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Gravitational versus electrodynamics process in the rotational energy extraction from rotating Black Holes following Roy Kerr solutions

Monday, 8 July 2024 10:00 (30 minutes)

In two recent papers submitted for publication to Phys. Rev. Letters on May 16, 2024 by R. Ruffini, C.L. Bianco, M. Prakapenia, H. Quevedo, J.A. Rueda, S.R. Zhang, the energy extraction process from the ergosphere of Kerr Black hole has been reconsidered, taking into account the effect of the Mirr. New concepts, as the energy extractable versus the extracted energy, are outlined. Pure gravitational ballistic process. highly irreversible, leads to negligible extracted energy and to the transformation of rotational energy into Mirr. From an astrophysical point of view, the case of a Kerr Newman metric embedded in an external magnetic field Bo, and consequently endowed by an "effective charge", as in the BdHN I models, appear to be effectively extracting the Kerr rotational energy. This is supported by observations of GRB.160625 B, GRB 220101 A and GRB 221001 A, submitted for publication (Ruffini, Bianco, Li, Mirtorabi, Rueda, Wang).

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