Classical interferometry from space: accessing new parameter spaces

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Abstract

Interferometry from space is arguably one of the most exciting horizons for modern astrophysics, pairing unprecedented angular resolution with sensitivity not easily achieved from the ground. Even a modest scale mission, with 10-50cm apertures flying in low Earth (LEO) or high Earth (HEO) orbits, can achieve similar sensitivities, similar or better resolution and better UV plane coverage than most ground based facilities. This opens up avenues for new astrophysics, including detailed imaging of stellar surfaces, AGNs and emission nebulae. As well as opening new science prospects, such a facility would also serve as a demonstrator for large-scale upcoming missions, such as the Large Interferometer For Exoplanets, aiming to be the best possible mission for addressing the truly fundamental question of whether life exists outside of our planet.

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