# Resolved Submillimeter Observations of the HR 8799 and HD 107146 Debris Disks

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We present 880 um Submillimeter Array observations of the debris disks around the young solar analogue HD 107146 and the multiple-planet host star HR 8799, at an angular resolution of 3" and 6", respectively. We spatially resolve the inner edge of the disk around HR 8799 for the first time. While the data are not sensitive enough (with rms noise of 1 mJy) to constrain the system geometry, we demonstrate that a model by Su et al. (2009) based on the spectral energy distribution (SED) with an inner radius of 150 AU predicts well the spatially resolved data. Furthermore, by modeling simultaneously the SED and visibilities, we demonstrate that the dust is distributed in a broad (of order 100 AU) annulus rather than a narrow ring. We also model the observed SED and visibilities for the HD 107146 debris disk and generate a model of the dust emission that extends in a broad band between 50 and 170 AU from the star. We perform an a posteriori comparison with existing 1.3 mm CARMA observations and demonstrate that a smooth, axisymmetric model reproduces well all of the available millimeter-wavelength data.

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