BAV Mitteilungen

# BAV-results of observations

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***Abstract:*** *This 73rd compilation contains especially the results of visual observations of BAV-members mostly from the years 2011 and 2012. Here we publish altogether 224 minima and maxima of 108 eclipsing binaries and pulsating stars, 7 of them have been observed using CCD-Technique. The data were acquired by 16 observers.*

We introduce 5 minima timings from 3 eclipsing binaries, 9 maxima from 5 RR-Lyrae-Stars, 10 maxima from 10 cepheids, 111 maxima and minima from 61 mirastars, 80 maxima and minima from 27 semiregular, longperiod and RV-Tauri-stars and 9 maxima and minima from 2 cataclysmic variables.

The results were acquired by 16 observers in Germany and one in Austria mostly in the years 2011 and 2012. All moments of minima and maxima are heliocentric UTC.

This paper contains only unpublished observations. All the lightcurves with evaluations can be obtained from the office of the BAV for inspection.

Please use the following link for an easy access to all the publications of the BAV including the “Lichtenknecker Database of the BAV”': http://www.bav-astro.de/sfs.

**Table 1 – Eclipsing Binaries**

| Variable | | | JDhel. UTC | | Observer | O-C | Source | n | Remarks |
|---|---|---|---|---|---|---|---|---|---|
| epsil | Aur | min | 55264.6 | | Vohla, F. | | | | 3,9 mag; 3) |
| | | „max“ | 55398.4 | | Vohla, F. | | | 74 | 3,5 mag; 3) |
| | | min | 55603.1 | | Vohla, F. | | | | 3,9 mag; 3) |
| V566 | Oph | min | 55775.465 | : | Rätz, K. | -0.025 | GCVS 2009 | 9 | |
| V1016 | Ori | min | 55969.444 | : | Wenzel, K. | 0.108 | GCVS 2009 | 5 | |

**Table 2 – RR_Lyrae-Stars**

| Variable | | | JDhel. UTC | | Observer | O-C | Source | n | Remarks |
|---|---|---|---|---|---|---|---|---|---|
| AA | Aql | max | 51040.416 | | Wunder, E. | -0.003 | BAVM 78 | 15 | |
| RZ | Cep | max | 53361.411 | | Nawrath, G. | 0.149 | GCVS 2009 | 19 | |
| RR | Lyr | max | 56110.422 | : | Strüver, H. | 0.118 | AC 1205.4 1982 | 10 | |
| | | max | 56111.450 | : | Strüver, H. | 0.012 | AC 1205.4 1982 | 8 | |
| | | max | 56120.513 | | Strüver, H. | 0.006 | AC 1205.4 1982 | 8 | |
| | | max | 56124.485 | | Strüver, H. | 0.010 | AC 1205.4 1982 | 10 | |
| | | max | 56162.443 | | Strüver, H. | -0.010 | AC 1205.4 1982 | 12 | |
| VV | Peg | max | 51040.404 | | Wunder, E. | -0.032 | GCVS 2009 | 13 | |
| CG | Peg | max | 56155.447 | | Wunder, E. | 0.171 | GCVS 2009 | 16 | |

**Table 3 – Cepheids**

| Variable | | | JDhel. UTC | Observer | O-C | Source | n | Remarks |
|---|---|---|---|---|---|---|---|---|
| LO | Cam | max | 55804.98 | Kriebel, W. | 0.00 | GCVS 2007 | 56 | ) |
| BP | Cas | max | 55802.07 | Kriebel, W. | -1.18 | GCVS 2009 | 57 | ) |
| CH | Cas | max | 55804.09 | Kriebel, W. | 3.75 | GCVS 2009 | 53 | ) normal |
| CY | Cas | max | 55805.50 | Kriebel, W. | 0.88 | GCVS 2009 | 56 | ) maxima |
| SU | Cyg | max | 55819.03 | Vollmann, W. | 0.00 | GCVS 2009 | 46 | ) |
| V609 | Cyg | max | 55814.50 | Kriebel, W. | 12.15 | GCVS 2009 | 52 | ) |
| S | Sge | max | 55821.90 | Vollmann, W. | 0.00 | GCVS 2009 | 48 | ) |
| S | Vul | max | 55713.00 | Kriebel, W. | -4.62 | GCVS 2009 | 96 | ) |
| SV | Vul | max | 55812.70 | Kriebel, W. | 26.62 | GCVS 2009 | 66 | ) |
| DG | Vul | max | 55794.05 | Kriebel, W. | 0.39 | GCVS 2009 | 54 | ) |

