

Article

The Dark Universe Cosmology

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Abstract: The sources of dark matter and its spatial distribution is not in the typical standard model. The study thought to induct the physical causalities with empirical evidence on the theory of black hole and white hole juxtapose. The research applied a mixed method of data analysis and observational cosmology. With the cosmological observations on the traces of white holes, the research finds that the accretion phenomenon of black holes is largely contributed by its thermonuclear binding with the white hole. The antimatter saturated plasma of cold fusion and hot fission are key to the phenomenon of black hole and white hole juxtapose. The force between the black hole and the white hole is stronger than the strong force, and sheds new directions on cosmological and gravitation studies. The research concludes that black holes are white hole entropy. The higher order of the universe in matter forms can exist beyond the observed force. The thermal arrow of time is critical to future general relativity dependent instrumentation discoveries.

Keywords: white hole; black hole; nuclear astrophysics; black hole seeds; quantum fluctuation; thermal fluctuation; temporal information; time curvatures; quantum forces; NGC 3034; NGC 3372

1. Introduction

The arrow of time in the order of forces is the fundamental arrow of cosmic causality. The unification of fundamental forces can't do without nuclear astrophysical analysis. The Big Bang theory (BB) predicates a hot thermal arrow of time to the expansion of the universe, or a contradictory "Big Crunch" in a general relativistic or earth-based nuclear environment. The Conformal Cyclic Cosmology (CCC) made a significant step on the contradiction [19]. Instead of seeking a solution in general relativity (GR) and physics experiments, the source of black hole seeds (BHS) [21] in relation to white holes (WH) [13] shaped the fundamentals of the cosmological theory. [16] Data deduction on the collision momentum is exhibited in *Figure 1*. The key debate on the establishment of new cosmological theories is on the second law of thermodynamics [20]. The paradox is resolved by the formation of exotic metal-insulator by black hole (BH) and white hole seeds (WHS) collision momentum, as exhibited in *Figure 2* and is justified by the phenomenology of Magnetosphere Eternally Collapsing Object theory [8] and the unification of the quadruple momentum with the weak force [18]. Further unification between the quadruple electroweak force [13] exhibited in *Figure 3* and the strong force was performed with data analysis, implying that the method is instrumentation gravity dependent. The WH observation experiment [15] supplemented the data analysis with observational cosmology, by induction on the force stronger than the strong force yielded by the data method with the result exhibited in *Figure 4*.



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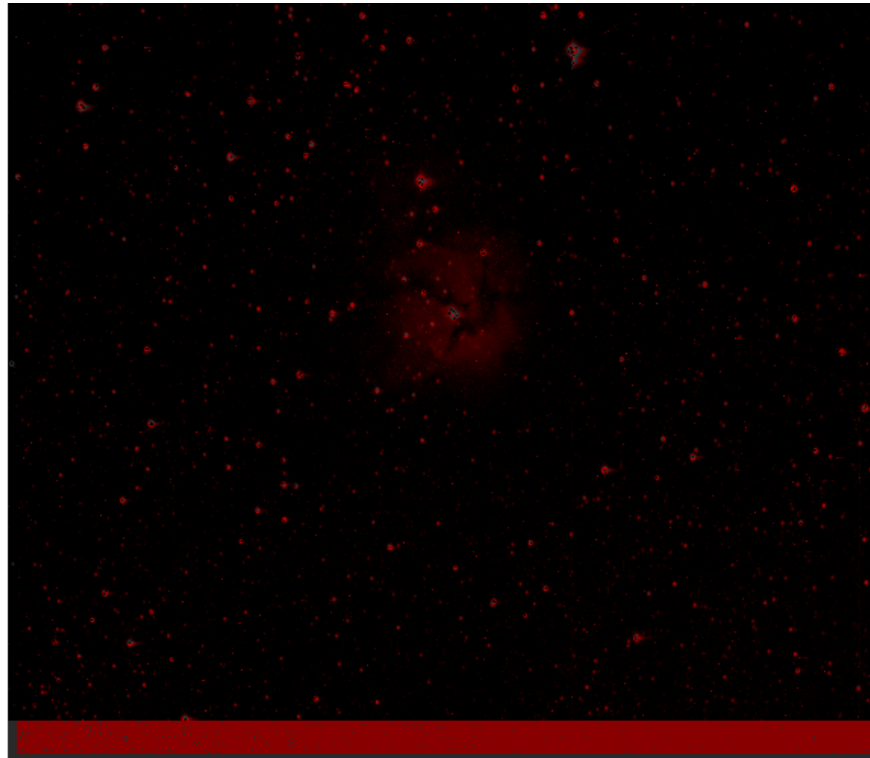


