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## BAV-resultes of observations Visual maxima and minima of pulsating and eruptive stars

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**Abstract:** *In this 90th compilation of BAV results of visual observations of variable stars obtained mostly in the year 2017 are presented, giving 149 maxima and 80 minima of pulsating and eruptive stars.*

We introduce 80 minima and 169 maxima of pulsating and eruptive stars. The results were acquired by 6 observers in Germany, mostly observed in the year 2017. The observations were made at private observatories.

This paper contains only unpublished observations. The types of the variable stars are taken from GCVS-catalog [3] or observer.

Please use the following link for an easy access to all the publications of the BAV [1] [2]:  
<http://www.bav-astro.de/sfs>

### Explanations to the table

|          |          |   |
|----------|----------|---|
| column 1 | Variable | designation from the GCVS                           |
| column 2 |          | constellation                                       |
| column 3 | Phs      | phase: maximum (max) or minimum (min)               |
| column 4 | HJD 24+  | heliocentric UTC timings of the observed min or max |
| column 5 | U        | if uncertain, mark „ : “                            |
| column 6 | Mag      | magnitude   |
| column 7 | Obs      | abbreviations, see table at the end of the list.    |
| column 8 | Type     | type of the variable star                           |
| column 9 | N        | number of measurements                              |

**Table 1 - Times of minima and maxima**

| Variable | Ext | HJD 24+ | U       | Mag | Obs  | Type | n    |     |
|----------|-----|---------|---------|-----|------|------|------|-----|
| R        | AND | max     | 57511   | :   | 6.5  | VOH  | M    | 41  |
| W        | AND | max     | 57796   |     | 7.2  | VOH  | M    | 32  |
| Z        | AND | max     | 57560   |     | 9.9  | VOH  | ZAND | 68  |
| TU       | AND | max     | 57764   |     | 8.6  | VOH  | M    | 43  |
| VX       | AND | max     | 57643   |     | 7.4  | NMN  | SRA  | 30  |
| AQ       | AND | max     | 57617   |     | 7.7  | VOH  | SRB  | 80  |
| R        | AQL | max     | 57529   |     | 6.5  | VOH  | M    | 57  |
| RV       | AQL | max     | 57670   |     | 8.9  | VOH  | M    | 18  |
| R        | ARI | max     | 57764   |     | 8.8  | VOH  | M    | 31  |
| R        | AUR | max     | 57739   |     | 7.3  | VOH  | M    | 70  |
| X        | AUR | max     | 57637   |     | 8.3  | VOH  | M    | 31  |
| X        | AUR | min     | 57722   |     | 12.9 | VOH  | M    | 40  |
| X        | AUR | max     | 57808   |     | 8.1  | VOH  | M    | 30  |
| X        | AUR | max     | 57988   |     | 9.1  | VOH  | M    | 27  |
| Z        | AUR | min     | 57637   |     | 11.1 | VOH  | SR   | 25  |
| Z        | AUR | max     | 57699   |     | 9.7  | VOH  | SR   | 33  |
| Z        | AUR | max     | 57799   |     | 10.3 | VOH  | SR   | 18  |
