

Debris Disks as Tracers of Nearby Planetary Systems

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Dr. Karl Stapelfeldt
NASA / Goddard

Many main-sequence stars possess tenuous circumstellar dust clouds believed to trace extrasolar analogs of the Sun's asteroid and Kuiper Belts. While most of these "debris disks" are known only from far-infrared photometry, dozens are now spatially resolved. I will review the observed structural properties of debris disks as revealed by imaging with the Hubble, Spitzer, and Herschel Space Telescopes. I will show how modelling of the far-infrared spectral energy distributions of resolved disks can be used to constrain their dust particle sizes and albedos. I will review cases of disks whose substructures suggest planetary perturbations. Progress in debris disk imaging will take us closer to the goal of detecting and characterizing terrestrial exoplanets orbiting nearby stars.