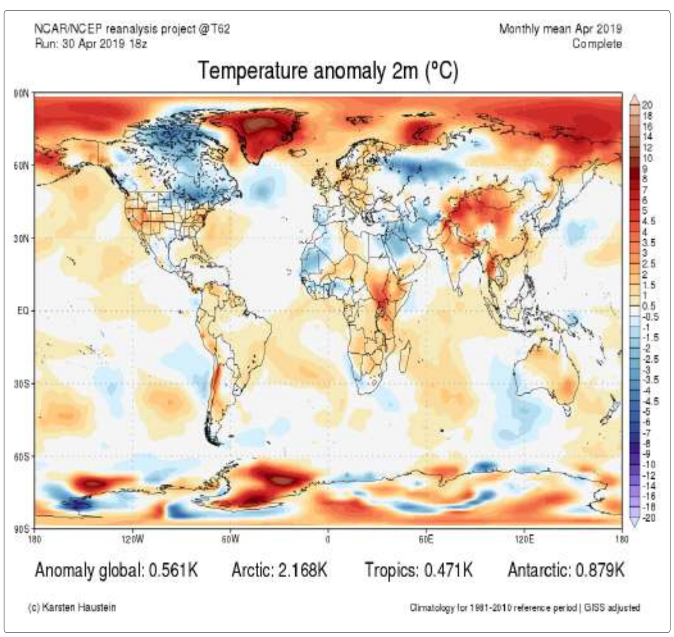

Figure 2: April 2019 Global Temperature Anomaly and PN NGC 40's hotspot [6]

The PN NGC 40's hotspot in Figure 2 is over Greenland in April 2019 again indicating an eastward movement from the March 23 reallocation of 85W longitude. The temperature map covers 30 days and by the ODPDR the PN NGC 40's hotspot would have moved 38 degrees to 47W longitude that is near the center of Greenland and the data in Figure 2 agrees with the SNIT theory prediction. In passing, observe the maximum air temperatures for Greenland occurred in April and the record surface ice melts to date happened in June 2019 another connected thermal event to the east. The ice is miles thick on the Greenland continent and melting even at the edges of the ice sheet involves a time constant. The early melting heat flux by PN NGC 40's hotspot occurs when the air temperature is a maximum in April 2019 as shown in Figure 2, but the early melting in northwestern Greenland happens in May 2019 [6a]. The early melting indicated by the northwestern corner and the April 17 position (allowing one month lag time) of the yellow line in Figure 2 in Greenland should reoccur annually in May and it is totally due to the hotspot of the new heat source.

The 2019 European Heat Wave appears to have set an all-time temperature record in France June 28 by PN NGC 40's hotspot due to its central tine [7]. By adding 85 degrees or days by the ODPDR to March 23, the hotspot is located at 182W or 2E longitude that is near the center of France. The SNIT theory prediction again agrees with the data and the motion of the PN NGC 40's hotspot is confirmed as eastward. By definition, the deflection area, DA, location is 75 degrees in the direction of motion of the hotspot from the ET theoretical longitude of 55W or 20E longitude. This location will be crossed by the hotspot twice per year on CAM dates June 6 and June 8.

Arctic Ice Data

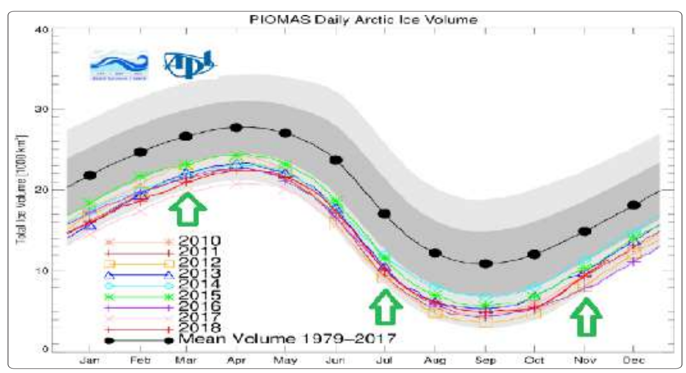

Figure 3: Arctic Ice Volume 2018 [8]

The red line in Figure 3 shows the Arctic ice volume begins increasing over previous year lows near March and May 2018, the first green arrow, due to the loss of heating source SN1006's WT and a "wink" from V603 Aquilae. The loss of the V606 Aquilae source is near July 2018, the second green arrow, and occurs during the melting season in the Arctic making it difficult to discern the change via ice volume. In November 2018, the third green arrow, the freezing season begins again and the ice volume senses the loss of SN1006's ET where the red line moves notably closer to the mean volume 1979-2017 line.