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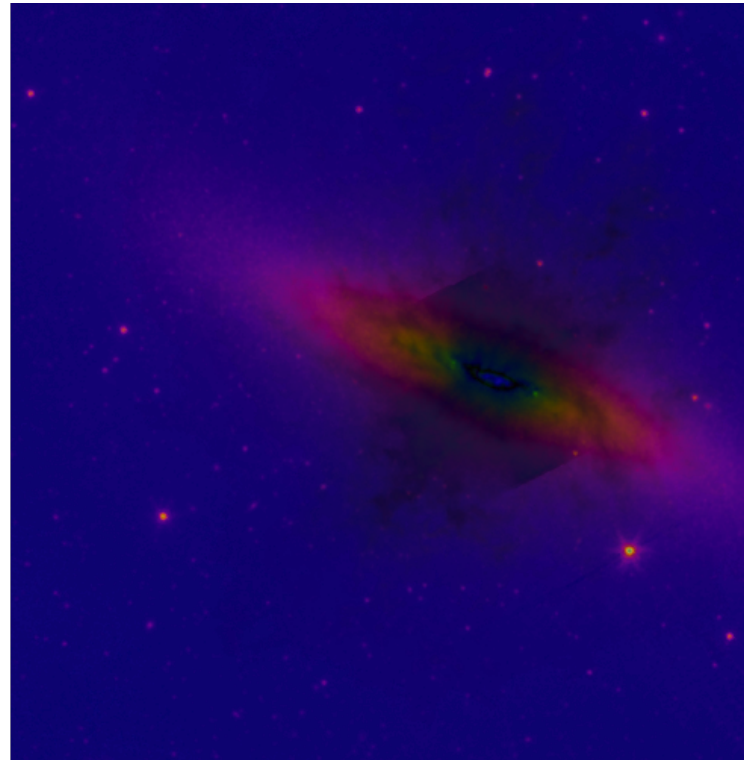
03 - electromagnetic influence on detection.png

Figure 1. The quadruple electroweak collision momentum of the BH and WH seeds on the ring singularity on NGC 3034.



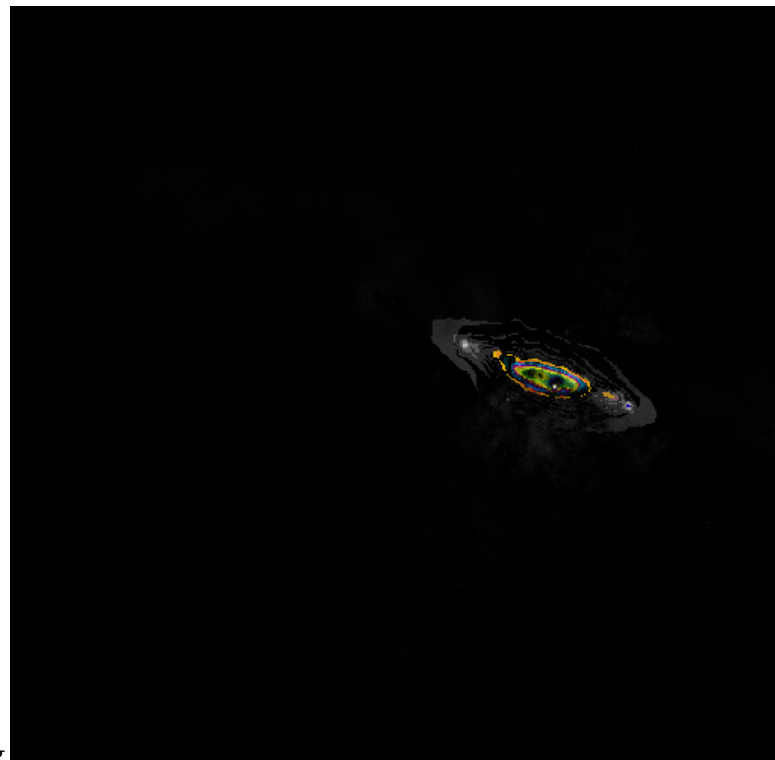
Hot Dark Matter.png

Figure 2. The hot dark matter representation on the exotic metal-insulator formed from the BHS and WHS collision on the Trifid Nebula.



weakforce nucleosynthesis.png

Figure 3. The quadruple electroweak nucleosynthesis on the ring singularity on NGC 3034.



