

Bright 22 μm Excess Candidates from WISE Survey

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We present a catalog which includes 141 bright candidates (≤ 10.27 mag, V band) showing the infrared (IR) excess at 22 μm . Of which, 38 stars are known IR excess stars or disk, 23 stars are double or multiple stars and 4 are Be stars. While the remaining more than 70 stars are identified as the 22 μm excess candidates in our work. The criterion of selecting candidates is $K_s - [22]_{\mu\text{m}}$. All these candidates are selected from *WISE* All-sky data cross-correlated with *Hipparcos* Main Catalog and the likelihood-ratio technique is employed. Considering the effect of background, we introduce the *IRAS* 100 μm level to exclude the high background. We also estimated the coincidence probability of these sources.

In addition, we presented the optical to mid-infrared SEDs and optical images of all the candidates, and gave the observed optical spectra of 6 stars with NAOC's 2.16-m telescope. To measure for the dust amount around each star, the fractional luminosity is also provided. We also test whether our method of selecting IR excess stars can be used to search for extra-solar planets, we cross-matched our catalog with known IR-excess stars having planets but none is matched. Finally, we give the fraction of stars showing IR-excess for different spectral type of main-sequence stars.