

OGLE II Car_SC1 154935 A Peculiar Variable in Carina

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Star Name:	OGLE II Car_SC1_154935
Coordinates (J2000):	11 06 49.77, -61 30 23.5
Variability type:	peculiar; Limits, System: 13.6-15.8 (I);
Period:	Epoch: JD

Remarks:

Data from the OGLE Photometric Database (Szymanski 2005, Udalski et al. 1997) for the Galactic Disc field in Carina reveals the onset of instability in the light curve behaviour of the star OGLE II Car_SC1_154935.

Prior to JD 2450650 there was some indication of low amplitude erratic drift in magnitude, however by the time of the season commencing around JD 2450830 erratic variations of ever increasing amplitude appear.

The figure illustrates the situation, with the contemporaneous photometry from the same database for OGLE II Car_SC1 154929 shown as horizontal line points. Despite lying only 18 arcseconds away and being of a similar magnitude at the outset of the data, no variation at later times is seen in this same field star, thus making instrumental effects an unlikely cause.

Using VizieR, CDS, Starsboug to provide further information reveals that a DENIS data point, plotted as a large open triangle, gives a gunn i magnitude somewhat in agreement for at least one instance, although gunn i and OGLE I magnitudes are not of directly comparable passbands, they are within a close range.

Similarly the I band SERC N plate magnitude for a 1981 epoch (JD 2444657.6) is given as 13.47 in USNO B1.0 and 13.74 in GSC2.3.2, comparable to the mean I magnitude at the onset of the OGLE II observations, that is prior to the onset of marked variability.

The DENIS and 2MASS J-Ks colours are both around 1.5 but coincidentally imaged only one day apart by the respective systems, at the point marked by the gunn i triangle on the plot. Despite the redness of such a colour it is possible in Galactic Plane fields such as the ones in Carina for this to be a reddened blue luminous object, either by interstellar extinction alone, or also including circumstellar material. There appears to be no data available with

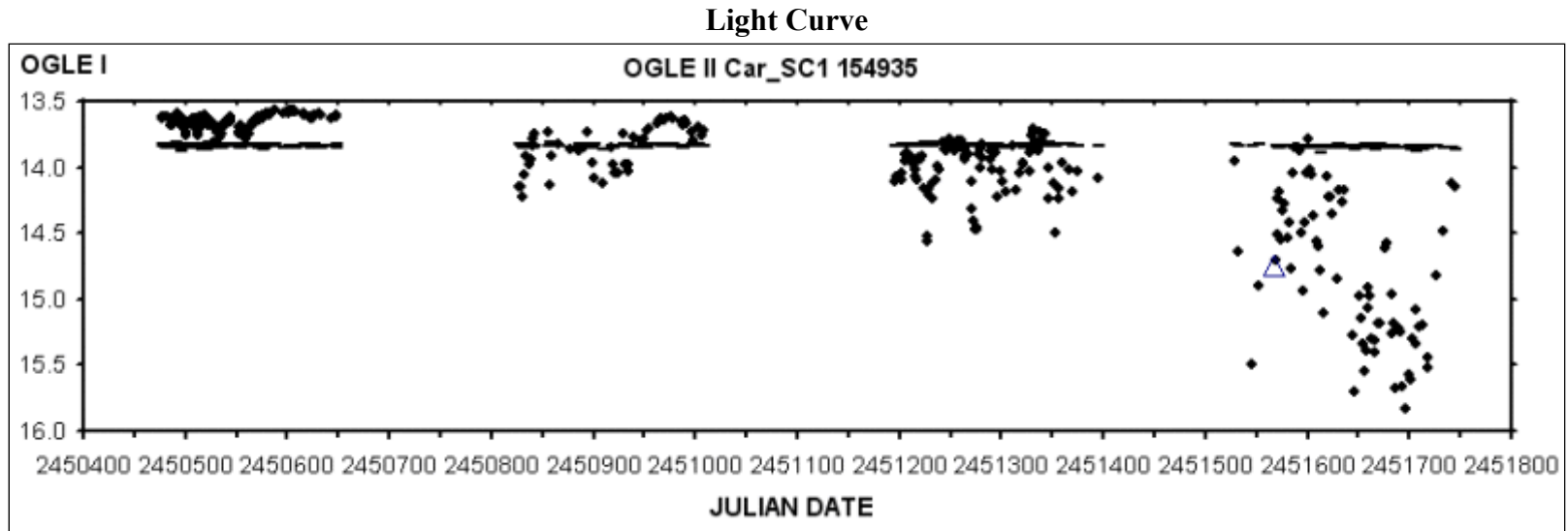
respect to this matter in any catalogue data, however.