**Table 4 – Mirastars**

| Variable | | | JDhel | | Mag | Observer | n | Rem | PH | Filter | Error |
|---|---|---|---|---|---|---|---|---|---|---|---|
| R | And | max | 55892 | | 7.2 | Vohla, F. | 38 | | | | |
| RR | And | max | 55852 | | 9.1 | Schubert, M. | 15 | | | | |
| TU | And | max | 55890 | | 8.6 | Vohla, F. | 34 | | | | |
| T | Aqr | max | 55868 | | 7.9 | Neumann, J. | 10 | | | | |
| R | Aur | max | 55877 | | 7.2 | Vohla, F. | 65 | | | | |
| X | Aur | max | 55837 | : | 8.5 | Vohla, F. | 22 | | | | |
| UV | Aur | max | 56011 | | 7.7 | Neumann, J. | 9 | | | | |
| | | max | 56027 | : | 7.7 | Vohla, F. | 36 | | | | |
| R | Boo | max | 55700 | | 7.5 | Vohla, F. | 52 | | | | |
| | | max | 55937 | | 7.6 | Vohla, F. | 20 | | | | |
| | | min | 56062 | : | 12.3 | Vohla, F. | 20 | | | | |
| S | Boo | max | 55830 | | 8.6 | Vohla, F. | 47 | | | | |

