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Dragging of inertial frames by matter and waves

Friday, 9 July 2021 10:40 (35 minutes)

We shall analyze three specific general-relativistic problems in which gravitomagnetism plays the important role: the dragging of magnetic fields around rotating black holes, dragging inside a collapsing slowly rotating spherical shell of dust, compared with the dragging by rotating gravitational waves (CQG 34, 205006 (2017), Phys. Rev. D 85 124003, (2012) etc). We shall also briefly show how „instantaneous Machian gauges“ can be useful in the cosmological perturbation theory (Phys. Rev. D 76, 063501 (2007)). Finally, we shall mention the „Quantum Detection of Inertial Frame Dragging“ (Phys. Rev. D 103, 024027 (2021)).

Primary authors: BICAK, Jiri (Institute of Theoretical Physics, Faculty of Mathematics and Physics, Charles University, Prague); LEDVINKA, Tomáš (Faculty of Mathematics and Physics, Charles University, Prague, Czech Republic)

Presenters: BICAK, Jiri (Institute of Theoretical Physics, Faculty of Mathematics and Physics, Charles University, Prague); LEDVINKA, Tomáš (Faculty of Mathematics and Physics, Charles University, Prague, Czech Republic)

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