Material Fields on NGC3034.png

Figure 4. The thermonuclear binding force between the BH and the WH on NGC 3034, with decayed neutron star from the WH.

The main aim of the work is to falsify the BB, and to inform on the mindfulness on energy excitation states in the outer space environment by human activities [15]. In particle physics, the cosmological development provides proper explanation for the global

asymmetry of neutrino oscillation [9]. Even though the work appears to be divergent from the CCC, the differences mainly resulted from the differences in approaches on the consideration for instrumentation safety [14]. The divergence on the meaning of the instrumentation data with crystallization effect [14] is the divergence in instrumentation rationale and the epistemic philosophical approaches. The work concludes that the BB failed to surmount the BHS and WHS collision momenta as a cosmological theory. This is the main contributing factor on the restricted epistemic development on BH studies. The BB failed on causal inference on a cosmological scale, and the necessity for the cosmological changes is justified by the necessity of WH studies and new conceptualizations in instrumentation designs. With the threshold of laboratory experiment methods [5], actual tests on the WH's probable violation on the known thermodynamic laws are only conducted on the quantum level [15] in lieu of the force carrier particle between the BH and the WH [13].

2. Materials and Methods

The data analytical experiment was conducted with the existing data from the 2020 NASA Data Challenge with *JS9-4L* online [7]:

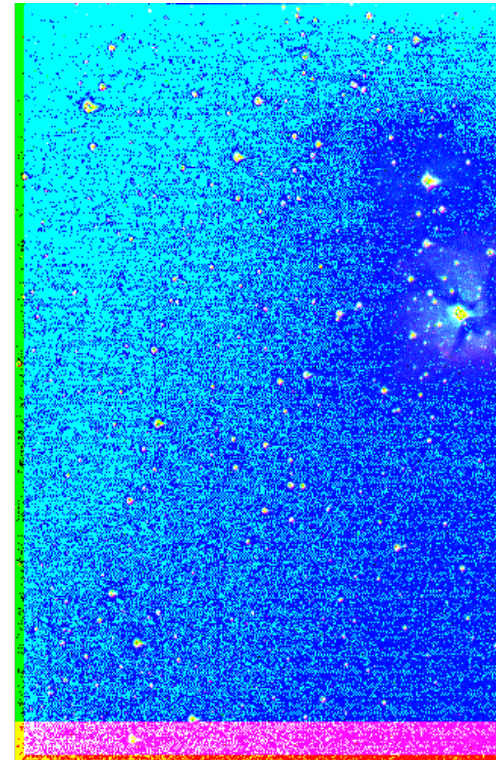
https://waps.cfa.harvard.edu/eduportal/js9/softwareChallenge_Archive.php

Supplementary Materials: The initial report and summary on the data research and research method is available at doi: [10.7910/DVN/T14RUS](https://doi.org/10.7910/DVN/T14RUS). The WH observation experiment FITS data collection is available at doi: [10.7910/DVN/OBXLGX](https://doi.org/10.7910/DVN/OBXLGX). Supporting information for the following as processed multi-spectral image data is available at doi: [10.7910/DVN/4KGGLK](https://doi.org/10.7910/DVN/4KGGLK). A supporting video article on the strong force resonance imaging is available at doi: [10.5281/zenodo.6504931](https://doi.org/10.5281/zenodo.6504931). The high frequency oscillation on the nuclear force between the WH and BH on the Trifid Nebula is available at doi: [10.5281/zenodo.6426887](https://doi.org/10.5281/zenodo.6426887).

For the physical limitations and probable concerns on national security, the data feedback and transmissions to the author may be incomplete [2], possibly so with some of the WH observation data [15]. For the nuclear astrophysical data analysis on NGC 3034, recursive analysis was performed on SAOImage DS9 MacOS [23], and a combination of analytical techniques were conceived by combining the two software's strengths in data processing.

The techniques developed helped with the analysis on the instrumentation gravitation in the solar orbits with histogram analysis in relation to $Zscale$ [10]. Celestial coordinates [4] were triggered during the data analysis and in the WH observation data analysis [15]. The projection in the multiple-slit experiment used a nearby star as macroscopic astro-particle [14] reference point [4], and the spectral analysis used non-linear calculation [15] in the system [11]. The instrumentation limitation with machine aid may have resulted in the non-calculation on the gravitational BH and WH juxtapose shown in *Figure 4* with the current BB protocols.

