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## **【463】 Wave optics lensing of gravitational waves in the LISA band**

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One of the major predictions of Einstein's general relativity is gravitational lensing, the deflection or amplification of light by mass distributions. In my talk, I focus on the phenomenology of gravitational wave lensing in wave optics (long wavelength), as opposed to the standard geometric optics. I show how a supermassive black hole acts as a wave optics lens, in the regime of the LISA mission. Keeping track of the tensorial structure of the signal, the lensing process shows rich physical features in wave optics, such as non-preservation of the GW helicity and polarization content, making black holes particularly interesting gravitational lenses that may be probed in the next decades.

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