**Table 4 – Mirastars (cont.)**

| Variable | | | JDhel | | Mag | Observer | n | Rem | PH | Filter | Error |
|---|---|---|---|---|---|---|---|---|---|---|---|
| SU | Cnc | min | 55984 | | 15.5 | Böhme, D. | 15 | 2) | C | -Ir | ± 5.0 d |
| R | CVn | max | 55757 | | 7.5 | Vohla, F. | 39 | | | | |
| R | CMi | max | 55877 | : | 6.9 | Neumann, J. | 8 | | | | |
| T | Cas | max | 55500 | | 7.7 | Winkler, R. | 14 | | | | |
| U | Cas | max | 55988 | : | 8.9 | Vohla, F. | 16 | | | | |
| V | Cas | max | 55586 | | 7.05 | Winkler, R. | 17 | | | | |
| | | max | 55812 | | 6.9 | Rätz, K. | 28 | | | | |
| | | max | 55818 | | 6.9 | Vohla, F. | 55 | | | | |
| | | max | 56045 | | 7.5 | Vohla, F. | 30 | | | | |
| W | Cas | min | 55778 | | 11.6 | Vohla, F. | 54 | | | | |
| | | max | 55985 | | 9.0 | Vohla, F. | 54 | | | | |
| V667 | Cas | max | 55948 | | 9.7 | Vohla, F. | 35 | | | | |
| S | Cep | max | 55867 | | 7.4 | Vohla, F. | 145 | | | | |
| T | Cep | max | 55595 | | 6.1 | Rätz, K. | 48 | | | | |
| | | min | 55782 | | 9.9 | Schubert, M. | 59 | | | | |
| | | min | 55789 | | 10.2 | Vohla, F. | 88 | | | | |
| | | max | 55983 | | 5.7 | Vohla, F. | 88 | | | | |
| | | max | 55985 | : | 5.6 | Neumann, J. | 23 | | | | |
| PQ | Cep | max | 56013 | | 8.2 | Neumann, J. | 14 | | | | |
| omikr | Cet | max | 55491 | | 2.9 | Winkler, R. | 19 | | | | |
| | | max | 55829 | | 2.2 | Rätz, K. | 33 | | | | |
| | | max | 55829 | | 2.4 | Sturm, A. | 15 | | | | |
| S | CrB | max | 55809 | | 7.6 | Vohla, F. | 50 | | | | |
| R | Cyg | max | 55670 | | 7.6 | Vohla, F. | 49 | | | | |
| | | max | 56088 | | 7.7 | Strüver, H. | 10 | | | | |
| U | Cyg | max | 55702 | | 7.2 | Vohla, F. | 59 | | | | |
| | | min | 55979 | : | 11.6 | Vohla, F. | 59 | | | | |
| Z | Cyg | max | 55936 | | 8.1 | Vohla, F. | 31 | | | | |
| RT | Cyg | max | 55621 | | 7.4 | Vohla, F. | 28 | | | | |
| | | min | 55717 | | 12.0 | Vohla, F. | 28 | | | | |
| | | max | 55808 | | 7.3 | Vohla, F. | 28 | | | | |
| | | min | 55916 | : | 12.3 | Vohla, F. | 27 | | | | |
| | | max | 56002 | | 7.3 | Vohla, F. | 27 | | | | |
| TY | Cyg | max | 56028 | | 9.9 | Vohla, F. | 17 | | | | |
| BG | Cyg | max | 55841 | : | 9.1 | Schubert, M. | 20 | | | | |
| CN | Cyg | max | 55724 | | 9.3 | Vohla, F. | 27 | | | | |
| | | max | 55928 | : | 9.6 | Vohla, F. | 15 | | | | |
| chi | Cyg | max | 55606 | | 4.7 | Winkler, R. | 16 | | | | |
| | | max | 56021 | | 4.75 | Sturm, A. | 24 | | | | |
| | | max | 56023 | | 4.73 | Vollmann, W. | 22 | 1) | C | V | |
| | | max | 56023 | | 5.0 | Vohla, F. | 51 | | | | |
| R | Gem | max | 55944 | | 7.4 | Vohla, F. | 29 | | | | |
| ST | Gem | max | 55874 | : | 9.2 | Vohla, F. | 18 | | | | |
| ZZ | Gem | min | 55945 | | 10.7 | Böhme, D. | 28 | 2) | C | -Ir | ± 7.0 d |
| HV | Gem | max | 55876 | | 11.6 | Böhme, D. | 34 | 2) | C | -Ir | ± 4.0 d |
| S | Her | max | 55768 | | 7.3 | Schubert, M. | 24 | | | | |
| | | max | 55768 | | 7.9 | Vohla, F. | 30 | | | | |
| T | Her | max | 55670 | | 7.4 | Vohla, F. | 31 | | | | |
| | | max | 55841 | | 8.6 | Vohla, F. | 38 | | | | |
| | | max | 56007 | | 8.3 | Vohla, F. | 30 | | | | |
| U | Her | max | 55937 | | 8.1 | Vohla, F. | 34 | | | | |
| W | Her | max | 55963 | | 7.8 | Vohla, F. | 29 | | | | |
| RS | Her | max | 55669 | | 8.3 | Vohla, F. | 31 | | | | |

