"3rd International conference on Astronomy, Astrophysics and Space Science"
October 16-17, 2020
Munich, Germany.

Theme of the conference

Big Ideas and Thoughts of Astronomy, Astrophysics and Space Science.

FERMI BUBBLE – DECIPHERING FERMI BUBBLE, Her Mass, Density Force and Energy (It is done Using a New Theory called HEPHAESTUS THEORY)

The Details of Hephaestus Theory is on the Site below,

https://cdn.shopify.com/s/files/1/2145/9911/files/The_Aquarian_Revolution_I_STRONG_BINDING_FORCE_and_Revolution_II_HAPHAESTUS_THEORY.pdf?10173797748576286 74

It is also in a Book Titled, revolution I (The Strong Binding Force, Revolution II (Hephaestus Theory)

Published by Barnes and Nobles

Application of Hephaestus Theory III *(Analyzing Conflagration and Radiation in the Cosmos using Hephaestus Theory, Fermi Bubble will be analyzed in this chapter in detail).*

Fig i

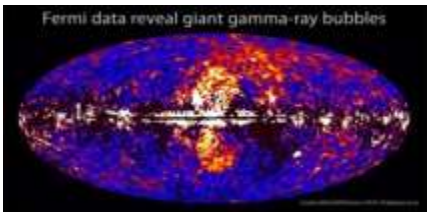


Fig ii



Fig iii

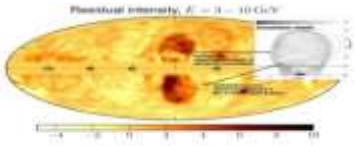


Fig iv



Fig v

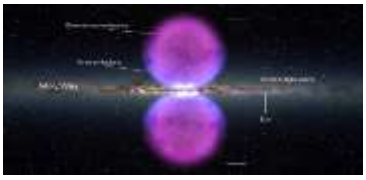


Fig vi



Fig vii



(Fig I, Fermi data revealed a giant gamma ray bubble. This picture was taken in the year 2010 by Harvard-Smithsonian Centre for Astrophysics; NASA's Fermi - Gamma Rays Telescope also gave a similar result, we are thankful to the Crew that made this possible and available, Fig ii, a normal candle on a wick being carried by a little Jewish boy for a Religious function, Fig iii, Cosmic Origin Spectrograph or COS, onboard Hubble in Feb 2014 was used to take this picture, its target was a distant quasar PDS 456 in Ultra violet wavelength, it was positioned near 15 degrees above the Milky Way Centre, whose Light passes through the Northern Bubble along the researcher's line of sight. Credit for this picture goes to Dr Andrew Fox, an Astronomer at the Space Telescope Science Institute Baltimore, this was done with his Research team, Fig iv, picture of a candle flame on a dark background, Fig v, Gamma waves on both the North and South Galactic poles drawn to approximate scale by an Artist, Fig vi infra-red picture of a candle flame, Fig vii the Fermi Bubble can be seen at the Galactic bulge – A Colorful Artist Drawing)
NB. Events in Fig I, Fig v and Fig vii occurred in 2010, while Fig III was taken in 2014.
Two groups of picture are listed above, they are pictures of the Milky Way Galaxy with Fermi Bubble and pictures of a candle flame, the Fermi Bubbles are Fig I, Fig iii, Fig v and Fig vii respectively, all the other pictures are those of a candle Flame. It was noticed sometimes in the year 2010 specifically on the 10^{th} of November that a massive Bubble on either side of our Local Black hole had emerged, one was on the North Pole, and the other was on the South Pole, the Bubble

Was called, Fermi Bubble, it was first captured by Harvard-Smithsonian
Centre for Astrophysicist and NASA's Fermi (Gamma Rays Telescope).

The Milky Way's Black hole Sagittarius A^* (Sgr A^*) was the source of the Fermi Bubble, it occurred within the Galactic Bulge, if one were to give it a second name, one would have called it Sagittarius A^*'s candle flame .

