

Gilles Jordan Pedieu Tcheuha: Non-Existence of Stationary Equilibrium Configurations of Three Aligned Rotating Black Holes

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Following the foundational studies of Hennig and Neugebauer on the balance of binary black holes, this work addresses the long-standing question of whether a third body can stabilize a stationary configuration. By constructing the explicit Triple-Kerr-NUT solution and employing a generalized regularity criterion based on sub-extremality inequalities, we provide a rigorous proof for the non-existence of equilibrium. Our results confirm that spin-spin repulsion remains insufficient to counter non-linear gravitational attraction in the three-body case, suggesting a universal constraint within the theory.