| Z        | AUR | min     | 57863   |     | 11.1 | VOH  | SR   | 17  |
| UV       | AUR | min     | 57446   |     | 10.4 | VOH  | M    | 23  |
| VX       | AUR | max     | 57648   | :   | 8.7  | VOH  | M    | 25  |
| AZ       | AUR | min     | 57657   |     | 12.6 | VOH  | M    | 61  |
| AZ       | AUR | max     | 57832   |     | 8.9  | VOH  | M    | 61  |
| R        | BOO | max     | 57500   |     | 6.8  | VOH  | M    | 59  |
| R        | BOO | max     | 57722   |     | 7.3  | VOH  | M    | 28  |
| V        | BOO | max     | 57515   |     | 7.6  | VOH  | SR   | 71  |
| V        | BOO | max     | 57790   | :   | 7.7  | VOH  | SR   | 95  |
| V        | BOO | min     | 57924   | :   | 9.6  | VOH  | SR   | 95  |
| R        | CAM | max     | 57461   |     | 9.1  | VOH  | M    | 58  |
| X        | CAM | max     | 57595   |     | 8.2  | VOH  | M    | 43  |
| X        | CAM | max     | 57738   |     | 8.2  | VOH  | M    | 34  |
| X        | CAM | max     | 57889   |     | 8.3  | VOH  | M    | 36  |
| X        | CAM | min     | 57955   |     | 12.6 | VOH  | M    | 36  |
| TW       | CAM | min     | 50496   | :   | 10.1 | NMN  | RV   | 29  |
| TW       | CAM | max     | 50510.5 | :   | 9.7  | NMN  | RV   | 29  |
| TW       | CAM | max     | 50550.5 | :   | 9.5  | NMN  | RV   | 29  |
| TW       | CAM | min     | 53623.5 | :   | 10.5 | NMN  | RV   | 20  |
| TW       | CAM | max     | 53643.5 | :   | 9.5  | NMN  | RV   | 20  |
| WY       | CAM | max     | 57772   |     | 10.6 | VOH  | M    | 65  |
| R        | CVN | max     | 57733   |     | 7.6  | VOH  | M    | 52  |
| R        | CAS | max     | 57885   |     | 6.5  | VOH  | M    | 66  |
| T        | CAS | max     | 57805   |     | 8.6  | NMN  | M    | 25  |
| T        | CAS | min     | 57599   |     | 10.8 | VOH  | M    | 182 |
| T        | CAS | max     | 57803   | :   | 8.6  | VOH  | M    | 182 |
| U        | CAS | max     | 57651   |     | 8.2  | VOH  | M    | 49  |
| U        | CAS | max     | 57924   |     | 9.4  | VOH  | M    | 27  |
| V        | CAS | min     | 57556   |     | 12.7 | VOH  | M    | 71  |
| V        | CAS | max     | 57659   |     | 7.3  | VOH  | M    | 71  |
| V        | CAS | max     | 57895   |     | 7.6  | VOH  | M    | 52  |
| W        | CAS | max     | 57598   |     | 8.9  | VOH  | M    | 122 |
| W        | CAS | min     | 57797   |     | 12.2 | VOH  | M    | 113 |
| SV       | CAS | max     | 57541   |     | 6.5  | NMN  | SR   | 32  |
| SV       | CAS | min     | 57747   |     | 9.5  | NMN  | SR   | 32  |
| SV       | CAS | max     | 57548   |     | 6.4  | VOH  | SR   | 51  |
| SV       | CAS | min     | 57893   |     | 9.1  | VOH  | SR   | 28  |
| WZ       | CAS | max     | 57739   | :   | 6.6  | NMN  | SRB  | 23  |
| PZ       | CAS | max     | 56944   | :   | 8.7  | NMN  | SRC  | 37  |
| PZ       | CAS | max     | 57084.5 | :   | 8.7  | NMN  | SRC  | 37  |
| PZ       | CAS | min     | 57174   | :   | 9.4  | NMN  | SRC  | 40  |
| PZ       | CAS | max     | 57220   | :   | 8.9  | NMN  | SRC  | 40  |

