

Time-Delay Interferometry and Noise Cancellation Schemes for LISA.

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ABSTRACT

Measurements from multiple Doppler readouts onboard the Laser Interferometer Space Antenna (LISA) mission allow simultaneous formation of several observables free of laser phase fluctuations, and all displaying different couplings to gravitational waves and the various LISA instrumental noises.

In this presentation we will show that this experimental technique, which we have called Time-Delay Interferometry, also offers the capability of getting further insights into the nature of the proof-mass and optical-path noises affecting the various interferometric measurements.