

GR 15: Klassische Allgemeine Relativitätstheorie 2

Zeit: Donnerstag 16:45–17:25

Raum: JUR K

GR 15.1 Do 16:45 JUR K

Geodesics in black hole space-times with cosmic strings —
 •PARINYA SIRIMACHAN¹, EVA HACKMANN², BETTI HARTMANN¹, and
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We investigate the solutions of the geodesic equations in the space-time of a Schwarzschild, respectively Kerr black hole pierced by an infinitely long cosmic string in the thin string limit. In this work the full set of analytical solutions of the geodesic equations are given in terms of elliptic functions. The perihelion shift and the light deflection have been calculated in order to compare the results with the observational data

from the solar system.

GR 15.2 Do 17:05 JUR K

Orbits of spinning particles in Schwarzschild- and Kerr-de Sitter space-times — •ISABELL SCHAFFER und CLAUS LÄMMERZAH² — ZARM, Universität Bremen, Am Fallturm, D-28359 Bremen

Spinning particles are described within the Mathisson–Papapetrou–Dixon–formalism. We calculate the orbits of particles with spin and the corresponding spin motion in Schwarzschild-de Sitter and Kerr-de Sitter space-times, determine the influence of the spin on the orbit, and evaluate the influence of the cosmological constant.