| Variable | Ext | HJD 24+ | U       | Mag | Obs  | Type        | n   |
|----------|-----|---------|---------|-----|------|-------------|-----|
| PZ       | CAS | min     | 57409   | :   | 9.4  | NMN SRC     | 40  |
| PZ       | CAS | max     | 57486   | :   | 9.0  | NMN SRC     | 40  |
| PZ       | CAS | max     | 57628   | :   | 8.7  | NMN SRC     | 34  |
| V0667    | CAS | max     | 57703   |     | 9.8  | VOH M       | 57  |
| T        | CEN | max     | 57877   |     | 6.3  | SM SR       | 16  |
| S        | CEP | max     | 57786   |     | 7.8  | NMN M       | 28  |
| S        | CEP | min     | 57535   |     | 9.8  | VOH M       | 128 |
| T        | CEP | max     | 57885.5 |     | 6.0  | NMN M       | 24  |
| T        | CEP | max     | 57889   |     |      | SM M        | 25  |
| T        | CEP | max     | 57876   | :   | 6.7  | SWZ M       | 10  |
| T        | CEP | max     | 57514   |     | 5.9  | VOH M       | 138 |
| T        | CEP | min     | 57670   |     | 10.0 | VOH M       | 146 |
| PQ       | CEP | max     | 57790   | :   | 8.0  | NMN M       | 20  |
| PQ       | CEP | min     | 57574   |     | 12.0 | VOH M       | 9   |
| PQ       | CEP | max     | 57830   |     | 8.6  | VOH M       | 129 |
| S        | CRB | min     | 57499   |     | 13.0 | VOH M       | 63  |
| S        | CRB | max     | 57616   |     | 7.6  | VOH M       | 74  |
| T        | CRB | max     | 57711   |     | 9.5  | VOH NR      | 68  |
| T        | CRB | min     | 57773   |     | 10.1 | VOH NR      | 68  |
| RR       | CRB | min     | 57837   |     | 8.0  | VOH SRB     | 52  |
| RR       | CRB | max     | 57868   |     | 7.8  | VOH SRB     | 52  |
| R        | CYG | max     | 57868   |     | 8.8  | VOH M       | 66  |
| U        | CYG | max     | 57610   |     | 8.7  | VOH M       | 133 |
| W        | CYG | max     | 57509   |     | 5.5  | VOH SRB     | 75  |
| W        | CYG | max     | 57936   |     | 5.6  | VOH SRB     | 77  |
| Z        | CYG | max     | 57528   |     | 8.5  | VOH M       | 64  |
| Z        | CYG | max     | 57776   |     | 7.8  | VOH M       | 48  |
| RS       | CYG | min     | 57573   |     | 9.0  | VOH SRA     | 176 |
| RT       | CYG | max     | 57762   |     | 6.8  | NMN M       | 9   |
| RT       | CYG | max     | 57507   |     | 7.5  | VOH M       | 77  |
| RT       | CYG | min     | 57625   |     | 11.7 | VOH M       | 77  |
| RT       | CYG | max     | 57695   |     | 7.3  | VOH M       | 46  |
| RT       | CYG | max     | 57910   |     | 8.1  | VOH M       | 55  |
| RU       | CYG | max     | 57495   |     | 8.2  | VOH SRA     | 169 |
| RU       | CYG | min     | 57708   |     | 8.8  | VOH SRA     | 169 |
| RU       | CYG | max     | 57868   |     | 8.0  | VOH SRA     | 100 |
| SS       | CYG | max     | 57633   |     | 8.2  | VOH UGSS    | 21  |
| SS       | CYG | max     | 57757   |     | 8.3  | VOH UGSS    | 13  |
| SS       | CYG | max     | 57874   |     | 8.3  | VOH UGSS    | 11  |
| SS       | CYG | max     | 57918.4 |     | 8.3  | VOH UGSS    | 9   |
| SS       | CYG | max     | 57956   |     | 8.2  | VOH UGSS    | 23  |
| TY       | CYG | max     | 57760   |     | 9.5  | VOH M       | 13  |
| AA       | CYG | max     | 57754   |     | 8.5  | VOH SRB     | 139 |
| AA       | CYG | min     | 57850   |     | 9.8  | VOH SRB     | 139 |
| AF       | CYG | max     | 57522   |     | 7.1  | VOH SRB     | 66  |
| AF       | CYG | min     | 57584   |     | 7.9  | VOH SRB     | 31  |
| AF       | CYG | max     | 57622   |     | 7.3  | VOH SRB     | 30  |
| AF       | CYG | min     | 57645   |     | 7.8  | VOH SRB     | 29  |
| AF       | CYG | max     | 57742   |     | 7.1  | VOH SRB     | 43  |
| AF       | CYG | min     | 58011   | :   | 7.3  | SV SRB      | 9   |
| BF       | CYG | min     | 57594   |     | 10.7 | VOH ZAND    | 152 |
| BG       | CYG | max     | 57590   |     | 10.0 | VOH M       | 58  |
| CH       | CYG | max     | 57641   |     |      | NMN ZAND+SR | 32  |
| CH       | CYG | max     | 57725   |     | 8.2  | NMN ZAND+SR | 32  |
| CH       | CYG | min     | 57745   |     | 8.5  | NMN ZAND+SR | 32  |
| CH       | CYG | min     | 57786   |     | 8.6  | VOH ZAND+SR | 137 |
| CN       | CYG | max     | 57526   |     | 9.4  | VOH M       | 48  |
| CN       | CYG | min     | 57623   |     | 13.4 | VOH M       | 43  |
| CN       | CYG | max     | 57727   |     | 9.2  | VOH M       | 36  |

