H Jacob Borish (University of Virginia, graduate)

Andreea Petric (Gemini Observatory)
Aaron Evans (University of Virginia)
Lee Armus (Spitzer Science Center)
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Jeffrey Rich (Carnegie Observatories)

Presentation Requested: poster
Category: Assembly of Galaxies / Mass & Structure Evolution
Question: Other

Near-Infrared Line Emission in the Nuclei of Luminous Infrared Galaxies in GOALS

We present preliminary results from a medium resolution ($R \sim 3000$) near-infrared spectroscopic TRIPLESPEC survey of Luminous Infrared Galaxies (LIRGS; $L_{ir} > 10^{11}$ $L_s un$) in the local universe ($0.003 < z < 0.08$). These galaxies are observed to be mostly majors mergers of gas-rich galaxies which are powered by star formation or AGN - dust obscuration complicates the interpretation of their nature from optical observations alone. Our sample is drawn from the Great Observatories All-Sky LIRG Survey (GOALS) and covers the full range of luminosity within GOALS (10^{11} L_{sun} $<$ $L_{ir} < 10^{12.4}$ $L_s un$). With these data, we search for optically obscured AGN, estimate nuclear star formation rates, and search for outflows associated with nuclear starburst or AGN. Finally, we made use of models of Hollenbach, Chernoff, and McKee (1988) to distinguish of shock-induced line emission from pure HII region emission.