

## **Annual report for the Variable and Double Star Section**

*(August 2018)*

### **DSLR photometry of eclipsing binary stars.**

The author undertook several photometry projects in collaboration with members of the Variable Stars South group (formerly the Variable Star Section of the RANZ).

These measures were used in several papers published by the Variable Stars South group in New Zealand and Australia.

A group of researchers from Kutztown University, Pennsylvania, travelled to Australia to do spectroscopic observations of the eclipsing interacting binary star R ARA and photometry was done in support of this an attempt to understand this unusual system.

Other eclipsing binary stars observed included QZ CAR, BL TEL, R ARA and TU MUS.

### **DSLR photometry of Novae**

DSLR measures were made of Nova Car 2108, Nova Cir 2108, Nova Lup 2108, Nova Sct 2108, and Nova Mus 2018 were submitted to the AAVSO.

In all, a total of 1009 DSLR observations were submitted to the AAVSO and VSS.

### **Other activity**

Jose da Silva and Neville Young, from the Pretoria Centre, successfully observed the exoplanet transit of HD189733 using a DSLR camera and 10" SCT. An excellent effort!

Other variable star observers including Percy Jacobs and Tim Cooper submitted observations to the AAVSO.

Tim Cooper observed the decline of Nova Car 2018 over a period of three months and his observations were submitted to the AAVSO.

The ASSA symposium in Cape Town featured a number of variable star related papers and we were privileged to have in attendance Stella Kafka, the president of the AAVSO, who presented a paper and workshops involving variable stars.

Early warnings of discoveries were posted to alert members and observations and light curves were posted on Facebook and published in MNASSA.

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

### **Double stars.**

The author continued with measures of Southern, wide double stars with a Celestron C11 telescope and Astrometric eyepiece.

No other double star activity was reported.

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