

Spitzer Observations of Fomalhaut

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We present Spitzer Space Telescope early release observations of Fomalhaut, a nearby A star with dusty circumstellar debris. The disk is spatially resolved at 24, 70, and 160 μm using the Multiband Imaging Photometer for Spitzer (MIPS) instrument. While the disk orientation and outer radius is comparable to values measured in the submillimeter, the disk inner radius cannot be precisely defined: the central hole in the submillimeter ring is at least partially filled in with emission from warm dust seen in IRS 17.5 to 34 μm spectra and MIPS 24 μm images. The disk has a strongly asymmetric brightness distribution, with its SSE ansa brighter than its NNW one by a wavelength-dependent factor. This asymmetry may reflect perturbations on the disk by an unseen interior planet.

