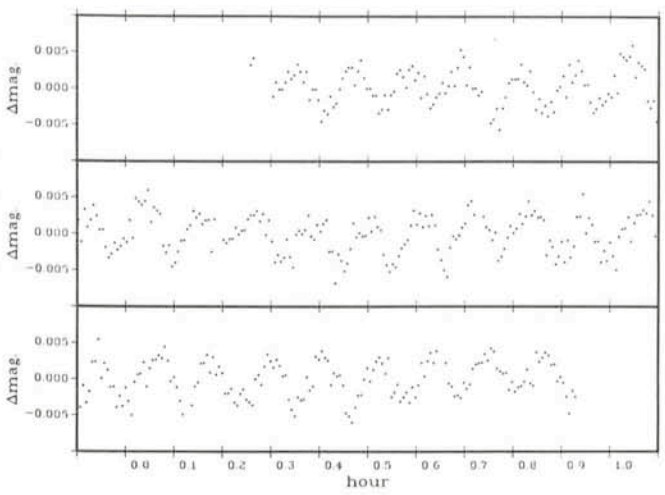

Fig. 4: *Pulsations of HD 128898 observed at La Silla with the 90 cm Dutch telescope, in the Walraven B band.*

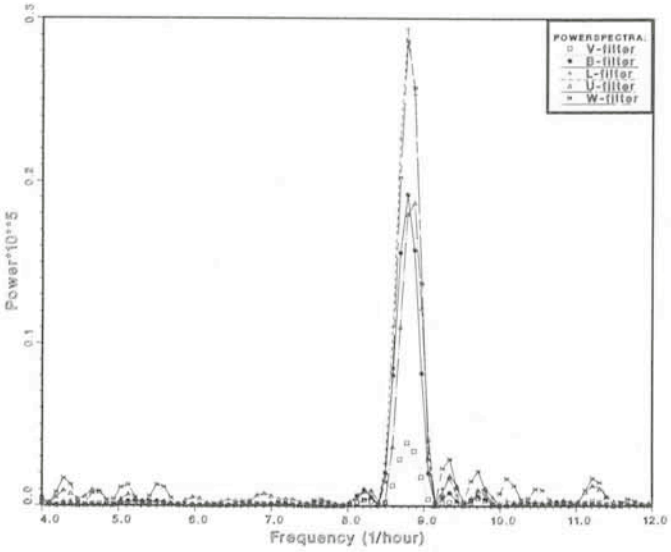

Fig. 5: *Power spectra for HD 128898 for all 5 Walraven colours.*

Another non-radially pulsating Ap star, also discovered by Kurtz, could be observed at ESO: HD 128898. The Walraven VBLUW photometer was used at the Dutch 90 cm telescope at La Silla. During an observing run of 24 nights in June 1982 we were lucky to observe HD 128898 during 3 of the total 20 clear hours of the entire run (it can be very depressing down there in Chile, sometimes!). We got excellent light curves in all colours and we present the B measurements in fig. 4. They are not typical, they are the best ones. A synopsis of the power spectra for all 5 colours is given in fig. 5. The light amplitudes are clearly a function of the wavelengths and we observed the same frequency in all five channels – as expected. Currently we are preparing a paper on these data which hopefully will allow us to specify the mode of pulsation by comparing theoretically determined phase-shifts for colours with our observations.

The other members of this third group of Cp stars were also all discovered by Kurtz and are: HD 24712, HD 60435, HD 83368, HD 137949, HD 201601 and HD 217522. Kurtz proposed a simple model which looks very plausible, but unfortunately, is contradicted by theoreticians. His model is called the *oblique pulsator.*

For this model, the axis of pulsation is aligned with the magnetic field axis. Therefore a maximum amplitude should be observed when looking at the magnetic pole and no pulsation at all when looking at the magnetic equator. This picture corresponds exactly to what we observe. The pulsation amplitude is modulated by the stellar rotation. Secondary frequency peaks are observed in the power spectra relative to the main pulsation frequency and are separated by almost exactly the stellar rotation frequency. But here come the theoreticians. For an observer moving with the rotating star, Coriolis forces perturb the dynamics of the oscillations which lead to a precession of the pulsation axis. Consequently, the frequency splitting should not correspond exactly to the rotation frequency, but should be slightly larger. However, their very crude model calculations also predict to first order that the axis of pulsation should *not* be aligned with the magnetic field.

This time the observational evidence is very strong and different observers agree surprisingly well – at least in the eyes of somebody who has been working in this field already for some time. So we can relax and mumble, "Too bad for the theoreticians!" Can we really relax? Definitely not. More and better determined power spectra are necessary. Reliable abundance determinations and magnetic field measurements are lacking for most of the stars mentioned in this article and simultaneous light- and velocity measurements would considerably ease the difficult task of oscillation-mode determination.

And still more questions are in the air: Why do we observe such high overtones and only very few of them? Is the pulsation axis always aligned with the magnetic axis? Does the magnetic field, a density discontinuity or some other effect trap selected modes? How do rapid oscillations correlate with T_{eff}, log g, v·sin i, H_{eff}, i, β and Z?

There are lots of problems, but lots of exciting results can be expected. Why is not one of the telescopes on La Silla completely devoted to Ap star research?

Workshop on ESO's Very Large Telescope

A workshop on the subject of Very Large Telescopes (VLT) took place at the Institut d'Etudes Scientifiques de Cargèse (Corsica): it was attended by about forty invited participants. During three and a half days (May 16–19, 1983) the following topics were presented and discussed: scientific objectives for galactic and extragalactic research; instrumental requirements and possibilities (different wavelength regions, auxiliary instrumentation, detectors, interferometry, etc.); ESO's New Technology Telescope as a precursor to the VLT; projects existing outside ESO; ESO's VLT studies and options; site selection; general discussion. While it was undoubtedly too early to come to definite technical conclusions, a number of points were clarified and it was absolutely clear that there does exist a strong support on the part of the scientific community in Europe for the idea of a VLT. The workshop was followed in Cargèse by a meeting of ESO's Scientific and Technical Committee which strongly recommended the setting up of a group of persons whose activities will be entirely devoted to the VLT. Such a recommendation was endorsed by the Council on June 6: a VLT project group will thus be created so that technical studies, site surveys, etc. are to begin in the very near future.

The proceedings of the Cargèse VLT workshop are presently in press and their publication is scheduled for September 1983.

J.-P. Swings