The three green arrow points are displayed in Figure 3a produced by Zachary Labe.

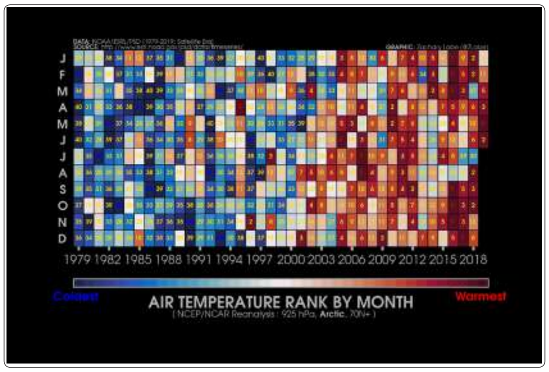

Figure 3a: Arctic Air Temperatures Blue Cold Red Hot [8a].

The months of March, July, and November of 2018 in Figure 3a all indicate a decrease in temperature with respect to the previous month. The blue months of this group should be the time of the loss of the heat sources.

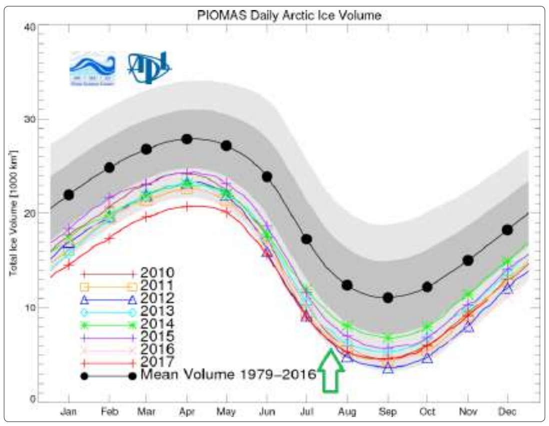

Figure 3b: Arctic Ice Volume 2017 and July Increase [8].

The crossover of the red line in Figure 3b indicates the loss of a heat source and ice volume increasing over previous years. This is in agreement with Figure 3a, it should be concluded the time of heat source loss, and increasing ice volume will be noted by blue months on Labe's plot.

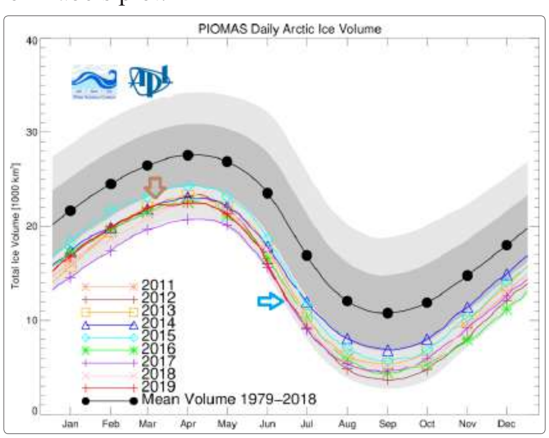

Figure 4: Arctic Ice Volume 2019 and PN NGC 40's Impact [8]

The 2019 ice volume red line of Figure 4 shows increasing ice volume until March 2019 noted by the brown arrow that is near the impact date of March 23, 2019 for the new heat source of the debris stream for exploding star PN NGC 40. It is too early to tell as to whether the new heat source will cause Arctic ice volume to attain new minimum values or if the strengths of acting heat sources will fade and ice volume will increase, but the blue arrow near the end of June indicates new lows for Arctic ice volume are in the near future. It should be realized that continually increasing greenhouse gases like manmade CO_2 could not cause Arctic ice volume to increase and decrease because CO_2 concentration is always increasing and the statement of the manmade greenhouse gas model is incorrect. Man is not the source that causes global warming, but exploding star debris streams provide the necessary energy for melting and the loss of a heating source causes refreezing.

