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FIFTEEN NEW SOUTHERN RR LYRAE STARS

WILS, PATRICK¹; GREAVES, JOHN²

¹ Vereniging Voor Sterrenkunde, Belgium; e-mail: patrick.wils@cronos.be

² Borrowdale Walk, Northampton, UK

Selected regions in the Southern sky have been examined for new variable stars using ASAS3 survey data (Pojmanski, 2002), as described by Greaves et al. (2004). Fifteen new RR Lyrae stars (12 RRab and 3 RRC) were found in this way, of which the details are presented in Table 1: identity, coordinates and proper motions (in milliarcseconds per year) from UCAC2 (Zacharias, et al., 2003), Galactic latitude b in degrees, Johnson V magnitude range (from ASAS3), 2MASS $J - K_s$ colour, variability type, epoch of maximum (HJD – 2450000), period in days and the time to rise from minimum to maximum (M–m) in percentage of the period. The electronic version of the IBVS also provides a link to the source of the data in an additional column. Phase diagrams are provided at the end of the paper.

Of individual note is GSC 6730-0109 which may well be exhibiting the Blazhko effect in a period of around 26 days.

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References:

Greaves, J., Wils, P., Van Cauteren, P., 2004, *IBVS*, No. 5489

Pojmanski, G., 2002, *Acta Astronomica*, **52**, 397

Zacharias, N., Urban, S., et al., 2003, *Second US Naval Observatory CCD Astrograph Catalog (UCAC2)*, in preparation

Table 1: Positional and photometric details for the new RR Lyrae stars.

| GSC | RA (J2000) | | Dec | | μ_α | μ_δ | b | V | $J - K_s$ | Type | Epoch | Period | M-m |
|-----------|------------|-----------|-------|-------|--------------|--------------|------|------|-----------|---------|-------|--------|-----|
| 8946-2667 | 09 45 09.3 | -63 27 26 | -66.0 | 9.2 | 7.7 | 12.02-12.82 | 0.37 | RRab | 2707.711 | 0.60585 | 19 | | |
| 7744-0868 | 11 31 04.5 | -41 07 03 | -31.4 | 5.7 | 19.3 | 12.20-12.86 | 0.29 | RRab | 2662.232 | 0.35323 | 34 | | |
| 6722-1540 | 13 39 51.7 | -26 52 17 | -11.5 | -16.3 | 34.8 | 11.45-11.99 | 0.23 | RRab | 2722.661 | 0.59606 | 22 | | |
| 7794-0682 | 13 58 56.8 | -40 53 50 | -29.0 | -16.3 | 20.2 | 12.19-13.35 | 0.40 | RRab | 2089.131 | 0.61589 | 13 | | |
| 6730-0109 | 14 13 45.5 | -22 54 42 | -9.6 | -9.7 | 36.3 | 12.12-12.87 | 0.14 | RRab | 2427.044 | 0.44795 | 42 | | |
| 7294-2242 | 14 21 08.1 | -37 04 16 | -58.4 | -14.7 | 22.4 | 12.04-12.57 | 0.12 | RRc | 1947.337 | 0.28518 | 39 | | |
| 7298-0015 | 14 57 44.9 | -30 26 39 | -20.4 | -17.7 | 25.0 | 12.37-13.36 | 0.29 | RRab | 2761.579 | 0.62168 | 14 | | |
| 8297-1427 | 15 03 27.4 | -47 56 04 | -6.6 | -21.2 | 9.3 | 11.62-12.23 | 0.42 | RRab | 2810.578 | 0.60059 | 18 | | |
| 7834-1438 | 15 17 06.5 | -43 56 38 | -5.3 | -5.8 | 11.5 | 12.53-13.52 | 0.33 | RRab | 2642.415 | 0.60336 | 16 | | |
| 7317-0157 | 15 23 12.9 | -32 26 42 | -0.8 | -10.8 | 20.3 | 12.12-12.74 | 0.42 | RRab | 2087.583 | 0.50491 | 24 | | |
| 8722-0769 | 16 12 06.2 | -59 42 49 | -48.8 | -38.3 | -6.1 | 11.57-12.04 | 0.23 | RRc | 2639.883 | 0.37537 | 42 | | |
| 6960-0506 | 22 03 23.6 | -29 28 52 | -3.6 | -10.8 | -53.1 | 12.58-13.27 | 0.16 | RRab | 2203.060 | 0.75681 | 21 | | |
| 0570-0139 | 22 31 52.9 | +02 37 25 | 0.5 | -10.5 | -45.1 | 13.08-14.06 | 0.30 | RRab | 2873.779 | 0.53601 | 14 | | |
| 6973-1172 | 23 15 49.9 | -23 00 13 | 31.2 | -18.4 | -68.0 | 12.21-13.16 | 0.16 | RRab | 2396.451 | 0.55459 | 17 | | |
| 8831-0796 | 23 23 57.4 | -53 18 11 | -14.0 | -29.2 | -59.2 | 12.52-13.00 | 0.25 | RRc | 2069.798 | 0.36971 | 48 | | |

