

Abstract Submitted
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Low Mass Stellar Objects: The Early Years Near to Mid Infrared Spectrographic Studies of Protostars and Protoplanetary Disks/Envelopes in Taurus-Auriga GAIL ZASOWSKI, University of Tennessee–Knoxville, DAN WATSON, JOEL GREEN, BEN SARGENT, BILL FORREST, University of Rochester, SPITZER IRS DISKS TEAM TEAM — The study of young stellar objects (YSOs), and their accompanying dust/gas envelopes and disks is a significant and rapidly growing area in the field of astrophysics. Using spectroscopic data from the new Spitzer Space Telescope, I analyzed several Class I protostellar sources to identify characteristics that could be used in modeling these objects. First, the spectra were extracted from the raw Spitzer data and put into usable format. Then each source was fitted with representations of the spectral continua; these were used to calculate optical depths of the major peaks and features. Plotting these data revealed several trends, such as the close correlation between H₂O and CH₃OH ices. Laboratory ice spectra were fit to the strong 15.2 μ m CO₂ feature of some objects. The apparent crystalline structure of some of these CO₂ features was studied. Much work remains to be done before a comprehensive understanding of these sources is reached.

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