

SPIE ABSTRACT

Formation Telescopes and the StarLight Mission

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NASA's StarLight mission, scheduled for launch in 2006, is the technology precursor for a whole new class of Formation Telescopes. Breaking the mass and size constraints of a single spacecraft platform, the combination of precision formation flying and active stabilization across a multi-spacecraft system open up new realms of angular resolution and sensitivity.

Proposed future formation telescope missions include the Terrestrial Planet Finder (TPF), Darwin, the Submillimeter Probe of the Evolution of Cosmic Structure (SPECS), the Micro-Arcsecond Xray Imaging Mission (MAXIM) and its precursor, MAXIM Pathfinder, and the Stellar Imager.

We describe the key performance parameters that govern the sensitivity of these systems, and show how they are addressed by the technology of the StarLight mission.