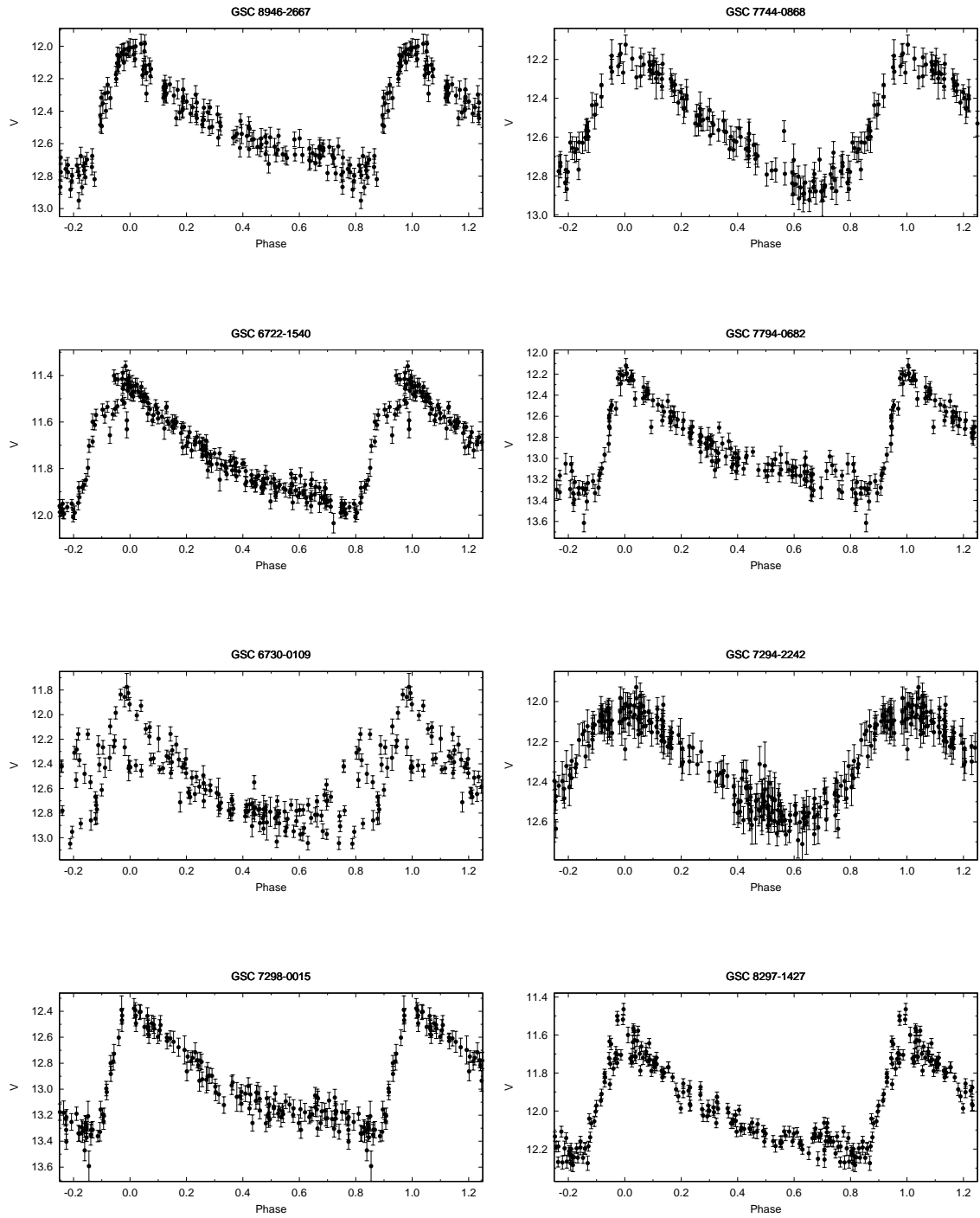


Figure 1. ASAS3 phased light curves for 8 new RR Lyrae variables.

