

WISE and the Dusty Universe

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The Wide-field Infrared Survey Explorer (WISE) is a medium class Explorer mission that was launched on 14 Dec 2009. WISE should detect hundreds of millions of stars and galaxies, including millions of ULIRGS and QSOs; hundreds of thousands of asteroids; and hundreds of cold brown dwarfs. The telescope cover was ejected on 29 Dec 2009, and the all-sky survey started on 14 Jan 2010. WISE takes more the 7000 framesets per day, with each frameset covering 0.6 square degrees in four bands centered at 3.4, 4.6, 12 and 22 microns. WISE is well-suited to the discovery of brown dwarfs, ultraluminous infrared galaxies, and near-Earth objects. With an angular resolution of 6 arcseconds at 12 microns, a 5σ point-source sensitivity of around 1 mJy at 12 microns and 6 mJy at 22 microns, and coverage of over 99% of the sky, WISE also provides a powerful database for the study of the dusty ISM in our own galaxy. A preliminary release of WISE data will be made available to the community 6 months after the end of the cryogenic survey, or about May 2011. The final data release will be 11 months later, about April 2012.

