

Observations with the Coudé Spectrograph

The first coudé run of the semester saw a gaggle of astronomers (Tom Bolton, Doug Gies, Gordon Walker and Stevenson Yang) working with the spectrograph on two projects simultaneously. The first, a study of X-ray binaries, had limited success due to slower than expected speed of the instrument. Better results were obtained for the second project, precision radial velocities of Delta Scuti stars. Alan Batten followed, continuing his program of photographic radial velocities.

In August M. and F. Spite continued their project of Reticon spectroscopy of extreme Population II stars. One exciting result already realized from this program is the determination of the primordial lithium abundance. The derived abundance suggests the universe is open, and this result is not subject to as many uncertainties as similar analyses of deuterium.

Ann Boesgaard then came to try using the spectrograph in the ultraviolet. It proved to be somewhat slower than hoped, but she nevertheless obtained some useful data in her search for lines of interstellar beryllium at 3130 Å. Equivalent speed was one hour for signal-to-noise ratio 100 for a star with $U=2.25$ at 1.8 Å/mm. It should be noted that atmospheric extinction and dispersion can significantly affect exposure times at these short wavelengths.

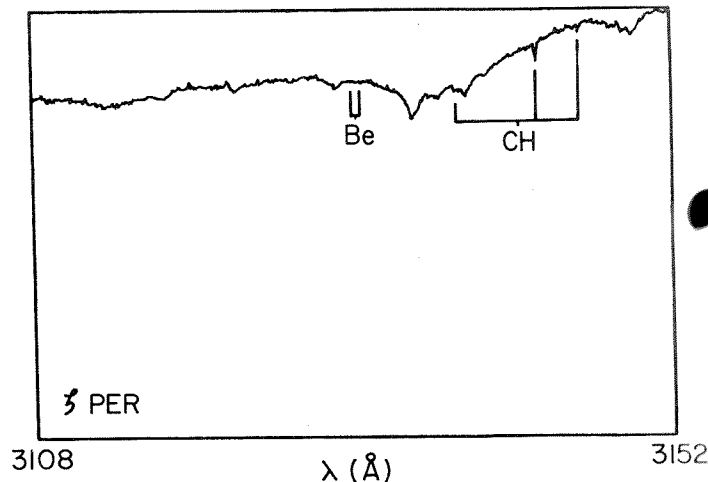
Bruce Campbell continued his program of precision radial velocities of solar-like stars in four runs through the semester. Some progress has been made in the reduction of this data with the discovery, and successful monitoring of high frequency components to dispersion curves from the spectrograph.

Roger and Guisa Cayrel returned for another coudé run in November. They obtained more good spectra for their study of extreme halo population stars. The

Cayrels, Chris Pritchett and Alan Irwin were collaborators with Bruce Campbell, who observed in December for another program of abundance analyses of field dwarfs and giants.

The electronographic camera was emplaced at the coudé for the first time in December. This was alternated with the Reticon for joint runs by P. Felenbok and F. Praderie. The C.E. was found to be substantially faster than the Reticon in a search for interstellar OH lines in the ultraviolet, while both instruments were used in a study of emission lines in Ae stars.

Sidney Wolfe and Jim Heasley tried using the Reticon to observe He I 10830 Å. Not surprisingly, the system proved much too slow to be useful at this wavelength. They switched to observation in the visible, but were unfortunately plagued by weather and telescope problems.



Spectrum of Zeta Persei in the ultraviolet obtained by Ann Boesgaard. The signal-to-noise ratio is about 450:1, and the resolution is about 0.08 Å. Known interstellar lines of CH are indicated, and the predicted positions of interstellar beryllium lines are shown. The Be lines are not detected, with an upper limit equivalent width of 0.3 m Å.

This & That

A new CFHT Observers Manual is currently in production. Our mailing list for this much expanded version is initially all major astronomical institutions in Canada and France, and some in the U.S.A. Individuals wishing to have a copy of the new manual, please send a request to CFHT headquarters (address at the end of this Bulletin).

New Observing Time Request Forms are now available. These have been

streamlined to help the reviewers and to give more data on observer requirements to CFHT staff. These new forms are available from the national agencies (see "Requests for Observing Time" in this Bulletin).

JOB OPENINGS: Two positions are currently open at CFHT, one for a mechanical technician, the other for an electronics technician. Both positions are with the summit crew. Interested persons should send a resumé to CFHT headquarters.