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Abstract:

The Wide Field Infrared Survey Explorer (WISE) has just completed a sensitive all-sky survey in photometric bands at 3.4, 4.6, 12, and 22 microns. We report on a preliminary investigation of main sequence Hipparcos and Tycho catalog stars with 22 micron emission in excess of photospheric levels. This warm excess emission traces material in the circumstellar region likely to host terrestrial planets and is preferentially found in young systems with ages < 1 Gyr. Nearly a hundred new warm debris disk candidates are detected among FGK stars and 150 A stars within 120 pc. We are in the process of obtaining spectra to determine spectral types and activity level of these stars and are using HST, Herschel and Keck to characterize the dust, multiplicity, and substellar companions of these systems. In this contribution, we will discuss source selection methods and individual examples from among the WISE debris disk candidates.