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Repulsive gravity in regular black holes

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We evaluate the effects of repulsive gravity using first order geometric invariants for regular black holes. We compare the repulsive regions with the predictions got from singular solutions. Notable characteristics and pathologies of regular black holes are thus emphasised. To heal the potential incompleteness of regular solutions, we construct alternative regular solutions. Implications and physical consequences of our results, as well as the inclusion of novel spacetimes are discussed in detail. Particular attention is devoted to the comparison of such solutions with quasi-periodic oscillations from astronomical sources.

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