| Variable | Ext | HJD 24+ | U     | Mag | Obs  | Type     | n  |
|----------|-----|---------|-------|-----|------|----------|----|
| R        | DEL | max     | 57793 | :   | 8.9  | VOH M    | 19 |
| EU       | DEL | min     | 57687 |     | 6.3  | VOH SRB  | 24 |
| R        | DRA | min     | 57514 |     | 13.3 | VOH M    | 50 |
| R        | DRA | max     | 57608 |     | 8.2  | VOH M    | 38 |
| R        | DRA | max     | 57870 |     | 7.8  | VOH M    | 55 |
| S        | DRA | min     | 57450 |     | 9.1  | VOH SRB  | 87 |
| S        | DRA | max     | 57567 |     | 8.6  | VOH SRB  | 87 |
| Y        | DRA | max     | 57548 |     | 9.2  | VOH M    | 28 |
| Y        | DRA | max     | 57878 |     | 8.5  | VOH M    | 31 |
| TX       | DRA | min     | 57641 |     | 7.9  | VOH SRB  | 22 |
| TX       | DRA | max     | 57829 |     | 6.7  | VOH SRB  | 27 |
| TX       | DRA | min     | 57877 |     | 8.4  | VOH SRB  | 15 |
| AG       | DRA | min     | 57761 |     | 10.2 | VOH ZAND | 94 |
| AP       | DRA | max     | 57997 |     | 11.1 | VOH M:   | 17 |
| R        | GEM | max     | 57818 |     | 7.5  | VOH M    | 46 |
| SS       | GEM | min     | 57413 | :   | 9.6  | VOH RVA  | 19 |
| SS       | GEM | min     | 57506 |     | 9.6  | VOH RVA  | 21 |
| SS       | GEM | min     | 57774 |     | 9.8  | VOH RVA  | 30 |
| ST       | GEM | max     | 57846 |     | 9.7  | VOH M    | 17 |
| ZZ       | GEM | max     | 57648 | :   | 9.1  | VOH M    | 48 |
| CD       | GEM | max     | 57804 |     | 11.9 | VOH M    | 16 |
| S        | HER | max     | 57598 |     | 7.5  | VOH M    | 70 |
| S        | HER | max     | 57910 |     | 7.3  | VOH M    | 66 |
| T        | HER | min     | 57583 |     | 12.9 | VOH M    | 53 |
| T        | HER | max     | 57662 |     | 8.4  | VOH M    | 31 |
| T        | HER | max     | 57816 |     | 7.9  | VOH M    | 41 |
| T        | HER | min     | 57912 |     | 12.4 | VOH M    | 50 |
| U        | HER | max     | 57543 |     | 7.2  | VOH M    | 80 |
| W        | HER | max     | 57639 |     | 8.0  | VOH M    | 46 |
| W        | HER | max     | 57925 |     | 8.8  | VOH M    | 52 |
| X        | HER | min     | 57451 |     | 7.0  | VOH SRB  | 21 |
| X        | HER | min     | 57570 |     | 7.3  | VOH SRB  | 59 |
| X        | HER | max     | 57621 | :   | 6.6  | VOH SRB  | 37 |
| X        | HER | max     | 57815 | :   | 6.2  | VOH SRB  | 31 |
| X        | HER | min     | 57869 |     | 7.0  | VOH SRB  | 47 |
| RS       | HER | max     | 57650 |     | 8.6  | VOH M    | 29 |
| RS       | HER | max     | 57881 |     | 8.2  | VOH M    | 55 |
| RU       | HER | max     | 57532 |     | 8.7  | VOH M    | 50 |
| SS       | HER | max     | 57617 |     | 9.5  | VOH M    | 14 |
| AC       | HER | min     | 57148 |     | 8.4  | VOH RVA  | 19 |
| AC       | HER | min     | 57602 |     | 8.5  | VOH RVA  | 13 |
| AC       | HER | min     | 57637 |     | 8.3  | VOH RVA  | 21 |
| AC       | HER | min     | 57867 |     | 8.0  | VOH RVA  | 12 |
| AC       | HER | min     | 57902 |     | 8.4  | VOH RVA  | 19 |
| RT       | HYA | max     | 57808 |     | 7.0  | SM SRB   | 37 |
| S        | LAC | max     | 57757 | :   | 8.8  | VOH M    | 23 |
| R        | LEO | max     | 57894 |     | 6.0  | SM M     | 29 |
| R        | LEO | min     | 57760 |     | 10.7 | VOH M    | 66 |
| R        | LEO | max     | 57903 | :   | 6.1  | VOH M    | 23 |
| S        | LEO | max     | 57821 |     | 10.7 | VOH M    | 11 |
| R        | LMI | max     | 57861 |     | 7.0  | NMN M    | 10 |
| R        | LMI | max     | 57864 |     | 7.1  | VOH M    | 23 |
| R        | LYN | max     | 57623 |     | 8.0  | VOH M    | 55 |
| W        | LYR | max     | 57684 | :   | 8.6  | VOH M    | 45 |
| W        | LYR | min     | 57780 |     | 12.5 | VOH M    | 49 |
| W        | LYR | max     | 57871 |     | 8.0  | VOH M    | 57 |
| U        | MON | min     | 57427 |     | 7.1  | VOH RVB  | 24 |
| U        | MON | max     | 57450 |     | 5.3  | VOH RVB  | 24 |
| U        | MON | min     | 57471 |     | 6.4  | VOH RVB  | 24 |

