material. Therefore the results obtained so far are still preliminary, however, it is obvious already that BD Pav has raised from a black dot on a plate in 1934 to an important star among the CVs.

References

Barwig, H., Schoembs, R.: 1981, *Inf. Bull. Var. Stars* No. 2031.
Barwig, H., Schoembs, R.: 1983, *Astron. Astrophys.* **124**, 287.
Barwig, H., Schoembs, R., Buckenmayer, C.: 1987, *Astron. Astrophys.*, Main Journal, in press.
Boyd, C.D.: 1939, *Harv. Ann.* **90**, 248.
Payne-Gaposchkin, C.: 1977, in: *Novae and related Stars*, p. 3.
Schoembs, R., Dreier, H., Barwig, H.: 1987, *Astron. Astrophys.*, in press.

Strengthening Research Links Between Astronomy/Astrophysics and Computing/Statistics

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In this article, a few current research directions are discussed, which relate to the common interfaces between astronomy/astrophysics, computer science and statistics. They relate essentially to organizational matters (working groups, conferences). Within the next decade contact between researchers over computer networks will become increasingly trouble-free, but for the present, contact between widely scattered researchers (and especially among those who straddle traditional disciplines) is necessarily in hard-copy form, as for example in this journal!

– Multivariate data analysis could be viewed as mid-way between statistics and graphics, and is an important part of the armoury of methods and tools available to the astronomer. Work to date in astronomy and astrophysics, using multivariate methods, has been surveyed (see Murtagh and Heck, 1986), and a text-book motivating methods, detailing the mathematics, and enumerating case-studies has recently become available (Murtagh and Heck, 1987).

– A working group was set up in 1985 to further contact between researchers with an interest in this, and related fields. It is the *Working Group for Mod-*

ern *Astronomical Methodology*, with a current active membership of a little under 100 worldwide. A bulletin is published twice yearly, and is currently contained in the *Bulletin d'Information du Centre de Données de Strasbourg* (C.D.S., Observatoire de Strasbourg, France). Further details may be obtained from André Heck or from Fionn Murtagh.

– Faced with ever-greater concentrations of astronomical data, new approaches to data handling and analysis need to be discussed and perfected. Recent years have seen the well-known workshops held at the Ettore Majorana Centre in Erice, Sicily (Di Gesù et al., 1984; 1986). The next workshop in the Erice series *(IIIrd International Workshop on Data Analysis in Astronomy)* will be held in June 1988. It will address advanced and unconventional data analysis methodologies; knowledge based systems; and parallel algorithms for data analysis. The use of fuzzy techniques and possibility theory is also an on-going topic of relevance, for low-statistics image data.

– A conference entitled *Astronomy from Large Databases: Scientific Objectives and Methodological Approaches* will be hosted by the ST-ECF in Garching on 12–14 October 1987. It functions as a follow-up conference to one enti-

tled *Statistical Methods in Astronomy* which was held in Strasbourg in 1983 (see Rolfe, 1983), and additionally addresses the topic of centralized data collections which are becoming increasingly important. The proceedings of this conference will be published by ESO.

– While it is important to focus efforts among astronomers and astrophysicists in order to tackle new problems in innovative ways, it is also important to mobilize computer scientists to bring increased efforts to bear on astronomical problems. A trend of relevance in recent years has been the increasing number of astronomical studies published in the mainstream pattern recognition literature. One important organ, internationally, in computing is the *International Association for Pattern Recognition* (IAPR). It is concerned with pattern recognition and image processing in a broad sense. It organizes major biennial conferences (the most recent in Paris in October 1986 had about 900 attendees), sponsors the journal *Pattern Recognition Letters*, and publishes a newsletter. Membership in the IAPR is by way of the relevant national pattern recognition or computing organization. The IAPR has a number of Technical Committees active in various fields of activity, and such a Technical Committee has recently been set up for astronomy and

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