The Approximate Cumulative Height, based on the Astrophysicists/Astronomers that took the pictures is approximately 50000 Light years, that is 25000 light years on each side of the Galactic Pole, (The North and the South Poles), 25000 Light years on the North Pole and 25000 Light years on the South Pole,

We can convert the 25000 light years to Meters; the conversion will be 2.365×10^{20} m, and the two side's cumulative Height in meters will be,

$2 \times 2.365 \times 10^{20}$ m = 4.730×10^{20} m.

For Record purposes the Cumulative Height in meters is 1530007 pc or 15330.007Kpc.

Meanwhile, Recall the Galactic Bulge has an approximate vertical diameter (Height) of 4kpc.

Most Astrophysicist and Astronomers assume that our Black hole (Sgr A^*), located within the galactic Bulge consumed some stars, the Resultant effect produced the conflagration, with massive Radiation (Gamma waves/Rays). The assumption in one's opinion is correct, the massive consumption of some stars, with very high radioactive content, produced the conflagration with the corresponding radiation.

One may ask how many paraffin candle flames make up the Fermi Bubble conflagration, based on the height that is the height on either side.

Solution

Recall, the height of a paraffin candle flame is 3.2×10^{-2}m,
while the Height of the Fermi Bubble on either pole is 2.365×10^{20} m
$\therefore$ The number of Paraffin Candle based on the height is
2.365×10^{20} m/3.2×10^{-2} m = $0.7390625 \times 10^{22} \approx 7.4 \times 10^{21}$ paraffin candle flames on each side. (North or South Pole), the two sides are
$2 \times 7.4 \times 10^{21} \equiv 14.8 \times 10^{21}$ paraffin candles.
Two major things that were noticed in the conflagration and Radiation were,

① High Gamma wave radiation and ② High magnetic/electric field

① High Gamma wave radiation: - The high Gamma waves were noted, the materials that were consumed by the Black hole (Sgr A^*), were very rich in Radioactive materials, that is the primary reason, it caused such a massive explosion, the explosion was followed by Gamma Rays/waves, that is the explanation for the massive Gamma waves Radiation, that was captured by the Gamma waves Telescope, it was one of the major by-products and was highly abundant on the Stars that were consumed.

② High magnetic/electric field:-The high magnetic field and high electric field were also pronounced, recall Stars are by nature bipolar, (They have magnetic North and South Pole), the dynamics of Stars (Both Rotation and Revolution, create electric field (Charged Electric fields on Stars), the consumption

of the star by our Black-hole (Sgr A^*) align the conflagration/Radiation based on the magnitude of the magnetic/electric field properties of the Stars, this was expressed on the positioning of the Fermi Bubble, as could be seen on the Black hole's Galactic North/South Pole, the magnetic or Electric South Pole/Negative Charges of the conflagration, migrated towards the galactic North/positive Pole

The opposite happened on the South Pole, The Conflagration/Radiation that is positive or that has traits of magnetic/electric North Pole naturally migrated to the Galactic South/Negative Pole, obeying the Classical Laws of Magnetism and Electricity. It is very visible and obvious on the picture, the flame/Radiations are Perpendicular to the Galactic Spiral arms, and it is a reflection of the magnetic/electric field characteristics of the conflagration/radiation.
NB. Recall, *K (Constant for complex/Super Flame is 71.4 X 10^6 but the external environmental factor is 10 or multiple of 0.1* (*This represent external Temperature, pressure, concentration et al)*
→ *71.4 X 10^6/10*

→ *71.4 X 10^5*

**Recall, Simple Flame* produces conflagration and Radiation, such as infra-red wave, yellow waves, Ultra-violet (Sometimes) etc.

Complex/Super flames produces conflagration and Radiations, such as infra-red, yellow waves, ultra violet, Gamma waves, sometimes X-ray.

