
GR 10: Main talk: Experimental Gravitation

Time: Tuesday 14:00–14:45

Location: SPA SR220

Invited Talk

GR 10.1 Tue 14:00 SPA SR220

Gaia: the project, its status and scientific promises — ●SERGEI KLIONER — Lohrmann Observatorium, TU Dresden

The launch of the ESA Cornerstone mission Gaia has marked a new era in astrometry: the era of microarcsecond accuracies. In addition to astrometric data Gaia will provide a homogeneous photometric and spectrophotometric survey of about one billion celestial sources. Gaia is expected to deliver revolutionary data and discoveries in many fields

of astronomy: from the solar system science to the physics of quasars. An overview of the mission and its scientific promises will be given with a special emphasis on the planned tests of fundamental physics. Unprecedented angular accuracy of Gaia will allow to perform a series of tests relation to the gravitational deflection of light, a test of Local Lorentz Invariance as well as measure the mass of some black hole candidates in some compact binary systems with optically visible components. Gaia data can also be used to estimate the energy flux of the gravity waves in certain frequency ranges.