Princeton University
Department of Astrophysical Sciences

Announces the

2003 Lyman Spitzer, Jr. Lecture Series

From Darkness Shall Come Light: An Observational Overview of Star Formation in the Galaxy

Presented by

CHARLES J. LADA
Harvard-Smithsonian Center for Astrophysics

General Astronomy Colloquium*

Tuesday, May 6th
4:15 p.m.
Peyton Hall Auditorium

"From OB stars to the Deuterium Burning Limit: Embedded Clusters and the Initial Mass Function"

Once formed, the subsequent life history of a star is essentially predetermined by one parameter, its mass at birth. Consequently knowledge of the frequency distribution of stellar birth masses and the variation in space and time of this distribution is of fundamental importance for understanding the evolution of stellar systems from clusters to galaxies. The functional form of this initial mass function (IMF) is not predicted by stellar evolution theory or by existing theories of star formation. The IMF must be determined directly from empirical data. Young embedded stellar clusters provide important new laboratories for IMF measurements. For example, studies of such clusters enable a determination of the IMF over a range of mass significantly greater than previously possible, a range that now extends deep into the substellar mass regime to masses near the deuterium burning limit. In this colloquium I will discuss how infrared studies of embedded clusters are leading to significant improvements in our knowledge of the functional form and universality of the IMF and the implications of this new knowledge for our understanding of the star formation process.

Lectures
Peyton Hall Auditorium

Lecture 1:	Thursday, May 8	2:00 p.m.	*OB Associations, GMCs and Embedded Clusters, the Fundamental Units of Galactic Star Formation*
Lecture 2:	Friday, May 9	2:00 p.m.	*From Protostars to Protoplanetary Disks: the Nature of the Youngest Stellar Objects*
Lecture 3:	Monday, May 12	2:00 p.m.	*Seeing Light Through the Dark: Infrared Extinction and the Structure of Dark Clouds*
Lecture 4:	Wednesday, May 14	2:00 p.m.	*Probing the Initial Conditions of Star Formation: Lessons from a Black Cloud*

**Refreshments will be served immediately following the Colloquium in the Peyton Hall Reception Area*