THE STAR FORMATION HISTORY OF ORION AND ITS ENVIRONS

NAG5-10545

Annual Report

For the Period 15 March 2001 through 15 February 2002

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January 2002

Prepared for

National Aeronautics and Space Administration
Goddard Space Flight Center, Greenbelt, MD

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The Smithsonian Astrophysical Observatory
is a member of the
Harvard-Smithsonian Center for Astrophysics

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During this period, we have obtained the following observations of the Orion associations:

Optical Photometry: During the Winter and Fall 2001 observing campaigns, we obtained multifilter photometry using the Quest camera on the 1mt Schmidt of the Venezuelan National Observatory, to continue the survey of the Orion clouds. In the Winter 2001 season, we obtained photometry for 9 scans at DEC=+5, 3 scans at DEC=-5, and 2 scans at DEC=-3, while 2 additional scans at DEC=-3 were obtained during the Fall 2001 observing campaign (the width of each scan is 2.3 arc minutes). The photometric survey has not been completed this season because the instrument was damaged by lightening on Sep 2001 and operations were suspended until Dec 2001. Observations are still under way. Nonetheless, we have enough scans at -3 and +5 to start selecting candidates for spectroscopic follow up on the next season.

Spectroscopy: Spectra of more than 300 objects was obtained with the FAST spectrograph on the Mt Hopkins 48" telescope during observing campaigns Jan-March 2001, and Oct-Dec 2001. Bad weather prevented observations with Hydra on the WIYN telescope on KPNO in Jan 2001. The FAST spectra are been analyzed to select the young population of the regions.

Near IR Photometry: Observations in the JHKL bands were obtained for a sample of 20-30 objects in Ori Ia and Ib from scan centered at DEC=-1, with the StellIRCam on the Mt Hopkins 48" telescope on Nov 2001. L band observations will be effective for picking up objects surrounded by accretion disks, in which inner disk holes prevent having any excess at shorter wavelength bands.

Mid IR Photometry: Observations at 10μm and 18μm were obtained in que mode for a sample of 20 objects in Ori Ia and Ib in the same regions as the near IR photometry with the Gemini-South telescope.

These new data is presently been reduced and analyzed, together with data from the observing campaigns of 2000. Analysis of Hydra fields at strips centered at DEC=-1 and +1 have confirmed 105 more candidates as low mass pre-main sequence objects. In addition, every target was detected at 10 μm and a few at 18μm. With these data, combined with our optical and JHKL photometry, we will construct spectral energy distributions. This will allow us to begin studying the structure of disks around low mass T Tauri stars in the distributed population of the Orion clouds, for direct comparison with that of Taurus. Ours is the first determination of the infrared emission of protoplanetary disks around low mass stars in the Orion region.