

XXIX-th International Workshop on High Energy Physics: NEW RESULTS  
and ACTUAL PROBLEMS in PARTICLE & ASTROPARTICLE PHYSICS and  
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## Einsteinian revolution's misinterpretation: no true black holes, no information paradox, but just quasi-static balls of quark gluon plasma'

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Even if one would assume existence of Black Holes (BHs), High Energy Astrophysics observations cannot be explained because no free charge, no current can emerge from central singularities. In other words, even supposed charged BHs cannot have any electromagnetic property. In fact gravitational effects too should not propagate out of Event Horizons! Several authors try to resolve the BH conundrum by invoking the original Schwarzschild solution for a Point Mass" by assuming the integration constant  $\alpha$  to be finite. But this approach is inconsistent because it endows a Point Mass" with a surface area of  $4\pi\alpha^2$ . This problem was finally resolved by Mitra (J. Math. Phys. 2009) by showing that, for a Point Mass",  $\alpha=0$ . Mathematically this implies that BHs have unique gravitational mass  $M=0$ . Physically, for continued gravitational collapse the entire mass energy must be radiated out. Since the comoving proper time for formation of a  $M=0$  BH is infinite, such a singular state is never formed and the so-called BH Candidates must be Eternally Collapsing Objects" (ECO). As the collapsing object heats up by contraction and start trapping its own radiation, at a certain stage, it attains "Eddington Luminosity" when the inward pull of gravity gets balanced by outward radiation force. Astrophysical ECOs are expected to be strongly magnetized (MECOs), and there are many evidences that whether in X-ray binaries or in Quasars, the BH Candidates are MECOs. The magneto radiative instabilities of MECO plasma cause unpredictable Solar Flare and Coronal Mass Ejection like phenomena. The long duration Gamma Ray Bursts are associated with formation of nascent MECOs and rejuvenation of their central engines can be understood as further collapse of unstable nascent MECOs.

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