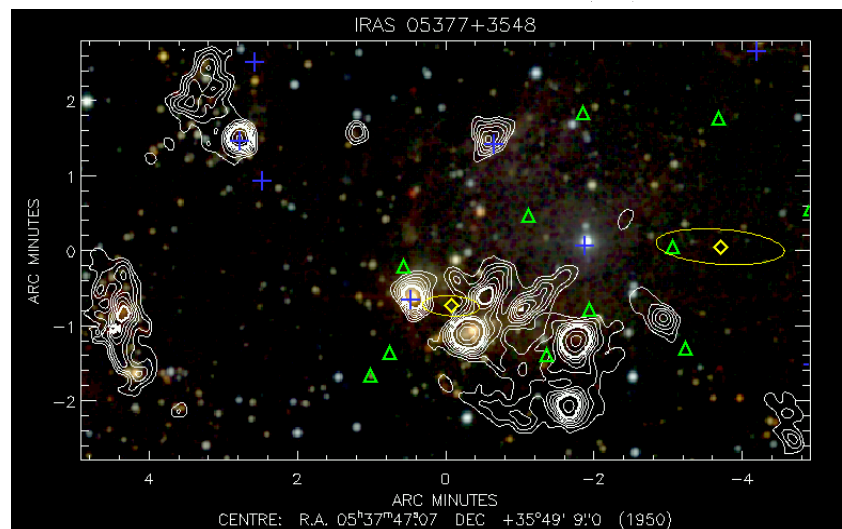


In a search for young proto-stars, we selected 47 of the 67 FIR-brightest IRAS sources in the outer Galaxy (excluding well known regions like Orion and W3) and mapped relatively large regions around them in the millimetre continuum. We present these maps together with near, mid-infrared, and radio data collected from the 2MASS, MSX, and NVSS catalogs. Further data from the literature on detections of high-density tracers, outflows, and masers are added. The multi-wavelength data is used to characterize each observed region. The compiled database is a valuable tool for further detailed investigations of selected massive star-forming regions as well a useful collection of general properties of these regions. Despite their importance, these results are only by-products of our original goal: The search for the youngest stages of star formation. We can present eleven massive pre-stellar core candidates.

We are going to publish the millimetre continuum maps together with an NIR image and the MSX and NVSS catalog data. The data will be presented like the figure to the right. The millimetre map is overlaid on the 2MASS image. The crosses denote MIR sources and the triangles denote radio sources from MSX and NVSS data respectively. The diamond with the ellipse mark the location of the IRAS source.



IRAS 05377+3548:

This region is the most fragmented region in our survey. It features a lot of separated prominent cores and various elongated structures. The western area is populated with NVSS radio sources (green triangles) coming from a large emission nebula. MSX sources (blue crosses) are associated to two cores and to the star BD+35 1201, an O9.5V star. The two cores in the center show K-band counterparts. The associations at different wavelength indicate different evolutionary stages. The two cores west of the centre are similar in mass ($50\text{-}60M_{\odot}$) and shape to the two in the centre, but lack NIR and MIR emission. This suggest that these cores are younger and less evolved and may be intermediate-mass pre-stellar cores.

Massive Pre-stellar Core Candidates:

Little is known about massive pre-stellar cores and the initial conditions for massive star formation. We identified 11 massive pre-stellar core candidates in five regions in our survey for further study with millimetre interferometers and FIR mission like Spitzer, SOFIA, or Herschel:

- . IRAS 03064+5638 #1a: Quiescent part of a double-peaked cloud core.
 - . IRAS 04073+5102 #2, #4, #6, #7: A ring of cloud cores around a star cluster.
 - . IRAS 06058+2138 #1: A single peaked cloud core, but the MSX and IRAS sources are offset by $20''$.
 - . IRAS 06073+1249 #2: A relatively small cloud core compared to the main component, but still massive.
 - . IRAS 06105+1756 #1a, #1b, #2, #3: The main component (1a) has an IRAS and MSX source only on its flanks.
- We regard cloud cores as candidates for massive pre-stellar cores if they have no association at any other wavelength within $10''$ of the peak and have a mass higher than $100M_{\odot}$.