



# PHYSICS AND ASTRONOMY SEMINAR

## Kristi Webb

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### “Ages and star formation histories of galaxies in the GOGREEN spectroscopic survey”

#### Abstract

The Gemini Large Program, Gemini Observations of Galaxies in Rich Early Environments (GOGREEN) is an imaging and deep spectroscopic survey of 21 galaxy systems at  $1 < z < 1.5$ . Some of the main science goals are to measure the role of environment in the evolution of low-mass galaxies, and measure the dynamics and stellar contents of their host haloes. The sample of galaxies were selected to span a factor of  $\sim 10$  in halo mass, and have deep enough spectroscopy to be statistically complete for stellar masses of  $\sim 10^{10.3}$  solar masses for all galaxy types over the redshift range. The spectroscopy is  $\sim 60$  percent complete as of the semester 18A, with an anticipated final sample of  $\sim 500$  new cluster members. In combination with existing spectroscopy on the brighter galaxies, GOGREEN will be a large legacy cluster and field galaxy sample with a wide range in stellar mass, halo mass, and cluster-centric radius. I will discuss the main goals of the survey, as well as the current status of several ongoing projects with the preliminary data. The focus of my project is to measure the star formation histories from the spectra of quiescent galaxies of different masses in different environments, and to distinguish between quenching mechanisms.

Tuesday, June 5, 2018

1:00 p.m.

DSB – Room C126