

Exoplanetary Science with the Space Infrared Telescope Facility
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SIRTF is NASA's next large space observatory mission, with launch scheduled in early 2003. With its 0.85 m cryogenic telescope and three science instruments, SIRTF will be nearly 100 times more sensitive than IRAS or ISO. SIRTF provides imaging in seven spectral bands over the wavelength range 3.5-160 microns, R=600 spectroscopy between 10-37 microns, R=60-120 long slit spectroscopy over 5.3-40.0 microns, and R=20 spectrophotometry between 55-95 microns. SIRTF will make major contributions to our knowledge of the structure and evolution of planetary systems through its studies of disks and substellar companions. SIRTF will resolve nearby debris disks; track the circumstellar disk frequency as a function of host star age, mass, and binarity; study the mineralogy of circumstellar dust and its kinship with bodies in our outer solar system; search for ultracool brown dwarfs as companions to nearby stars and as field objects, and spectrally characterize their atmospheres. A major fraction of the data taken in SIRTF's first year will become immediately available to the astronomical community under the SIRTF Legacy Science Program. Two of the six Legacy projects have been designed to study the evolution of disks around stars. More than 70% of the SIRTF observing time is being awarded to the general community, with the next call for proposals expected in late 2002. Join us in applying the major new capabilities of this Great Observatory to studies of extrasolar planetary systems!

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