Finally, there is this quote from NSIDC Arctic Sea Ice News & Analysis July 2, 2019, "Extent over the first 10 days of the month dropped quickly but then the loss rate suddenly slowed. From June 12 through June 16, extent remained almost constant at 10.8 million square kilometers (4.17 million square miles). Following this hiatus, extent then dropped quickly through the remainder of the month. Overall, sea ice retreated almost everywhere in the Arctic in June. Exceptions included the northern East Greenland Sea, southeast of Svalbard, near Franz Joseph Land, and in the southeastern part of the Beaufort Sea, where the ice edge expanded slightly." [9]. The exceptions in the quote are the regions of its 180-degree sector where the hotspot has not reached at this time again agreeing with the analysis of the SNIT theory.

Noctilucent Clouds

Noctilucent clouds, NLC, are clouds that glow after the sun has set and are formed in the mesosphere at 85 kilometers altitude. They are a relatively new research phenomenon and various theories try to explain their formation. In general, the various theories have three problems. How did water from our atmosphere attain that height? Why do they glow after sunset and not before sunrise? Why do the NLCs have high radar reflectivity?

Addressing the last question first causes the constituents of a debris stream to be identified. The concentration of the constituents of the debris stream will change with time, but all elements contained in our solar wind will be present in the incoming debris stream of an exploding star. This will include sodium and iron that cause a high radar reflectivity [10].

NLCs are observed at the poles at particular times of the year and as a result, they are said to have seasons normally in the summer. One says NLCs appear above the Arctic in July and August and above the Antarctic in late November and early December. Another says May to September in the north and November to April in the south. The sun's twilight appears at the North Pole from April to September as it is setting toward total darkness from November13 to January 29. The sun's twilight appears at the South Pole from November to April as it is setting toward total darkness from May 14 to July 30. It can be concluded a fixed season for NLCs does not exist, but the twilight after the vernal equinox for northern NLCs and the twilight after the autumnal equinox for southern NLCs appear to be required.

The sun is setting at the North Pole after the summer solstice in the summer months. The air of the warmer months, April to September, of the northern hemisphere has more absolute humidity around the observer and produces more scattering of light for the eye of the observer. The same scattering that causes a rainstorm to produce a rainbow via water droplets produces the different colors for NLCs. The months of October, February, March, and November thru January are of lower absolute humidity and do less to scatter the spectrum of light from the NLCs and as a result the NLCs even though present do not appear. The mesosphere is warmer during the lower absolute humidity months and ice does not form to reflect sunlight. The inverse of this paragraph explains the phenomena at the South Pole.

The single assumption for the explanation of NLCs is that they are an exploding star debris stream that becomes visible over the poles, as twilight exists when the sun is setting at a particular pole. The first part or leading edge of an incoming debris stream of an exploding star's major element is ionized hydrogen and when it mixes with oxygen at 80 to 90 kilometers altitude, they combine and produce water molecules. Some of the water molecules coagulate and freeze to form ice. The ice reflects sunlight and the observer sees white light from the NLC as in the leading edge of the debris stream shown in Figure 5.

Figure 5: NLC Reflecting White Light and Showing the Solar Rainbow [11].

Figure 5 shows the leading edge of the NLC as ice and the ice is reflecting the white light from the sun as the debris stream circles in the earth's magnetic field at the magnetic pole and as you follow the trail of the debris stream back into the space where temperatures are not as low the stream of water droplets made by the debris stream has produced the solar spectrum or a very high altitude rainbow, violet, blue, green, yellow {?}, and red. The debris stream circles around the pole due to the abundance of ionized atoms, mostly hydrogen, from the exploding star. The rainbow light passes through the NLC and the humid atmosphere surrounding the observer to scatter into a rainbow.

Comparison of Brightness of Noctilucent Clouds and Earth Average Temperature

When an exploding star debris stream enters earths, mesosphere it has a high impact strength that fades over the years. The strength is related to the particle density and high particle density will cause more water to be produced that in turn will increase brightness for noctilucent clouds. The strength of the debris stream will also cause an increase in the Earth's average temperature. Figure 6 shows a variation of noctilucent brightness over a period of 40 years.

