



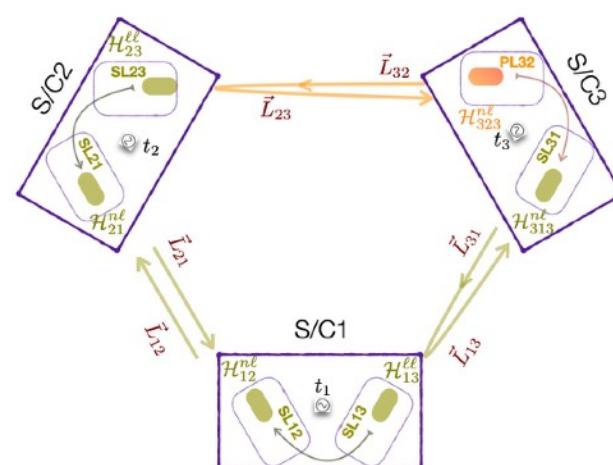
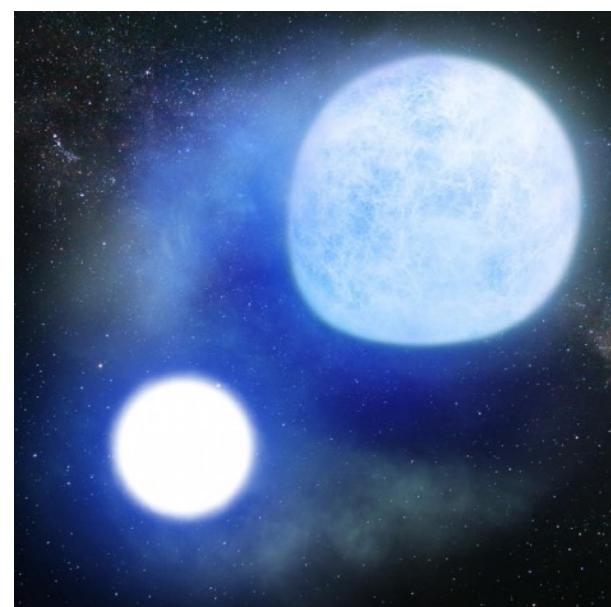
The delightful challenges of LISA Instrumentation and data analysis.

Tuesday, 28 November, 2023

Seminar room 4a/b & Webcast 16:00 h

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The space-based GW detector *Laser Interferometer Space Antenna* (LISA) will probe the low-frequency GW sources such as mergers between massive Black holes and ultra-compact binaries and extreme binaries, amongst others. LISA is an ESA mission with NASA partnership, planned to launch in 2034. To achieve the science goals, the interferometry that will measure the distance variations between freely falling test-masses is required to achieve picometer sensitivity in the LISA observational frequency band. The LISA data processing involves several successive processing steps of the telemetry of the data onboard the 3 spacecrafts and other auxiliary ground data leading to the main scientific products. In this talk, I will describe these measurements and the dominating noise sources along with their planned mitigation schemes. I will also highlight the potential role of the so-called Verification Binaries in instrument characterisation that would enable optimal science expected from LISA. The talk will end highlighting the novelty of “locking” in forming the main science measurements and their possible consequences in the LISA Science.



This is a HYBRID colloquium

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