

Abstract Submitted
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Searching for Protostars using MYStIX GREGORY ROMINE, ERIC FEIGELSON, Penn State — The MYStIX data set synthesizes photometric data in the Xray, nearIR, and farIR for 20 star forming regions in the nearby galaxy with rich OBdominated clusters. Data are obtained from NASA's Chandra Xray Observatory, the UKIRT telescope in Hawaii, and NASA's Spitzer Space Telescope. This project attempts to utilize the MYStIX data sets and ESA's Herschel mission farIR cloud maps to find protostellar candidates within dense cloud cores of the star forming regions. Within the data set are stars with strong infrared excesses indicative of dusty protoplanetary disks at the Class I stage of protostellar evolution. In addition, Xray sources with very high extinction are present that may represent enshrouded protostars. The study will describe the selection process for candidate protostars, reducing contamination from extraneous Galactic and extragalactic objects. Candidates are then compared to known protostars in the regions, and we provide an atlas and catalog of the resulting candidate protostars.

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