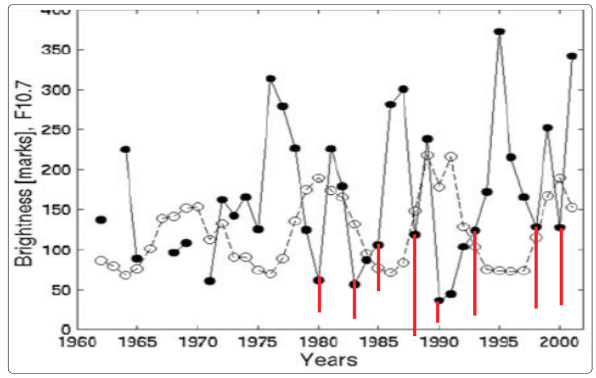

Figure 6: Noctilucent Cloud Brightness Minimum Points at Red Lines over 40 Years [12]

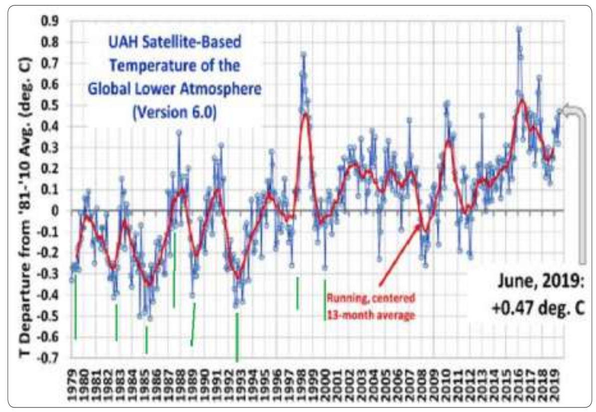

Figure 7: Earth Average Temperature Data Minimums at Green Lines [13]

The red lines in Figure 6 denote the years where brightness of NCLs is minimum and begins to increase to a maximum because of a debris stream impact. Figure 7 via green lines denotes when Earth's average temperature is a minimum and begins to increase to a maximum because of a debris stream impact. The years for the green lines and red lines are the same because the strength of the incoming debris stream is maximum at the denoted times [14, 15]. The year 1987 is a special case that impacts during a temperature maximum and a minimum temperature will not exist at this time.

Northeastern Passage

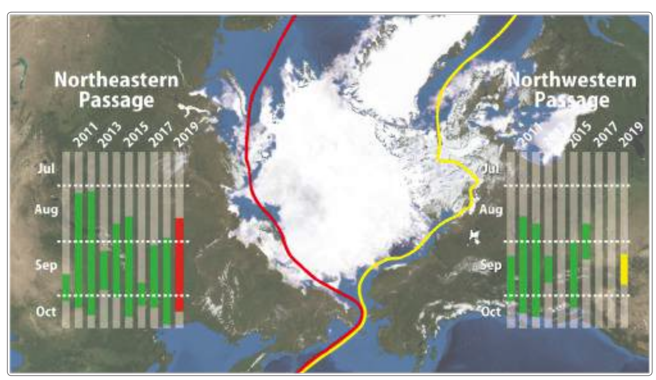

Figure 8: Arctic Passages Open Periods for Shipping – Green and Predicted Periods – Red & Yellow [16].

If the theoretical location of PN NGC 40's WT was shifted 30 degrees west, the real location for the WT is 95E longitude and the CAM date is September 22. This location is a close match for the Vilkitsky Strait of the Severnaya Zemlya region that normally blocks the Northeast Passage usually opening in the late summer months. It is important to realize our analysis treats the WT as a point or a specific longitude, but the heating effect is over a large circular area where the point is the center. The heat traveling east arrives at the point approximately a month early and leaves a month late.

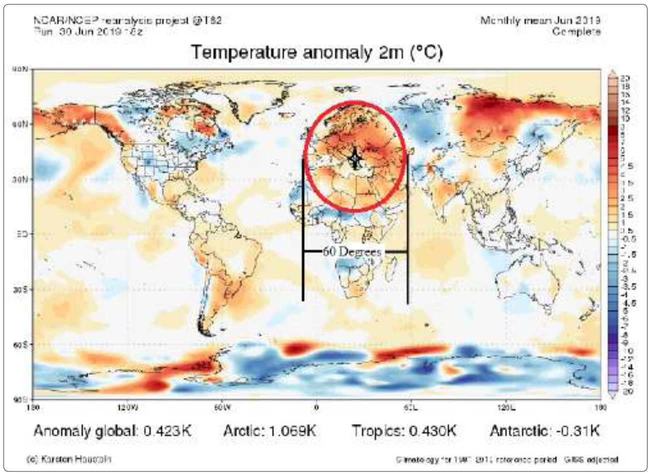

Figure 9: Hotspot of PN NGC 40 June 2019 [6]

