

## *Annual report to the ASSA AGM - August 2026*

*David Blane – Director, Double and Variable Star Section*

### *Variable star observations. (50 years and counting!)*

My primary observing activities centred on obtaining precision photometric observations for submission to the American Association of Variable Star Observers (AAVSO). Observations included eclipsing binaries, cataclysmic variables, novae and other variable stars requiring long-term monitoring. All observations were reduced, analysed and submitted under my AAVSO observer code BLD, adding to my long-standing contribution to the organisation's international database.

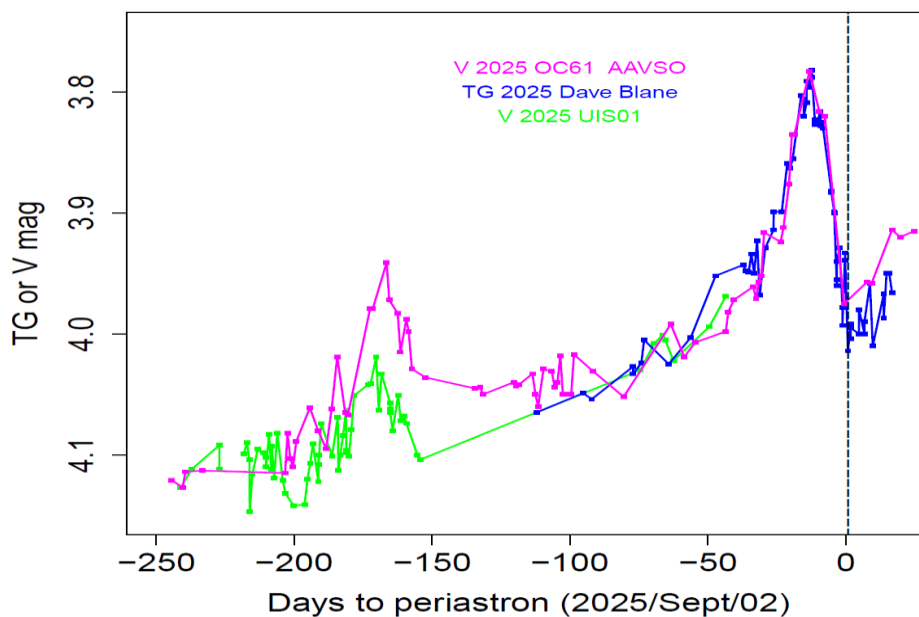
Long-term monitoring of the eclipsing binary R Arae remained one of my principal research interests. Continued observations have extended the historical light curve and provide additional data for future investigations into orbital period changes and mass transfer within the system.

Collaboration with the Variable Stars South group and other organisations on eclipsing binary stars is ongoing.

**Berto Monard**, our prolific variable star observer, continued his CCD work on high energy systems with observations being submitted to the AAVSO and other organisations this past year

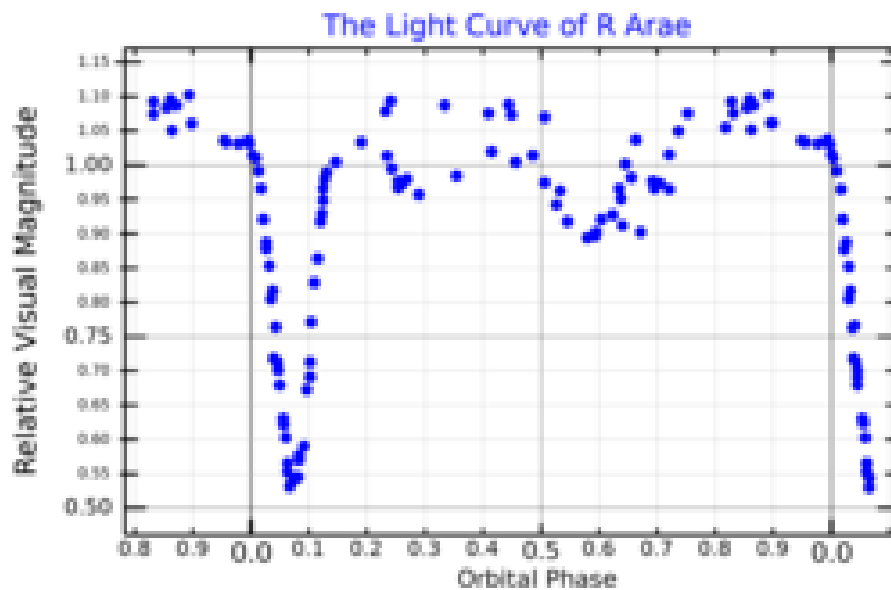
### *Eta Carinae project*

The collaboration with Prof. Augusto Damineli of the University of Sao Paulo observing the behaviour of eta Carinae as it approached periastron passage in August/September has been completed and a paper will be published later this year.



Light curve for eta Carinae

### ***R Arae project***



***From Wikipedia,***

A V band light curve for R Arae, adapted from Blane *et al.*

Early warnings of nova and supernova discoveries and other interesting events were posted to alert observers. Observations, light curves and other information was posted on Facebook and WhatsApp.

The author continued with the AAVSO's mentoring programme and is currently supporting new variable star observers, mostly in the USA.

Talks were given on Variable Stars and DSLR photometry of eclipsing binary stars.

Objectives for the coming year are to continue expanding my contribution to the AAVSO International Database, maintain long-term monitoring of selected variable stars, respond rapidly to transient astronomical events, and continue contributing meaningful observations to international astronomical research.

No variable star observations were received by the Section as most observers submit their data to organisations such as the AAVSO, BAA and VSS.

I am standing down as the Director, Double and Variable Star Section and appreciate the support provided over the years by the Astronomical Society of Southern Africa .

### ***Double stars.***

No reports of visual double star observations were received.