To obtain reliable ages for globular clusters, two aspects are basic: first, to secure accurate photometry to faint magnitudes; and second, to derive high-quality isochrones. The modern generation of electronic detectors, such as the CCD, have made improved photometry possible, especially at magnitudes near photographic plate limits. We believe as well that the measurements should be extended to longer wavelengths, since there now exist *BVRI* synthetic isochrones provided by the work of VandenBerg and Bell (1985, ApJS, 58, 561).

At this moment we have published the results of the following ten globular clusters: NGC 104 (47 Tuc), NGC 1851, NGC 2298, NGC 2808, NGC 3201, NGC 4372, NGC 4590 (M68), NGC 5139 (ωCen), NGC 6121 (M4) and NGC 6362. All the *BVRI* CCD frames have been obtained with the 1.54 Danish telescope and the 2.2-m Max-Planck telescope at ESO - La Silla. In order to minimize errors produced by photometric transfer and differential extinction we have established photoelectric standards in the same cluster fields with the 1-m telescope at La Silla. Data for other clusters are currently being reduced at La Silla and analyzed at the Isaac Newton Institute. The CMD have been compared with the isochrones of VandenBerg and Bell. We find the ages derived for all of them are $16\pm2 \times 10^9$ yr, suggesting that the globular cluster system could be coeval, and hence that the epoch of the galactic contraction was rather short.

PHOTOMETRIC VARIATIONS OF SOUTHERN Be STARS

R.E. Mennickent and N. Vogt

Grupo de Astrofísica,
Pontificia Universidad Católica de Chile

Differential *uvby* photometry of 20 southern Be stars has been obtained with the ESO and Danish 50-cm telescopes at La Silla during 1983-91 by the ESO "Group of Variable Stars", section of Be stars. We found short-term (days to weeks). HR 4074 showed a period of 4.66 days. An outburst of amplitude -1^m in v was detected in the non-radial pulsator HR 2749 (ω CMa) in March 1986. In addition, long-term (months to years) variations were observed in several stars, being the extreme amplitudes of $0^m.02$ (HR 4074) and $0^m.50$ (HR 2749). Quasi-periodic changes were observed in HR 2492 (3.6 yrs) and HR 2545 (2.7 yrs). There are some evidence that short-term amplitudes are correlated with long-term amplitudes. The variations are being analyzed together with those of spectra taken at the Manuel Foster Observatory of the Catholic University of Santiago. We are indebted to FONDECYT (Grant 369/88) for a partial support of this research.

RESULTS OF A NOVA SEARCH: 1982 - 1991

William Liller

Instituto Isaac Newton,
Ministerio de Educación de Chile

Beginning in mid-1982 the author began a nova patrol of the Southern Milky Way using nothing more than an equatorially-driven 35mm camera with a 55mm f/1.4 lens and an inexpensive (i.e., home-made) stereocomparator. As of 1 June 1991, this search, which was coordinated with the PROBLI-COM program initiated by Mayer (see, e.g., Liller and Mayer 1987, PASP, 99, 606), has resulted in the discovery of 14 novae and nova-like objects. Two novae were found in the Large Magellanic Cloud which was searched on occasion using longer focal length cameras (135 and 300mm).

Because over a third of all galactic novae are found in the Sagittarius-Scorpius region south of declination -25^o, the region of the Milky Way most carefully searched in my patrol, a new estimate has been made of the frequency of all novae that occurred in the Galaxy during the decade of the 1980s.

During this ten-year period, a total of 30 novae were discovered with $V < 11.0$ (not including two dwarf novae and a probable "flasher"); four are recurrent (RS Oph, U Sco, V394 CrA, V745 Sco). After making incompleteness allowances owing to (1) interference of the sun and moon, (2) bad weather, (3) down time (vacations, illness, etc.), (4) and simply missed (because of rapid fading, nearness to other stars, photographic defects, etc.), it is estimated that on the average 11.1 novae occurred per year with $V < 11.0$.

Distance estimates indicate that all 30 novae occurred within a 60^o sector centered of the galactic-nucleus. An estimated additional 15 were not seen because of heavy obscuration especially near the galactic center, but the work of Ciardullo *et al.* (1986) suggests that this number is highly uncertain.

Combining all the above information leads us to the result that each year an average of 76 ± 22 novae occur in the Galaxy. This number is to be compared to the 26 found by Arp (1956, AJ, 61, 15) in one year in M 31, but Ciardullo *et al.* (1986, BullAAS, 18, 918) have found many more in this spiral by patrolling the nuclear region in Hα. Clearly, what is now needed is a deep patrol of the center of our Galaxy using Hα (or Pα) imaging devices. It would be most intriguing if we found that our Galaxy produces three times as many novae as M 31.

Rev. Mexicana Astron. Astrof., **22**, 311-312 (1991)

INDICE DE AUTORES/AUTHORS' INDEX