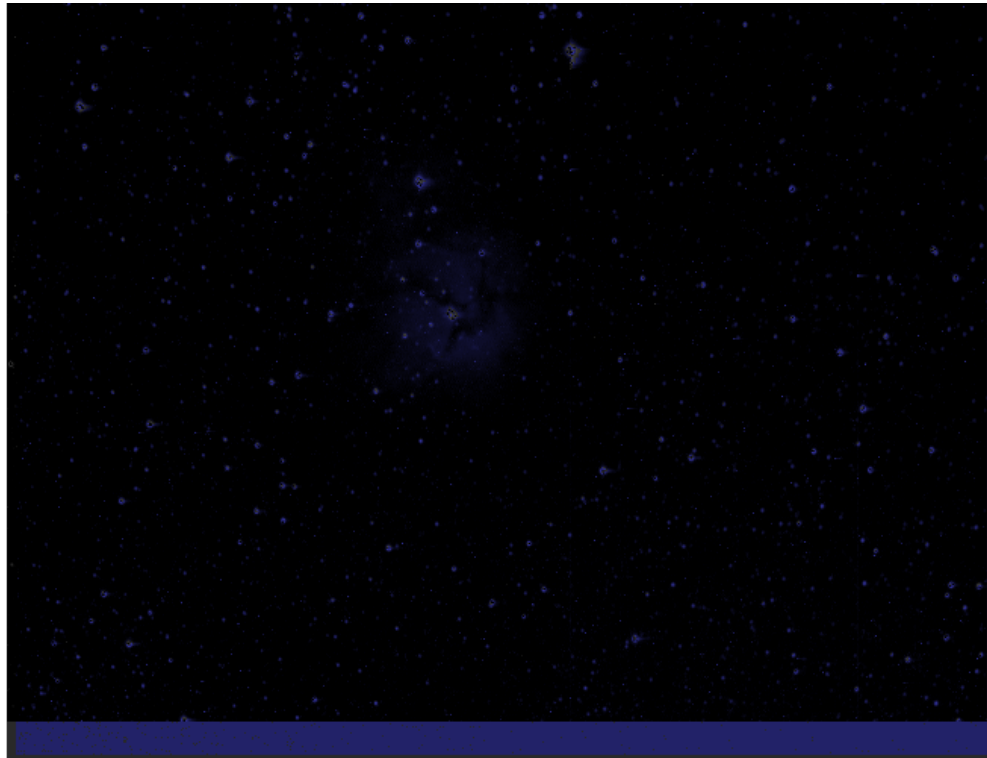
The time axis [22] was adapted with astrochemistry thinking [14] by Lorentz transformation to the celestial planes. It is with this regard, the time parameters [15] in the WH observations naturally describes the cosmic decays in relation to the quantum forces with resonance imaging. An exchange of time length to distance length was adopted for the observation to detect the nuclear force between a WH and a BH, and the moon and the sun observations were used to keep a sense of the observer's biological time on earth. The WH observation method was experimental and is based on quantum physics. The observation result on the Trifid Nebula with below absolute zero temperature that captured the nuclear force stronger than the strong force justified the validity of the experimental method. The use of the ground-based observatory also justified the cosmological results are instrumentation-gravity independent. The time-frame on the Trifid Nebula that captured the nuclear force is exhibited in *Figure 5*.



Threshold TrifidNebula210427113014₂1₀8₂021(17).png

Figure 5. The energy threshold on the Trifid Nebula observation with thermonuclear binding force between the BH and the WH that is stronger than the strong force.

Particle filtering process was used both in the data analysis and observation data analysis. The particle filtering process was what made the minuscule lengths of distance to have a dimension of gravity in the observation and data rendering [14]. Albeit the high noise in the data may be seen as a weakness of the method, it is relatively safe in observational protocols and the source of the high noises are from the collision momenta of BHS and WHS, signified by the warm dark matter representation of the exotic metal-insulator exhibited in *Figure 6*. The force's influence is consistent with the results from the data analysis shown in *Figure 7*. The axial oscillation with particle-filtering process adopted an analytical mathematics method described in the *Appendix*. It is also with the particle-filtering process, the visualization on the observation result on M82 in *Figure* is made possible on the gravitational intersection between the WH and the BH [15], apart from the quadruple electroweak nucleosynthesis shown in *Figure 3*.



(27).png

Figure 6. The exotic metal-insulator from the BHS & WHS collision momentum on Trifid Nebula with the warm-to-cold dark matter representation.

