

## Status of First 699

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### 1. Work Done So Far

I have reduced the raw HIRES spectra of the sample of stars to be examined as presented in my proposal (15 stars, a subset of Ann's data). This has included more observation time on some of the stars in order to achieve a higher signal to noise (This past June and January). I calculated preliminary abundances of Beryllium for 8 of my stars. The abundances were calculated using MOOG, a program that can be used to generate synthetic spectra for comparison purposes, created by Chris Sneden. The models were created using values from the literature as a starting point then adjusting the temperature and  $[\text{Fe}/\text{H}]$  to better fit lines in the Beryllium region. I presented these results as a poster at the Keck Science Meeting at UC Irvine this past Friday, 9/15/06. A (very large) JPEG of the poster can be found on my webspace at <http://ifa.hawaii.edu/~jrich/Presentation1.jpg>.

### 2. Work To Be Done

I plan to generate new models for the stars in my sample by calculating new stellar parameters from the spectra themselves. The HIRES spectra cover a broad enough spectral region to include several Fe I and II lines. I have measured the equivalent widths of these lines for my stars and plan to use the "abfind" driver in MOOG to determine Temperature, Fe abundance and  $\log g$  from these results, in order to generate more accurate models for my stars, which in turn will allow for more accurate Beryllium abundance calculations. I can complete this within the next four months and plan to present the results at AAS in Seattle.

It may also be possible to add more stars to my sample, as there is an upcoming observing run in October and I have not considered any of the other stars aside from my own in Ann's recent observing runs. This is not necessary to complete the project and was not originally planned. Another possible result is Oxygen abundances, calculated from the OH line in the Beryllium spectral region, though again this is not a necessity.