

# **Wavefront versus amplitude division high precision displacement measuring interferometers**

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## **Abstract**

Displacement measuring interferometers (DMI's) with sub-Angstrom accuracy are sought in several NASA's planned missions such as the Space Interferometry Mission (<http://huey.jpl.nasa.gov>). In this paper, we will review the work we have done at the Jet Propulsion Laboratory on the development of high precision laser heterodyne interferometers for such applications. We will discuss and compare different methods to reduce periodic nonlinear error to sub-Angstrom regime. We will also discuss different interferometer configurations that have small temperature sensitivity. Experimental results will be presented and discussed.