

## VARIABLE STAR SECTION

Director: J.Hers

### REPORT FOR THE PERIOD 1995 JANUARY 1 TO DECEMBER 31

Communications have once again been significantly improved. By the end of the year five of our observers were linked to Internet, and this made it possible to forward alerts received to nearly all but two of the more active observers with a minimum of delay. Others can be contacted by fax. Whereas in the past events such as outburst of novae and dwarf novae often remained unobserved in far-away regions because too much time had elapsed in getting the message through, this is now no longer the case. Observers in the most distant places can be reached almost instantaneously, and their reports forwarded in the same way back to the AAVSO, the Variable Star Section of the RASNZ, and the Japanese VSNET, with all of which we maintain close contact. On several occasions during the year reports on the behaviour of VW Hydri have been sent to the AAVSO on a nightly basis.

The highlight of the year was the visit by Dr Janet A.Mattei, Director of the AAVSO, and Dr John R.Percy, of the University of Toronto and Past President of the AAVSO, who came here in February to attend the Symposium on Stellar Pulsations in Cape Town. We were privileged in that they found time to meet and address amateur astronomers - and especially variable star observers - not only in Capetown, but also in Bloemfontein, Johannesburg and Durban. It was encouraging to hear at first hand that the South African observations were not merely valuable, but were crucial to the success of a number of space telescope projects. At present variable star observers are mainly located in Johannesburg, Pretoria and Cape Town, and it is sincerely hoped that observers in other centres, and particularly Durban and Bloemfontein, will now have been encouraged to give more attention to variable stars in future.

It is not always realised how very dependent variable star observers are on the existence of reliable magnitudes for the comparison stars which they use. General catalogues, like the SAO, seldom include stars fainter than 9th magnitude, and at the faint end these magnitudes are often unreliable. Observers therefore have to depend entirely on the special charts for each star which have been designed for this particular purpose. Such charts have to include stars down to 14th or 15th magnitude or even higher. Many of the charts presently in use date back to a time well before photo-electric photometry, and they may often be of doubtful accuracy. In recent times there has been a proliferation of CCD magnitudes for comparison stars, which may differ from the values now in use, and which may or may not be better. In the meantime there is a real danger that by using new and possibly untried values the continuity from the older measures to those of today might be destroyed. This problem, which is attracting more and more attention, requires the close cooperation of all the variable star organisations, and it is hoped that this will be seriously addressed in the near future.

The following visual observations have been received from observers in South Africa:

1995

<u>OBSERVER</u>	<u>TOWN</u>	<u>NO. OF OBSERVATIONS</u>
P. Bailley	Grahamstown	1
B. Burdis	Grahamstown	1
K. Burdis	Grahamstown	1
M. Datt	Grahamstown	1
S. de Villiers	Cape Town	480
K. Harrison	Grahamstown	1
J. Hers	Sedgefield	944
R.W. Jones	Fish Hoek	2188
L. Kinghorn	Grahamstown	3
N. Kriek	Britstown	6
H. Lund	Johannesburg	78
C. Mesu	Harare	5
L. Munton	Grahamstown	1
L.A.G. Monard	Pretoria	1248
X. Nocanda	Grahamstown	1
M.D. Overbeek	Edenvale	17480
M. Ritchie	Grahamstown	1
N.B. Robinson	Pretoria	9
J.A. Smit	Pretoria	1344
S. Walsh	Grahamstown	290

Total: 23651