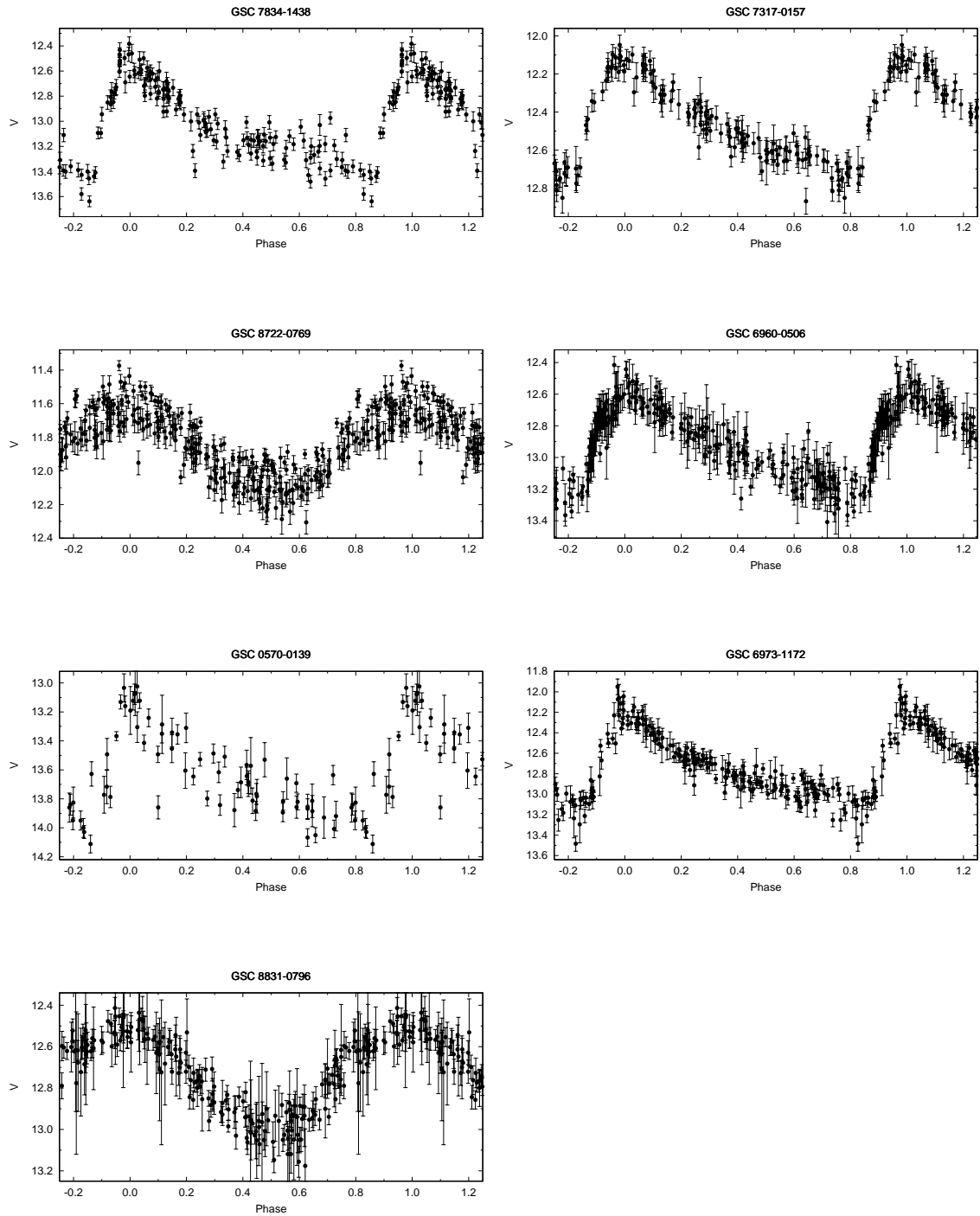


Figure 2. ASAS3 phased light curve for 7 new RR Lyrae variables.