

ABSTRACT

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Galaxy Detection in 2MASS: Global expectations and results from several fields

An algorithm has been developed and used to find galaxies in the 2MASS data. It uses the central surface brightness and measured size to discriminate galaxies from the much larger stellar population. Additional tests reject contaminants such as double stars. Simulations have demonstrated that this galaxy algorithm performs with high completeness and reliability above integrated galaxy magnitudes of $K_s = 13.5$ mag. The reliability is limited currently by chance coincidences of three stars within a radius of $10''$, which is important only below galactic latitudes of 10 degrees. Results for two surveyed fields at $b = -26$ and $b = 90$ degrees are in agreement with these simulations,