**Table 4 – Mirastars (cont.)**

| Variable | | | JDhel | | Mag | Observer | n | Rem | PH | Filter | Error |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | max | 55881 | | 8.5 | Vohla, F. | 20 | | | | |
| S | Lac | max | 55835 | | 7.8 | Vohla, F. | 34 | | | | |
| | | max | 55836 | | 7.8 | Vohla, F. | 34 | | | | |
| R | Leo | max | 55704 | | 4.95 | Rätz, K. | 32 | | | | |
| | | max | 56026 | | 6.0 | Sturm, A. | 17 | | | | |
| | | max | 56027 | | 6.1 | Vohla, F. | 45 | | | | |
| W | Lyr | max | 55731 | | 8.9 | Vohla, F. | 42 | | | | |
| | | max | 55735 | | 8.3 | Winkler, R. | 16 | | | | |
| | | max | 55912 | : | 8.2 | Vohla, F. | 42 | | | | |
| Y | Mon | max | 55997 | : | 9.5 | Böhme, D. | 20 | 2) | C | -Ir | ± 8.0 d |
| V562 | Mon | max | 55946 | | 12.2 | Böhme, D. | 30 | 2) | C | -Ir | ± 6.0 d |
| X | Oph | min | 55700 | | 8.6 | Vohla, F. | 75 | | | | |
| | | max | 55867 | : | 7.1 | Vohla, F. | 80 | | | | |
| Z | Oph | max | 55900 | | 8.1 | Vohla, F. | 40 | | | | |
| U | Ori | max | 56017 | | 7.0 | Vohla, F. | 24 | | | | |
| W | Peg | max | 55868 | | 8.1 | Neumann, J. | 12 | | | | |
| Z | Peg | max | 5583 | | 8.4 | Neumann, J. | 11 | | | | |
| RT | Peg | max | 53317 | | 10.9 | Marx, H. | 7 | | | | |
| U | Per | max | 55925 | | 8.0 | Vohla, F. | 63 | | | | |
| TW | Per | max | 55945 | : | 11.5 | Vohla, F. | 7 | | | | |
| R | Tau | max | 55945 | | 8.6 | Vohla, F. | 26 | | | | |
| V | Tau | max | 55865 | | 9.1 | Vohla, F. | 22 | | | | |
| R | Tri | max | 55591 | | 5.9 | Winkler, R. | 17 | | | | |
| | | max | 55856 | | 6.0 | Vohla, F. | 57 | | | | |
| R | UMa | max | 55518 | : | 7.8 | Vohla, F. | 30 | | | | |
| | | max | 55835 | | 7.1 | Vohla, F. | 38 | | | | |
| | | min | 56040 | : | 12.8 : | Vohla, F. | 38 | | | | |
| S | UMa | max | 55490 | : | 8.0 | Vohla, F. | 26 | | | | |
| | | max | 55703 | | 8.2 | Vohla, F. | 52 | | | | |
| | | max | 55933 | | 7.7 | Vohla, F. | 36 | | | | |
| | | min | 56064 | | 12.3 | Vohla, F. | 36 | | | | |
| T | UMa | max | 55610 | | 7.6 | Vohla, F. | 52 | | | | |
| | | min | 55804 | | 12.4 | Vohla, F. | 41 | | | | |
| | | max | 55871 | | 7.1 | Vohla, F. | 0 | | | | |
| | | max | 55874 | | 6.9 | Neumann, J. | 16 | | | | |
| S | UMi | max | 55657 | | 8.6 | Vohla, F. | 49 | | | | |
| | | min | 55798 | | 12.5 | Vohla, F. | 49 | | | | |
| | | max | 55984 | | 7.9 | Vohla, F. | 76 | | | | |
| T | UMi | min | 55651 | : | 11.9 | Vohla, F. | 26 | | | | |
| | | max | 55714 | | 10.5 | Vohla, F. | 26 | | | | |
| | | min | 55879 | | 12.0 | Vohla, F. | 26 | | | | |
| | | max | 55942 | : | 10.3 | Vohla, F. | 26 | | | | |
| U | UMi | max | 55761 | | 8.4 | Vohla, F. | 48 | | | | |
| | | max | 55763 | | 8.2 | Schubert, M. | 34 | | | | |
| | | min | 55920 | | 11.2 | Vohla, F. | 48 | | | | |
| R | Vir | max | 56071 | | 6.2 | Vohla, F. | 23 | | | | |