Figure 9 shows the hotspot contained in a red circle of 60 longitude degrees where the temperature anomalies noted in red and blue are warm and cool areas. The hotspot is moving to the east and the center of the circle, the black star, started on June 1 in Spain and moved 30 degrees east to its shown location. During this time period, the eastern half of the circle passes over the shown location of the center of the circle. In the next 30 days, the western half of the circle passes over the shown location of the center of the circle. Residual energy will be stored in the bedrock of the Earth due to the passing of the hotspot and this effect will caused sea ice to be absent for a longer period of time. For the case of the Vilkitsky Strait of the Severnaya Zemlya region that normally blocks the Northeast Passage, a month early of the WT CAM date is August 22 for opening and closing will be a month and one half after September 22 or November 7. Warmer currents to the east will cause the closing of the Chaunskaya Bay region normally in late September to occur later in the year. The generally warmer currents and warmer Arctic Ocean has been caused by different exploding star debris streams particularly for the years 2007 thru 2019 as shown in Figure 10 and 11 [17].

https://worldmaritimenews.com/archives/171476/nsr-northwest-passage-open-for-shipping/ Northeast Passage open August 18

The red line in Figure 10 at 1998 has an unknown exploding star debris stream, but the large increase in temperature indicates a large impact of incoming energy and the Northeast Passage opened that year [17]. Figure 10 shows the results of the energy sources for global warming. The opening of the northern passages is one of the advantages. The green line in Figure 10 shows our prediction that occurs due to planetary nebula NGC 40.

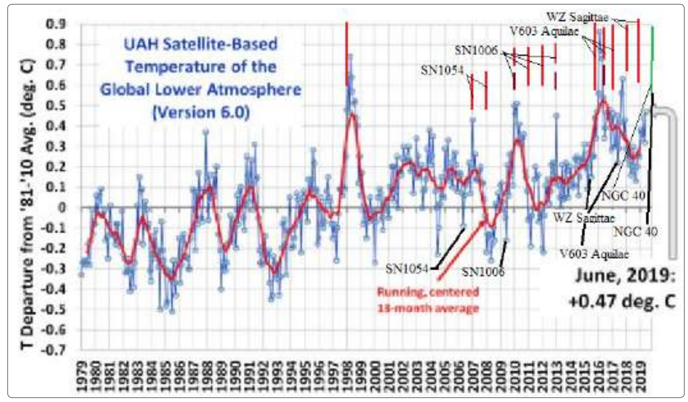

Figure 10: Opening Years Northwest Passage – Red Lines & Spencer's Temperatures [13]

The black line annotations indicate the year of impact for the exploding star debris stream and it is observed in Figure 10 that the effect of the initial impact reoccurs in following years particularly for SN1006 that produced the hottest year 2012.

The author does not know the knowledge as to the area of refreezing controlling the closing date. If it is the Vilkitsky Strait of the Severnaya Zemlya region, the Northeast Passage will be open into the middle of November as shown by the path of NGC 40's hotspot in Figure 11 and the CAM date of September 22. If the Chaunskaya Bay region's ice controls the closing date, the closure could be earlier than usual due to the loss of SN1006 heating source as proven by Greenland's Jakobshavn Isbrae Glacier refreezing in 2017. The glacier refreezing was not affected by WZ Sagittae's impact of 2017 because its location was not in WZ Sagittae's path as can be seen in Figure 11. The paths of the exploding star's hotspots shown in Figure 11 are the red lines between the black vertical lines and only indicate longitude because the latitude of the hotspots are not known.