The UCAC2 proper motion for this object is negligible at barely 10 milliarcseconds per year, so it is unlikely that this is the case of a star progressing from its imaging centroid over time with another background star coming into play at later dates. The lightcurve itself suggests continued variation, with some hint of a return to pre-event magnitudes towards the end.

References:

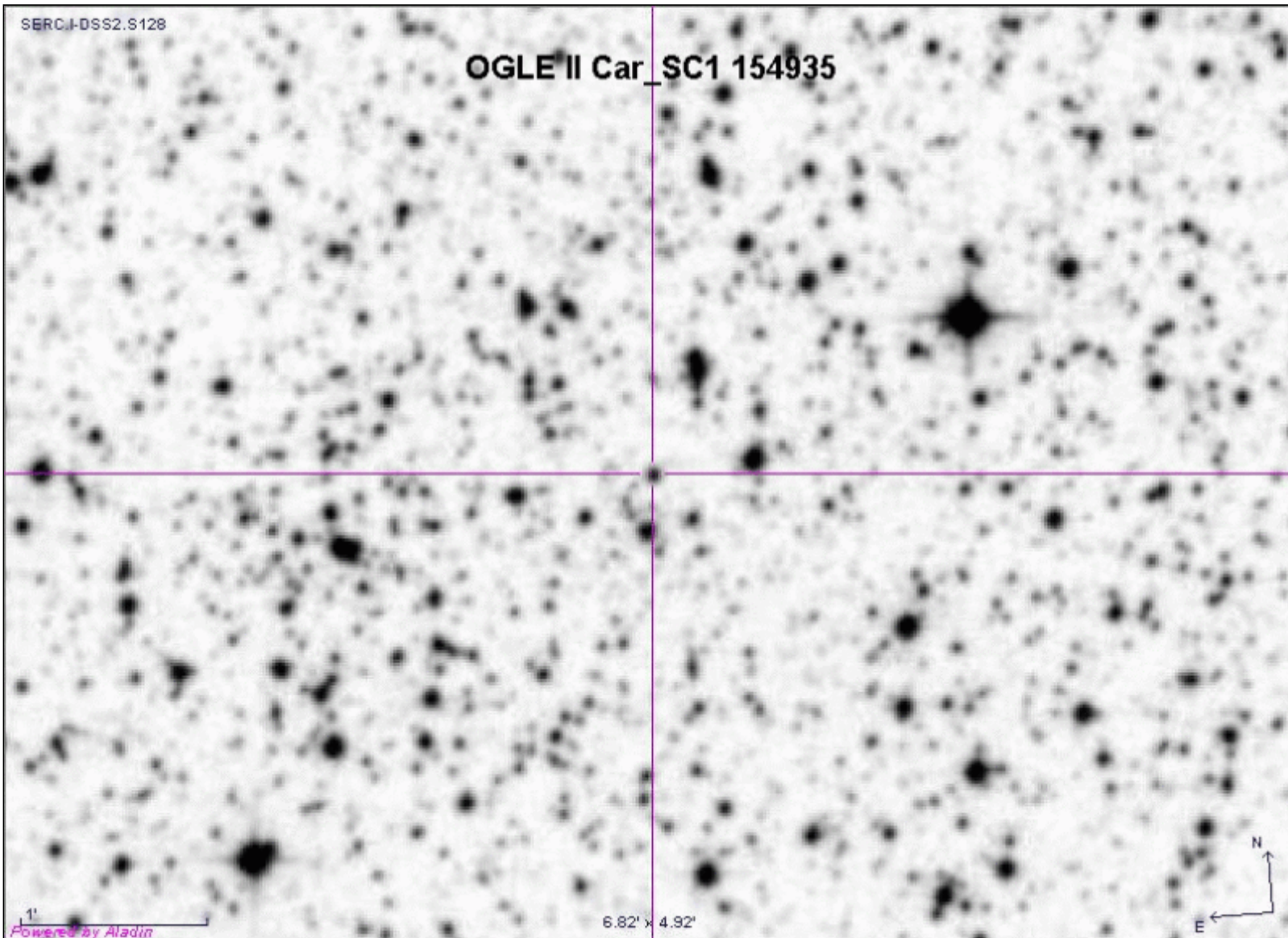
Szymanski, M., 2005, Acta Astronomica, 55, 43

Udalski, A., Kubiak, M., Szymanski, M., 1997, Acta Astronomica, 47, 319



The onset of largescale variability in OGLE II Car_SC1 154935 plotted as points, with a DENIS Gunn i point as an open triangle and for comparison over the same date range the adjacent star OGLE II Car_SC1 154929

Finding Chart



Data Source

1. [car_sc1_154935.dat](#)