Most of these were captured on the Fermi Bubble (Galactic Candle), however due to the massive distance, Gamma rays was captured the most. Comparing the two flames, side by side a simple flame, paraffin candle and complex/super flame, Fermi Bubble (Galactic candle), one can pick either of the two Bubbles, either from the North or South Galactic Pole for the research, for the detail analysis of this work, the one from the North Pole will be preferred, but either of them will give the same result.

*Complex flame is one conflagration and Radiation from a single Radioactive source e.g. Nuclear Bomb, while Super flame is when the

Conflagration/Radiation has multiple Radioactive sources, though their constant 'k' is approximately the same, Super flames are common on stars, supernovas, Galactic Bulges etc., the same constant 'k' will be used for both Complex and Super flames, this is because their sources are radioactive. One will be using complex and super flame regularly; they both represent the same type of flame/radiation.
FEATURES!
The features of the Fermi Bubble (complex/super flames) on the Center of the Galaxy (Sgr A*) exhibited some unique traits, some features exhibited have some similarities to those of a domestic candle

(paraffin) flame, however the major features noticed are influenced by these four major factors, they are

1 Gravitational Force

2 Mass of Light emitting particles and Dark matter

3 Density of the Flame/Radiation

4 Galactic Poles (Bipolar nature)

1. Gravitational Force: - The massive gravitational Force of the black hole aligned the Fermi Bubble to produce the Paraffin candle-like features of the Fermi Bubble (The magnitude of the center of mass, of the polar acceleration due to gravity is derived in the next chapter), most experts claim that the black hole must have munched 'spaghettied' massive stars that emitted the flame and radiation, they are right, the black hole munched 'spaghettied' many stars with high quantity of radioactive content, it/they exploded and produced that conflagration, the conflagration produced the Flames with the corresponding Radiation (Gamma rays/waves).

2. Mass of Light emitting particles and Dark Matter:- The mass of the dark matter are in multiples higher than the Fermi Bubble (Both conflagration and Radiation), these cumulative mass of Light emitting particle and dark matter align the light emitting particles to the most massive part of the black-hole (Sgr A^*),

They are aligned on the Galactic plane, at a horizontal position of $0^0/180^0$, based on mass, the conflagration/Radiation (Gamma waves/Rays are lighter in mass, the area of the conflagration/Radiation is large, but the mass is not very large, the mass of the Sun is larger than the mass of the conflagration/Radiation on both sides combined, (The calculations are done in the next pages).

3. Density of the Flame (Conflagration)/Radiation :- Matter that is less dense floats on matter that is more dense, based on classical Physics, the conflagration/Radiation floats on a denser Light emitting matter (mass or particle) and dark matter, just like Hydrogen floats on Air, Fossil fuel (Petrol) floats on water, the massive force of gravity from our Black hole (Sgr A*), align it like our paraffin wax candle to give it that streamline shape, (just the way it is on Earth, in Space the candle flame does not have the same shape due to micro-gravity. (Treated in earlier chapters)

4. Galactic Poles: - The massive Radioactive rich Stars that were consumed by Sagittarius A^* (Sgr A^*) are bipolar just like the Sun, (it has North Pole and South Pole) after consumption, the conflagration and Radiation, including other remnants are bipolar, the South Pole/Negative Charges migrated to the galactic North Pole/Positive charges, dominant in the North, while the positive charges in the remnant conflagration/Radiation move to the South Galactic Pole with the North Polar remnant of the conflagration and Radiation, a massive magnetic field, electromagnetic field and electric field could be seen on display, the charged particles that are colliding produced those fields on the conflagration/radiation remnant, their traits obey Fleming Right Hand Rule, where the Magnetic/Electric Fields move in those direction; the Galactic Spiral Arms move (spins) in a direction that corresponds to the Laws of Classical Physics (Magnetism and Electromagnetism), the bipolar remnant carry the conflagration and radiation towards the Galactic poles (North and South), this happens once in a while in all Galactic Black holes, we must be thankful for the Universal Laws of Physics, the four factors

stated above minimized the impact of the conflagration/Radiation, the Energy/Force generated by it has the potential of destroying over half of the Galaxy (the Energy/Force is calculated later in the chapter), the damages it could have caused, would have later led to extensive damages , particularly on the remnant of the Galaxy with toxic Radioactive radiation, the Solar system would not have been spared, these factors enabled us admire it from a distance as a Galactic fireworks.

