KMI-Colloquium

Gravitational Wave Astronomy: We can hear the dark universe!

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Abstract:

For thousands of years we have been looking at the universe with our eyes. But most of the universe is dark and will never be observable with electromagnetic waves. Since September 14th, 2015, everything is different: Gravitational waves were discovered by ground-based detectors! We have obtained a new sense and finally we can listen to the dark side of the universe. In 2017 ESA has selected the LISA mission concept for the L3 large mission flight opportunity with a foreseen launch in 2034. LISA will comprise 3 spacecraft at the corners of an equilateral triangle with 2.5 million km arms in a heliocentric orbit trailing the earth. It will form a laser interferometer with 3 arms and 6 laser links, observing low-frequency gravitational waves with frequencies from less than 0.1 mHz up to more than 0.1 Hz.