

Second European Physical Society Conference on Gravitation: measuring gravity



Contribution ID: 28

Type: talk

Limitations on LISA sensitivity to gravitational waves from local spacecraft gravitational field

Monday, 5 July 2021 13:40 (1 minute)

The Laser Interferometer Space Antenna mission LISA measures the strain in 2.5 million km distant free falling test masses couples, for detecting gravitational waves from galactic and extra galactic sources in the low frequency regime between 20 micro-Hz to 1 Hz. The instrument sensitivity is such that LISA would be able also to detect the effect of the gravitational field on its test masses originating from the mass distribution of their housing spacecrafts. We discuss the different levels of coupling, the foreseen design requirements, and the resultant contribution to the current LISA performance budget.

Primary author: FERRONI, Valerio (University of Trento, TIFPA)

Co-author: WEBER, William Joseph (university of Trento)

Presenter: FERRONI, Valerio (University of Trento, TIFPA)

Session Classification: Recorded Talks: Experimental Challenges in Gravitational Wave Detection