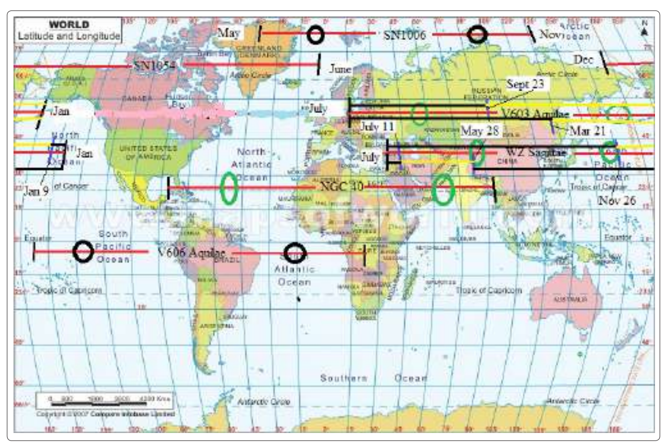

Figure 11: Exploding Stars' Longitude Ranges – New & Extinguished

The green circle paths are new 2015, 2017 and 2019 for V603 Aquilae, WZ Sagittae and NGC 40, respectively. V606 Aquilae and SN1006 the black circle paths have expired in 2017 and 2018, respectively. The three exploding star debris streams V603 Aquilae, WZ Sagittae, and NGC 40 will control the opening and closing of the Northeast Passage in 2019 and for years thereafter until heat sources make changes in Figure 11. SN1054 has a WT in the eastern part of the Northeast Passage in December, but its energy input is too late to change the closing date of the passage. The three controlling debris streams are relatively young and strong energy delivers.

WZ Sagittae returns to the northern hemisphere (yellow line above red line) November 26 at 166E longitude marked by a dark blue vertical line and moves east to Jan 9 with its power in the northern hemisphere where it melts sea ice in the Northeast Passage east of 166E longitude and affects the Bering Strait before Jan 20.. On Jan 9 its power transfers to the southern hemisphere moving east until it contacts the ET where it changes direction and moves west until May 28 (black line above and below red line). On May 28 its power transfers to the northern hemisphere and continues west until July 11 (yellow line below red line) where it transfers power to the southern hemisphere and continues west until it contacts the ET and moves east to Nov 26 where it started one year ago (black line below and above red line). The yellow lines in Figure 11 show the longitude regions where the debris stream of WZ Sagittae adds the most thermal energy to the northern hemisphere.

The same code is used for V603 Aquilae in Figure 11. The yellow line is power in the northern hemisphere and the black line is power in the southern hemisphere. The declination of V603 Aquilae is +0.5 degrees indicating the remnant is very near Earth's equator. The perpendicular requirement with Earth's magnetic field that causes the power of V603 Aquilae to shift hemispheres occurs at the autumn and vernal equinoxes September 23 and March 21, respectively. The wink where V603 loses power for one month occurs in March 2018 indicating the power of the remnant is in the southern hemisphere and this requirement places the yellow line below the red line headed west from the January ET to pass through March before or near the autumn equinox causing the power to shift back to the southern hemisphere as shown in Figure 11.

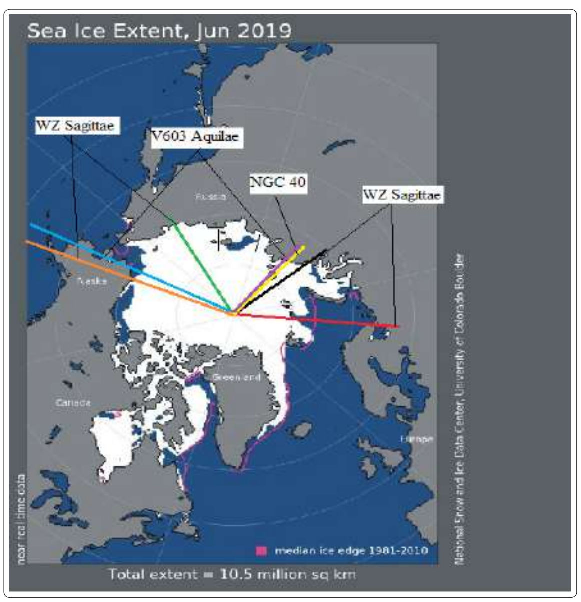

Figure 12: Power Zones Northern Hemisphere Controlling Debris Streams

The yellow line regions for the denoted exploding star debris streams of Figure 11 are shown in Figure 12. An example is the two yellow zones for WZ Sagittae. The longitudes between the black and red lines with the longitudes between the green and orange lines are both of the power zones for WZ Sagittae in the northern hemisphere. The region of most probable sea ice blockage of the Northeast Passage is between the yellow and purple lines known as the Vilkitsky Strait. Since NGC 40 impacted Earth late in the year 2015, Figure 8 shows how the passage has been opened since the year 2015. It is proposed that the impact of NGC 40 will cause the blocking sea ice to melt sooner and remain gone longer.

Conclusions

The heating of our planet producing polar ice melts and heat waves are caused by exploding star debris streams and CO2 manmade global warming via greenhouse gases has a very small effect on planetary temperatures.