Even though some features of quantum chromodynamics were involved in the visualization of the method, quantum forces are the key method in the experiments. The unification of the quadruple electroweak force with the strong force signified by the X-ray event horizon of the BH on NGC 3034 [13] is the reason that the plasma illuminated the BH & WH surfaces shown in *Figure 8*. The adaptation of the unified forces in the quantum realm is described in the *Appendix*. The differentiation of radiation from the BH and from the WH are made possible with the thermal plasma. Against the backdrop of neutron diffraction is the thermonuclear force bonded BH & WH seen in *Figure 4*.

Materials and Methods should be described with sufficient details to allow others to replicate and build on published results. Please note that publication of your manuscript implicates that you must make all materials, data, computer code, and protocols associated with the publication available to readers. Please disclose at the submission stage any restrictions on the availability of materials or information. New methods and protocols should be described in detail while well-established methods can be briefly described and appropriately cited.

Research manuscripts reporting large datasets that are deposited in a publicly available database should specify where the data have been deposited and provide the relevant accession numbers. If the accession numbers have not yet been obtained at the time of submission, please state that they will be provided during review. They must be provided prior to publication.

Interventionary studies involving animals or humans, and other studies require ethical approval must list the authority that provided approval and the corresponding ethical approval code.

3. Results

The monochrome imaging on the BH & WH indicates there are two types of neutrons on the sides of the BH and WH respectively, around the inner regions of the ring singularity exhibited in *Figure 7*. The presumptions of BHs having event horizons resulted from the

thermonuclear dynamics around the juxtapose [3]. From the Magnetosphere Eternally Collapsing Object (MECO) [8] description of BHs, the circumnuclear ring's weak force field is described as:

$$\omega = 2\pi\sqrt{\frac{e^+e^- + \bar{e}^+\bar{e}^-}{2}}, 1 \quad (1)$$

With the common force binding the BH & WH that drives the formation of BHS (m_b) & WHS (m_w), depending on the dimensions of n , the MECO's relativistic collision momentum is described as:

$$\frac{Ea^n c^2}{G} = \frac{m_b m_w}{\omega^2}, 3 \quad (2)$$

In a galactic context, with the Bekenstein-Hawking entropy formula, the revision for GR can be expressed as [15]:

$$\frac{2ShEa^n}{\pi Akc} = \frac{m_b m_w}{\omega^2}, 7 \quad (3)$$

The equation with its varied forms gives an empirical determination to the quadruple electroweak forces on the MECO [8] with collapsing content [18] and an energy dimension to the notion of singularities. With antimatter distribution [14] circumnuclear to the MECO, the exotic plasma consisting of the quadruple electromagnetism is expressed in terms of the white hole:

$$S^2 = \left(\frac{\omega r_i \vec{m}_w \pi c^6}{h v m_w}\right)^2, 8 \quad (4)$$

