The Modern Physics of Compact Stars and Relativistic Gravity



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## Kerr-like behavior of orbits around rotating Newtonian stars

The innermost stable circular orbit and the splitting of epicyclic and orbital frequencies are among strong-field signatures of general relativity searched for in astronomical objects, particularly in the X-ray data accumulated in observations of neutron stars and black holes. It may come as a surprise that these effects are present in the Newtonian physics of rapidly rotating gravitating bodies, such as the classic Maclaurin spheroids.

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