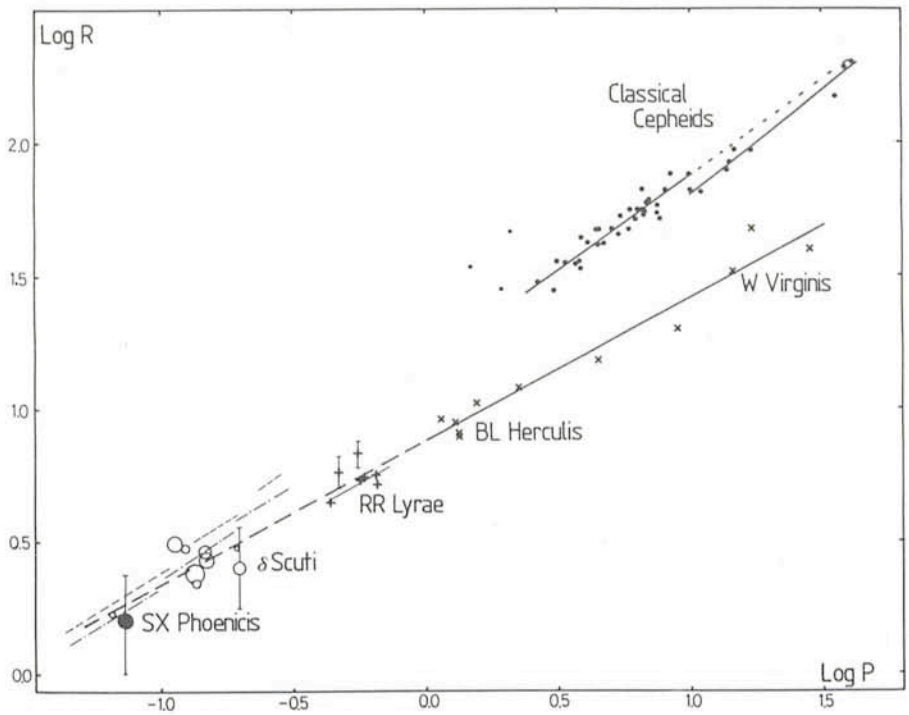

Figure 7: *The log R vs. log P diagram for six classes of pulsating stars. The 4 stars with error bars are RR Cet, DX Del, BS Aqr, and DY Peg (present work).*

ESO Information and Photographic Service

ESO has established a new service, which from now on handles the organization's public relations matters. It is located at the ESO Headquarters at Garching. It incorporates the functions of the former ESO Sky Atlas Laboratory and is directly attached to the Office of the Director General. The sale of conference proceedings, etc. will also be taken care of by this service.

The ESO Information and Photographic Service will inform the media and interested persons about events at ESO of general interest. These will include results of scientific research (in particular new discoveries) made at ESO's La Silla observatory, as well as technical matters in connection with ongoing telescope projects and auxiliary astronomical instrumentation. Major scientific meetings at ESO will also be covered.

The information will become available in the form of press releases and through the *Messenger*. It is the intention to organize Press Conferences whenever major events occur; members of the press will receive invitations in advance. Archival and current pictures, related to astronomical and other activities at ESO will be made available upon request. A catalogue is in preparation and will be announced in the June issue of the *Messenger*.

Members of the press, who would like to visit the ESO Headquarters in Garching must contact Mrs. E. Voelk (tel: (089) 320-06-276) at least one week in advance.

The Head of the ESO Information and Photographic Service is Dr. Richard M. West, a Danish astronomer who has been with ESO since 1970.

Performance Tests of DAOPHOT/INVENTORY Photometry Programmes in Dense Stellar Fields

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A comparative test of DAOPHOT and INVENTORY reduction programmes was performed at ESO Garching computer centre, in November 1985, on six frames of globular cluster fields obtained at the Danish 1.5-m telescope with the RCA CCD # 1. The scale is 0.″47 per pixel and the seing was almost constant around 1.″1–1.″3.

The comparison of the two programmes is based on three different tests:

(1) analysis of very dense stellar fields (centre of the globular cluster Pal 6); (2) analysis of very faint stars in a relatively clean field of NGC 7006; (3) comparison of the photometry in two V frames of NGC 7006.

For the first two cases the comparison is based on the quality of the resulting instrumental colour-magnitude diagrams, for the last one the frame-to-frame difference for each star is computed, and the standard deviation per magnitude interval is derived.

1. The Field of Pal 6

A couple of average B, V frames obtained from 2 V, 4-minute and 2 B, 20-minute exposures have been analyzed with INVENTORY and DAOPHOT. Figure 1 shows the approximately 110″ × 110″ region used for the comparison. 360 stars with a limiting magnitude of V~21 have been detected with INVENTORY and 300 with DAOPHOT. The average star density at V~21 is about 70 pixels per star rising at about 25 pixels per star in the 60″ × 60″ central region where most of the stars have been detected.

Figures 2 and 3 present the c-m diagram of Pal 6 obtained with INVENTORY and DAOPHOT respectively. In both plots a very red, diffuse giant branch is visible, with a possible horizontal branch at about 3 magnitudes below the giant tip. The diagrams are contaminated by the galactic background population, mostly in the blue part where a group of blue, bright stars is well defined. As demonstrated by the c-m diagrams of the field (Ortolani, unpublished data) they belong to the galactic field population. The upper part of the diagrams is comparable, but the scatter at the level of V~19.5 seems higher in INVENTORY than in DAOPHOT. The superiority of DAOPHOT in searching and centring the stars in the most crowded part of the cluster is also indicated by a visual inspection of the pictures.