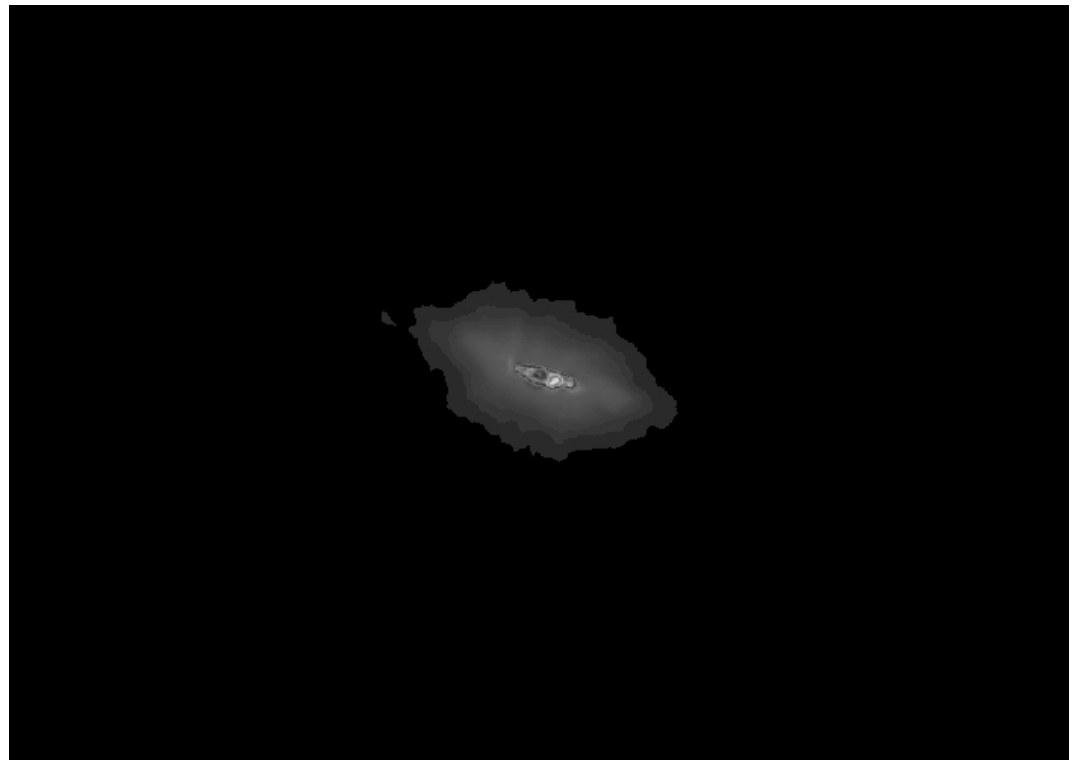
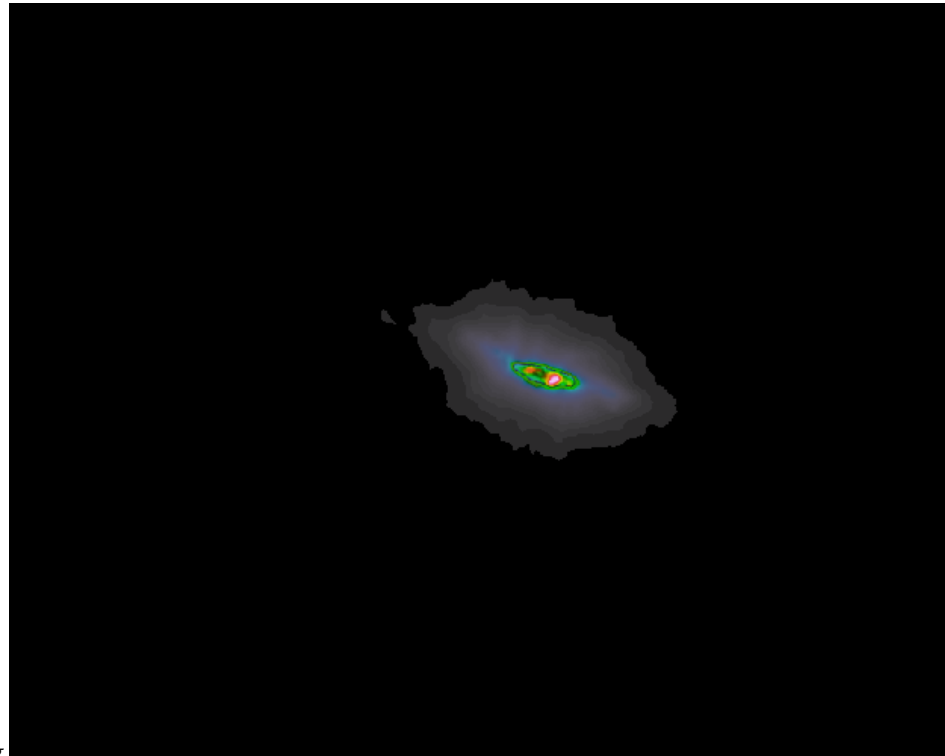


Figure 7. The quadruple electroweak plasma inside the ring singularity illuminating the BH and the WH in the Kerr-Newman structure. Two distinct morphs of neutron diffraction are visible on the active galactic nuclei and on the intersection of the WH & electromagnetic ring.



Thermo State.png

Figure 8. The thermal plasma imaging of the BH & WH juxtapose on NGC 3034 with the activation of the galactic nuclei.

The result is supported by the observation of the Carina Nebula with black hole shadows from the gravitational eruption in the multi-spectral data of plasma.⁹

Figure 9. The black hoe shadows in the binary system on Carina Nebula.

The formation of the black hole shadow regions is a consistent phenomenon from the NGC 3034, and the multi-spectral data was processed with the Carina Nebula. [14] 10

Figure 10. The multi-spectral black hole binary with shadowed blasts on Carina Nebula.

