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QPOs and Lense-Thirring precession

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Observations of QPOs from neutron stars and black holes suggest they must be a feature of the accretion disc surrounding these objects. Their measured frequencies indicate they are from the inner disc, where effects from the Lense-Thirring precession are significant. However, because the properties of the high and low frequency QPOs are so different, it is thought that separate physical processes cause them. We present 3D global simulations of inclined accretion discs and identify features caused by Lense-Thirring precession that may explain both high and low frequency QPOs. We estimate the powerspectra from these simulations and compare these to observations of QPOs.

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