

SCIENTIFIC OPPORTUNITIES WITH SIRTf

MICHAEL WERNER
SIRTf PROJECT SCIENTIST
JET PROPULSION LABORATORY, CALIFORNIA INSTITUTE OF TECHNOLOGY
PASADENCA, CA 91109

NASA will launch the Space Infrared Telescope Facility – SIRTf – in January of 2003. SIRTf will complete NASA's family of Great Observatories and serve as a scientific and technological cornerstone for upcoming missions of NASA's origins theme. Key technical features of SIRTf include an 85-cm telescope cooled to 5.5K, three instruments using large arrays and providing background limited imaging and spectroscopy over the wavelength range 3-180 μm and a 2.5-to-5 year lifetime in a heliocentric orbit. Scientifically, SIRTf builds on the legacy of IRAS, COBE, and ISO and will push our exploration of the Universe at infrared wavelength to much fainter flux levels than were reached by these successful missions. SIRTf can greatly increase our understanding of known astrophysical problems while also providing tremendous potential for the discovery of new phenomena on scales from the outer solar system to the early and distant Universe. Over 75% of the observing time on SIRTf is to be awarded to the international scientific community through the standard peer-reviewed proposal process. This talk will summarize the scientific capability and promise of SIRTf and emphasize the opportunities for community participation in this powerful mission.

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