4. Discussion

The empirical research & studies have tried to seek a new concept of time that is not proportional to the temporal phenomenon on earth. Even though the approach in seeking of higher order causality in the universe theoretically put the gravitational constant out, GR is still the driven factor on instrumental technologies. It is with this regard, I have put forth a philosophical argument on the aspect of instrumentation rationale that the first qualities of the cosmos are the forces.

Black hole is not observable by definition, and white hole is. However, the nuclear binding force between a black hole and a white hole is still an unknown quantity. It was based on this concept of thermonuclear cosmology, the theory behind the research took shape with a Newtonian observer-space and cosmic time model. The evidence on the fifth cosmic force has led to a singularity-free equation on the relativistic white hole to its relativistic mass momentum to the observer:[16][17]

$$\left| \frac{\Delta m_2}{m_2} \right| = \left| \frac{\vec{m}_w}{m_w} \right|, 4 \quad (5)$$

The epistemic argument of the Big Bang theory is that spacetime is created by fundamental forces, and the matter abundance of the universe is derived by calculus. The core

thesis of modern physics, hence astronomy and astrophysics, presumes vacuum is space free from the influence of cosmic forces and spatial curvature is caused by the presence of matter, i.e. gravity. Thus, the ontology on the existence of black holes was explained by gravitational effects dissected by the strong and weak force.

5. Conclusions

Since there is a thermo duality on the BH evolution in the open space, the theory building on the inner structures of the Kerr-Newman was based on the reversal analysis of the observed data. This means that it is based on the thermo conductivity effect on the BH before, during, and after its pulsar phase in each cycle that can be observed, with the luminary illustration on the open space's cooling effect. The consistency of the effect can be observed from the intensity image, with the thermo ripple of space and time in electromagnetic conductivity change. [12] It can be seen from the anti-chronicle order, the informationally lost space (in intensity image) occurred at the thermo drop on the inner ergosurface where AGN is the source of strong force. The strong force can be caused by the structure of the Kerr-Newman, which means the axis of the object is contrary to the X-ray histograms.

Inside the Kerr-Newman inner ergosurface the AGN-BH-WH 3-body constitutes the condense matter reaction chain. The drastic annihilation between AGN and inner ergosurface is at the core of the Kerr-Newman's pulsar phase. The phase is determined by the BH and WH spins. The annihilation on AGN conduct thermo source by mass density, and changes the thermo-electric-magnetism of the BH-WH 2-mass. With the BH-outer ergosurface and WH-inner ergosurface magnetic relations, the drastic change of thermo-magnetism signified by the temporal field channeling influences the pressure inside the ergosurfaces, and the Kerr-Newman undergoes a systemic open phase where pulsar occurs. It is plausible that during the Kerr-Newman's open phase at some threshold point the WH's interaction with the inner and outer ergosurfaces were pushed through the ergosurfaces, and out of the inner and outer event horizon. It is triggered by AGN, and accelerated by the BH-WH pair conductivity and interactions. Since the astroparticle reactions may be reversible, the part of WH mass squeezed out can be accompanied by its reversal reactions out of the electro-chemical loop, and formed the minor BH. This is a possible explanation for the surface area law of BH [6]. The AGN-BH-WH thermo-electric-magnetic-chemical imbalance is the source of the Kerr-Newman's spin. And from the process it is plausible that the minor BH created is also a Kerr-Newman type. The creation of new BH can be the source of galactic wind with AGN's sudden thermo temperature drop. Since the condense matters in the vicinity of the 3-body system are highly activated, the temporal explosive touch of the 2-mass Kerr-Newman conducted by AGN pushes the materials away with the heat trace. As the 2-mass holds the gravitational pull, the open space's cooling effect is seen in multi-spectroscopy histograms. The process is highly dynamic with mass-energy equilibrium. The changes in matter density levels are affected by the thermo effects that shift the overall pressure on star-formation in the galaxy.

The cigar shape of M82 can be a result of the AGN-BH-WH galactic center shifts. The gravitational waves caused by spin of the Kerr-Newman and pulsars influence the stellar motion in the galactic system. It partially creates annihilation of gravitons in X-ray (Zscale), which is more obvious in the outer regions of the galaxy. [1] The creation of new Kerr-Newman BH influenced the galactic motion due to the relative spins. This explains M82's relation to M81. It is most probable the AGN-BH-WH structure is universal to all BHs. It means that BHs can be the source of galactic movement and evolution of the universe. And inter-galactic forces can be the powering mechanism of cosmology. This, however, needs much more further researches to be better quantified.

