



Contribution ID: 164

Type: not specified

## Science of the LISA mission: A Summary for the European Strategy for Particle Physics

The LISA mission is an international collaboration between ESA, its member states, and NASA, for the detection of gravitational waves from space. It was adopted in January 2024 and is scheduled for launch in the mid-2030's. It will be a constellation of three identical spacecraft forming a near-equilateral triangle in an heliocentric orbit, transferring laser beams over 2.5 million km long arms. Laser interferometry is used to track separations between test masses, thus measuring spacetime strain variations as a function of time. LISA Science Objectives tackle many open questions in astrophysics, fundamental physics and cosmology, including ESA's Cosmic Vision questions "What are the fundamental laws of the universe?" and "How did the universe originate and of what is it made?". In this contribution, based on the LISA Red Book, we present a summary of the LISA Science Objectives relevant for the European Strategy for Particle Physics.

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