

Spectroscopic Observations of Nearby, Young, Low-Mass Stars

Laura Vican¹, David Rodriguez, and Ben Zuckerman

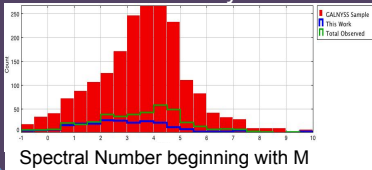
¹UCLA, lvican@ucla.edu; ²Universidad de Chile, drodrigu@das.uchile.cl; UCLA, ben@astro.ucla.edu

We used the Keck 10m and Shane 3m to observe ~200 stars in the GALNYSS catalog.

The Sample

Targets were taken from the **GALEX Nearby Young-Star Survey (GALNYSS) catalog** (PI: David Rodriguez).

They are **nearby, low-mass stars** with UV emission indicative of youth.



The Observations

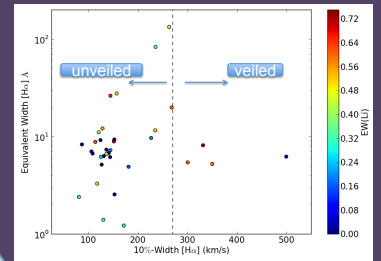
We used low and high resolution spectrographs to search for spectroscopic signatures of youth.

Telescope	Instrument	Resolution
Keck 10m	HIRES (echelle)	~50,000
Shane 3m	Hamilton (echelle)	~40,000
Shane 3m	Kast (slit)	~2,500

For observations with echelle spectrographs, we were also able to calculate radial velocities and galactic space velocities (UVWs).

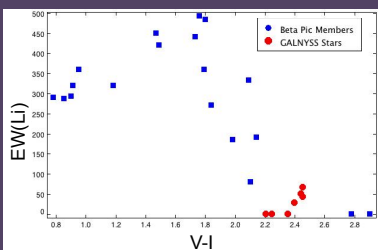
H-alpha Emission

We were able to measure radial velocities for 40 stars in our sample. Several of our targets show **evidence of veiling**.



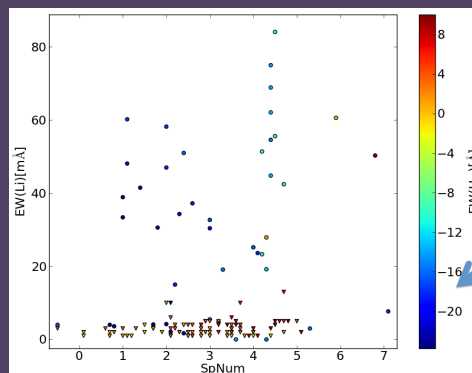
Of 160 reduced spectra, 52 stars had detectable lithium indicative of youth.

Moving Groups



Seven of the stars with echelle spectra (and thus RVs) appeared to be **members of beta Pic** according to their UVWs and lithium abundances.

Lithium Abundances



Most stars with high levels of Li also have H α in emission

Future Work

Upcoming Papers on:

an M-dwarf binary system with signatures of extreme youth and accretion

a group of co-moving stars not associated with any other moving group

new low-mass members of the Beta Pic moving group

We continue to perform high-resolution spectroscopy on stars from the GALNYSS catalog.