NB. The four factors listed above saved all the Planets/Satellites/Meteors/asteroids and other particles in the Solar system, they would have all been destroyed by the destructive potential of Fermi Bubble, these four factors saved the Earth from the destruction that befell a Planet called Proxima b on the 24th of March 2017, that destruction would have befallen the Earth on 10th November 2010 due to Fermi Bubble. The four factors gave the Fermi Bubble a Streamline Shape at the Galactic Poles as earlier explained. *Details of the Mass, Energy and Force of the Stellar Flare of Proxima Centauri are calculated in Chapter XVII

The mass of Fermi Bubble

The number of paraffin candle that make up the Fermi Bubble on each of the Galactic Poles was derived earlier, let's refresh! How many paraffin candle flames make up the Fermi Bubble conflagration? Based on the height, that is the height on either side.

Solution

Recall, the height of a paraffin candle flame is 3.2 X 10^{-2}m, while the Height of the Fermi Bubble on either pole is 2.365 X 10^{20} m

∴ the number of Paraffin Candle based on the height is

2.365 X 10^{20} m/3.2 X 10^{-2} m = 0.7390625 X 10^{22}

≈ 7.4 X 10^{21} paraffin candle flames on each side. (North or South Pole), the two sides are

2 X 7.4 X 10^{21} ≡ 14.8 X 10^{21} paraffin candles.

Recall, the mass of a paraffin candle is 6.0 X 10^{-5} kg.

∴ The mass of Fermi Bubble if it is a simple Flame is

→ Number of paraffin Candle flames X Mass of each paraffin candle flame X constant /Environmental Disturbances

Constant (Simple Flames) 1 flame

Environmental disturbances = 10 (inverse or multiple of 0.1)

7.4 X 10^{21} X 6.0 X 10^{-5} kg X 1/10 = 44.4 X 10^{15} kg.

→ 4.44 X 10^{16} kg. (For each of the Sides)

Both sides

2 X 44.4 X 10^{15} kg = 88.8 X 10^{15}kg

8.88 X 10^{16}kg.

If the Fermi Bubble is a complex/Super Fermi (which it actually is) the mass will be gotten using the principle

→ 7.14 X 10^{21} X 6.0 X 10^{-5}kg X 71.4 X 10^{6}/10 = 3170.16 X 10^{21} kg

→ 3.17016 X 10^{24} kg

For the two sides, 6340.32 X 10^{21} kg or 6.34032 X 10^{24} kg.

Flame Energy

The flame Energy for the fermi Bubble (Complex/Super flame) on each side could be gotten by applying the equation of Flame Energy.

E = m ($3c^2$)

→ Applying the parameters that were given earlier

E = 3.17016 X 10^{24} kg X $[3\ (3\ X10^{8}ms^{-\mathrm{i}})^{2}]$

= 85.59432 X 10^{40} Joules (massive)

For the two sides

= 2 X 85.59432 X 10^{40} Joules

= 171.8864 X 10^{40} Joules (massive).

The Energy is very massive; it may not be easily sustained for long.

The Force of the Flame

F = k (E)/x

For each of the flame (fermi Bubble)

F = 71.4 X 10^{6} (85.59432 X 10^{40} J)/ 2.365 X 10^{20} m

F = 2584.1160457 x 10^{16} N or 2.5841160457X10^{29} N

For each of the sides

The both sides will be

$\approx 5168.2320913X10^{26}$ N

≈ 5.1682320913 X 10^{29} N