**Table 5 – Semiregular, Longperiod and RV-Tauri-Stars**

| Variable | | | JDhel | | Mag | Observer | n | Rem | PH | Filter | Error |
|---|---|---|---|---|---|---|---|---|---|---|---|
| UX | And | max | 55905 | : | 8.4 | Neumann, J. | 17 | | | | |
| VX | And | min | 55757 | | 8.4 | Neumann, J. | 21 | | | | |
| | | max | 55902 | | 7.9 | Neumann, J. | 21 | | | | |
| AQ | And | min | 55859 | : | 8.8 | Vohla, F. | 58 | | | | |
| | | min | 55887 | | 8.7 | Neumann, J. | 16 | | | | |
| V | Boo | max | 56018 | | 8.1 | Vohla, F. | 43 | | | | |
| WZ | Cas | min | 55597 | : | 7.0 | Neumann, J. | 9 | | | | |
| | | max | 55678 | | 6.6 | Neumann, J. | 9 | | | | |
| | | min | 55778 | : | 7.3 | Neumann, J. | 9 | | | | |
| | | max | 55868 | : | 6.6 | Neumann, J. | 9 | | | | |
| RW | Cep | max | 55118 | | 6.4 | Neumann, J. | 24 | | | | |
| | | min | 55240 | : | 7.1 | Neumann, J. | 24 | | | | |
| μ | Cep | min | 55921 | : | 4.0 | Vohla, F. | 197 | | | | |
| W | Cyg | max | 55943 | | 5.9 | Vohla, F. | 37 | | | | |
| | | min | 56018 | : | 7.2 | Vohla, F. | 37 | | | | |
| RS | Cyg | min | 55533 | | 9.5 | Vohla, F. | 30 | | | | |
| | | max | 55799 | | 7.4 | Vohla, F. | 30 | | | | |
| | | min | 55932 | | 9.3 | Vohla, F. | 30 | | | | |
| | | max | 56049 | | 7.0 | Strüver, H. | 10 | | | | |
| | | min | 56120 | | 8.5 | Strüver, H. | 21 | | | | |
| RU | Cyg | max | 55683 | | 8.1 | Vohla, F. | 136 | | | | |
| AA | Cyg | min | 55840 | : | 10.0 | Neumann, J. | 9 | | | | |
| | | max | 55924 | : | 8.3 | Neumann, J. | 9 | | | | |
| AF | Cyg | min | 55676 | : | 7.9 | Vohla, F. | 26 | | | | |
| | | max | 55712 | : | 7.1 | Vohla, F. | 26 | | | | |
| | | min | 55744 | : | 7.6 | Vohla, F. | 26 | | | | |
| | | max | 55780 | | 6.8 | Vohla, F. | 26 | | | | |
| | | min | 55851 | | 7.7 | Vohla, F. | 24 | | | | |
| | | max | 55893 | | 6.9 | Vohla, F. | 24 | | | | |
| | | min | 55931 | | 7.5 | Vohla, F. | 24 | | | | |
| | | max | 55962 | | 7.1 | Vohla, F. | 24 | | | | |
| | | min | 56063 | : | 7.8 | Strüver, H. | 11 | | | | |
| | | max | 56113 | | 7.0 | Strüver, H. | 20 | | | | |
| S | Dra | max | 55640 | : | 8.6 | Vohla, F. | 28 | | | | |
| | | min | 55856 | | 9.2 | Vohla, F. | 33 | | | | |
| | | max | 55938 | | 8.6 | Vohla, F. | 33 | | | | |
| | | min | 56040 | : | 8.9 | Vohla, F. | 33 | | | | |
| RY | Dra | min | 55564 | : | 7.8 | Neumann, J. | 15 | | | | |
| | | max | 55667 | | 6.5 : | Neumann, J. | 15 | | | | |
| | | max | 55874 | | 6.2 | Neumann, J. | 15 | | | | |
| UX | Dra | max | 55159 | | 6.4 | Neumann, J. | 10 | | | | |
| | | min | 55249 | | 6.9 | Neumann, J. | 10 | | | | |
| | | max | 55302 | : | 6.4 | Neumann, J. | 10 | | | | |
| | | min | 55395 | : | 6.9 | Neumann, J. | 10 | | | | |
| SS | Gem | max | 55655 | | 8.4 | Vohla, F. | 26 | | | | |
| II | Gem | max | 55881 | | 13.6 | Böhme, D. | 15 | 2) | C | -Ir | ± 4.0 d |
| X | Her | max | 55727 | : | 6.1 | Vohla, F. | 52 | | | | |
| | | max | 55883 | : | 6.1 | Vohla, F. | 59 | | | | |
| | | min | 55984 | : | 7.1 | Vohla, F. | 21 | | | | |
| | | max | 56024 | : | 6.2 | Vohla, F. | 21 | | | | |
| SX | Her | max | 56004 | : | 8.1 | Vohla, F. | 25 | | | | |
| AC | Her | min | 55826 | | 8.1 | Vohla, F. | 17 | | | | |
| | | min | 55864 | | 8.5 | Vohla, F. | 17 | | | | |