The new heat source, PN NGC 40, has a declination of + 72° 31′ 19.085'' giving the debris stream an acute angle near our pole star Polaris and causing incoming particles on both sides of the North Pole that are producing heating in the areas cited and the opposite arctic areas in Asian sea ice and permafrost. The high value of declination guarantees the thermal power of the new source will always be located in the northern hemisphere. As the new heating source is moving east in the western hemisphere, it is moving west in the eastern hemisphere. This is such a high value of declination for the new heating source that the melting of the ground farther to the west than usual in northern Russia is causing houses to sink due to exploding star incoming energy occurring in a new area [18].

The gain or loss of heat sources for the Arctic can be concluded by simply following Zachary Labe's Arctic temperature figure and this figure indicates the gain or loss of Arctic ice volume.

Applying Occam's razor to the NLC phenomenon states the only assumption necessary to produce an NLC is the NLCs major component is a strong exploding star debris stream visible at the North Pole in the summer months of the northern hemisphere and visible at the South Pole in the summer months of the southern hemisphere. Mother Nature provides everything else that is needed.

The NLCs are breaking records in 2019 and the water content of the mesosphere is higher than ever seen before [19]. When these two facts are combined, the SNIT theory concludes the impact of the PN NGC 40 debris stream is very strong and will accelerate the effects of global warming especially in the northern hemisphere.

The killer heat wave should be extended by the new heat source through August in India and the breakup of sea ice for the Nares Strait should be early, before June and July, for the next few years. Other noted exceptions in this work should occur annually until the new heat source loses strength.

The method shown for predicting dates for opening and closing of the Northeast Passage is big news for the shipping industry and is considerably different from the dates predicted by the red bar of Figure 8 for the Vilkitsky Strait area being open longer by three weeks. The predicted open period for the sea ice of the Vilkitsky Strait of the Severnaya Zemlya region will reoccur annually until the debris stream for PN NGC 40 has lost its strength. The closing date for the Northeast Passage depends on the transition of WZ Sagittae's thermal power from the southern hemisphere to the northern hemisphere and the predicted closing date is November 7 setting a record for the longest open time period (August 22 to

November 7, 77 days) for the Northeast Passage.

Addendum: 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@yahoo.com. Good Luck!

References

1. Sokeland WP (2017) Supernova and Nova Explosion's Space Weather: Correlated Megafauna Extinctions and Biosphere Meg-disturbances – Global Warming. Journal of Earth Science and Engineering 7: 136-153.
2. https://hubblesite.org/image/2468/gallery
3. https://www.dailykos.com/stories/2019/6/26/1867323/-Nares-Strait-Ice-Arch-collapses-early-flushing-old-sea-ice-out-of-the-Arctic-Ocean-into-Baffin-Bay
4. http://www.climate4you.com/SeaIce.htm#Northern Hemisphere Monthly Sea Ice
5. https://www.dailykos.com/stories/2019/6/26/1867323/-Nares-Strait-Ice-Arch-collapses-early-flushing-old-sea-ice-out-of-the-Arctic-Ocean-into-Baffin-Bay
6. http://www.karstenhaustein.com/climate.php
7. https://www.livescience.com/65749-greenland-early-melt.html
8. https://www.usatoday.com/story/news/weather/2019/06/28/europe-heat-wave-france-hits-all-time-heat-record-french-media-says/1595935001/
9. https://neven1.typepad.com/blog/piomas/
10. https://sites.uci.edu/zlabe/arctic-temperatures/
11. https://nsidc.org/arcticseaicenews/
12. https://en.wikipedia.org/wiki/Noctilucent_cloud
13. https://www.simply-selma.com/2012/09/clouds-101-special-noctilucent-cloudsnlc.html
14. https://www.researchgate.net/publication/252292250_Forty_years_of_noctilucent_cloud_observations_near_Moscow_Database_and_simple_statistics
15. http://www.drroyspencer.com/latest-global-temperatures/
16. https://weather.com/science/environment/news/2019-06-14-permafrost-melting-sooner
17. https://www.sott.net/article/415370-Water-vapor-concentrations-in-the-mesosphere-at-highest-levels
18. https://global.weathernews.com/news/12647/
19. https://www.climate.gov/news-features/event-tracker/northwest-passage-clear-ice-again-2016