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Conflicts of Interest: I hereby declare conflict of interest with all dictatorial regimes and Communist parties, especially the Communist Party of China.

Abbreviations

The following abbreviations are used in this manuscript:

BB	Big Bang theory
CCC	Conformal Cyclic Cosmology
GR	General Relativity
BH	Black Hole
WH	White Hole
BHS	Black Hole Seed
WHS	White Hole Seed
MECO	Magnetosphere Eternally Collapsing Object

Appendix A. The Cosmological Oscillation

In order to oscillate the system beyond the BB protocols exemplified by the ring singularity, dimensional analysis was performed on the base system of the FITS protocols. This allowed the system to make room for the WHs that was not in its type. The concept was a combination of the Penrose-Hawking singularity theorem and special relativity, and the gravitation is aided by Archimedes mathematical geometry in relation to the particle-filtering process with the equilibrium of planes. The Ham sandwich theorem guaranteed that the dimensions are extensible and calculable. By reducing the singularity theorem to a Newtonian gravitational plane with Euclidean geometry, the possibilities of generating proofs and evidences from the WH observation were made probable without changing the base system. Theoretically, the empirical determination of black hole mass can be possible thence with adjustment to GR.

Appendix A.1. Particle-filtering in Einstein's Gravity

The dimensional analysis was performed on my notebook during the experiments, counteracting the presumptions of the BB as shown in *Figure A1*. The note adapted the Penrose-Hawking singularity theorem on a discrete basis to make room for the WH. The thermonuclear binding force between the BH and the WH were expected, including the geodesic incompleteness of GR.

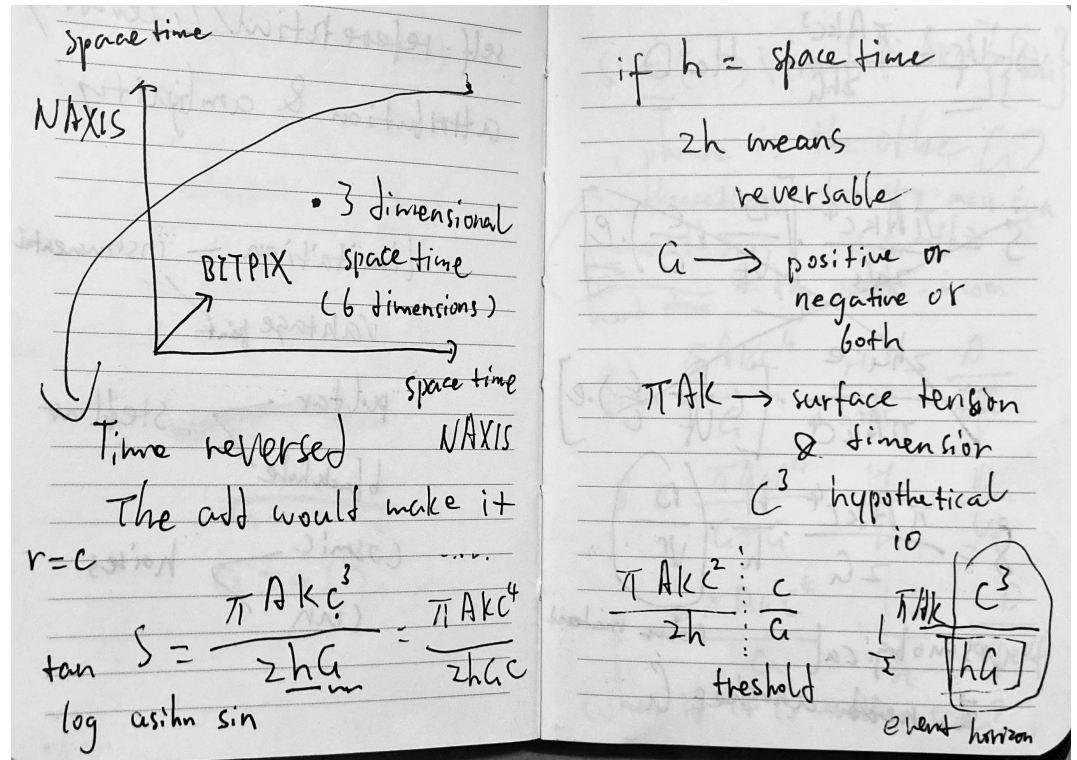


Figure A1. The notebook page on the oscillation of forces of the BB with the Penrose-Hawking singularity theorem.

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