**Table 5 – Semiregular, Longperiod and RV-Tauri-Stars (cont.)**

| Variable | | | JDhel | | Mag | Observer | n | Rem | PH | Filter | Error |
|---|---|---|---|---|---|---|---|---|---|---|---|
| alpha | Ori | max | 54154 | : | 0.4 | Braune, W. | 19 | | | | |
| | | max | 54598 | : | 0.45 | Braune, W. | 10 | | | | |
| | | min | 55848 | | 0.9 | Braune, W. | 15 | | | | |
| | | max | 55973 | : | 0.2 | Braune, W. | 14 | | | | |
| X | Sge | max | 55854 | : | 8.3 | Neumann, J. | 13 | | | | |
| R | Sct | min | 55731 | | 5.75 | Sterzinger, P. | 53 | | | | |
| | | min | 55801 | | 5.75 | Sterzinger, P. | 53 | | | | |
| Z | UMa | max | 55697 | | 7.1 | Vohla, F. | 67 | | | | |
| | | min | 55807 | | 9.3 | Vohla, F. | 57 | | | | |
| | | max | 55878 | : | 6.9 | Vohla, F. | 72 | | | | |
| | | min | 55995 | | 9.3 | Vohla, F. | 43 | | | | |
| RY | UMa | min | 55613 | | 7.8 | Vohla, F. | 57 | | | | |
| | | max | 55728 | : | 6.8 | Neumann, J. | 20 | | | | |
| | | max | 55731 | | 7.1 | Vohla, F. | 57 | | | | |
| | | min | 55861 | : | 7.8 | Neumann, J. | 20 | | | | |
| | | max | 56016 | | 7.1 | Vohla, F. | 77 | | | | |
| VY | UMa | min | 54560 | | 6.3 | Neumann, J. | 15 | | | | |
| | | max | 54637 | | 5.9 | Neumann, J. | 15 | | | | |
| | | min | 54715 | | 6.3 | Neumann, J. | 15 | | | | |
| | | max | 54866 | : | 5.9 | Neumann, J. | 15 | | | | |
| | | min | 55047 | | 6.4 | Neumann, J. | 12 | | | | |
| | | max | 55104 | | 6.0 | Neumann, J. | 12 | | | | |
| | | min | 55218 | : | 6.4 | Neumann, J. | 12 | | | | |
| | | max | 55298 | : | 5.9 | Neumann, J. | 12 | | | | |
| | | min | 55385 | : | 6.4 | Neumann, J. | 20 | | | | |
| | | max | 55688 | | 6.0 | Neumann, J. | 20 | | | | |
| V336 | Vul | max | 55835 | | 8.1 | Neumann, J. | 11 | | | | |

**Table 6 – Eruptive and CataclysmicVariables**

| Variable | | | JDhel | Mag | Observer | n | Rem | PH | Filter | Error |
|---|---|---|---|---|---|---|---|---|---|---|
| SS | Cyg | max | 55743 | 8.3 | Vohla, F. | 14 | | | | |
| | | max | 55800 | 8.3 | Vohla, F. | 14 | | | | |
| | | max | 55867 | 8.2 | Vohla, F. | 14 | | | | |
| | | max | 55958 | 8.2 | Vohla, F. | 14 | | | | |
| | | max | 56010 | 8.3 | Vohla, F. | 14 | | | | |
| | | max | 56067 | 8.2 | Vohla, F. | 14 | | | | |
| | | max | 56113 | 8.8 | Vohla, F. | 14 | | | | |
| V725 | Tau | min | 55246 | 9.4 | Neumann, J. | 13 | | | | |
| | | max | 55991 | 8.6 | Neumann, J. | 18 | | | | |

**Remarks for Tables 1 to 6**

| | |
|---|---|
| : | uncertain |
| n | number of measurements |
| PH | C := ccd-photometrie / blank := visual observation |
| Error | mean error |
| 1) | ccd-camera Meade SDI Pro 3 |
| 2) | ccd-camera Canon 450D |
| 3) | these are three times inside of the minimum. The times one and three are the faintest magnitudes inside the minimum, the second time is a brightening inside of the minimum. |

**Correction to BAV Mitteilungen No. 174**

| Variable | | | JDhel | Observer | |
|---|---|---|---|---|---|
| RZ | Cep | Max | 53361,428 | Nawrath, G. | must be deleted |

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