N17b   Data Exploration and Analysis Software for Deep, Large Area Photometric Surveys

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Making full use of the wealth of information provided by deep, large area photometric surveys requires novel statistical methods and software supporting the interactive exploration of datasets. We present our data analysis software for large photometric surveys along with initial scientific results gleaned from its use.

The software provides facilites for 1) catalog merging, 2) statistical analysis, 3) synthetic dataset production, 4) astrometry and photometry based selection, and 5) diagram production and exploration.

We present application of the software to the IRSF Magellanic Clouds Point Source Catalog (Kato 2007) and the Magellanic Cloud Photometric Survey of Zaritsky et al. (2000). The merged data subset contains approximately 1.8 million sources, or 90% of all high S/N sources in the former survey.