| Variable | Ext | HJD 24+ | U        | Mag | Obs  | Type        | n   |
|----------|-----|---------|----------|-----|------|-------------|-----|
| U        | MON | min     | 57743    |     | 7.1  | VOH RVB     | 18  |
| X        | OPH | max     | 57550    |     | 6.6  | VOH M       | 97  |
| X        | OPH | max     | 57857    |     | 6.7  | VOH M       | 83  |
| Z        | OPH | max     | 57652    |     | 8.4  | VOH M       | 62  |
| Z        | OPH | min     | 57870    |     | 12.4 | VOH M       | 55  |
| U        | ORI | min     | 57752    |     | 12.9 | VOH M       | 30  |
| U        | ORI | max     | 57867    |     | 7.3  | VOH M       | 20  |
| Y        | ORI | max     | 57833    |     | 10.1 | VOH M       | 10  |
| R        | PER | max     | 57757    |     | 8.3  | VOH M       | 24  |
| U        | PER | max     | 57511    |     | 7.4  | VOH M       | 62  |
| U        | PER | min     | 57648    |     | 11.1 | VOH M       | 59  |
| U        | PER | max     | 57815    |     | 8.2  | VOH M       | 60  |
| X        | PER | min     | 57717    |     | 6.5  | NMN GCAS+XP | 24  |
| X        | PER | max     | 57780.5  | :   | 6.1  | NMN GCAS+XP | 24  |
| Y        | PER | min     | 57805    |     | 10.0 | VOH M       | 44  |
| TW       | PER | max     | 57637    |     | 10.2 | VOH M       | 28  |
| RV       | SCO | max     | 57928.29 |     |      | SM DCEP     | 14  |
| R        | SCT | min     | 57626    |     | 5.8  | VOH RVA     | 50  |
| R        | SCT | min     | 57841    |     | 5.9  | VOH RVA     | 11  |
| R        | SER | max     | 57587    |     | 7.4  | VOH M       | 45  |
| R        | SER | max     | 57933    |     | 6.8  | SM M        | 28  |
| V        | TAU | max     | 57748    |     | 9.5  | VOH M       | 33  |
| R        | TRI | max     | 57719    |     | 6.2  | VOH M       | 72  |
| R        | UMA | max     | 57925    |     | 6.7  | SWZ M       | 10  |
| R        | UMA | min     | 57517    |     | 13.0 | VOH M       | 75  |
| R        | UMA | max     | 57633    |     | 7.3  | VOH M       | 86  |
| R        | UMA | min     | 57820    |     | 12.5 | VOH M       | 73  |
| S        | UMA | max     | 57750    |     |      | NMN M       | 16  |
| S        | UMA | max     | 57994    |     | 8.0  | SWZ M       | 13  |
| S        | UMA | max     | 57550    |     | 7.7  | VOH M       | 57  |
| S        | UMA | max     | 57763    |     | 8.1  | VOH M       | 77  |
| T        | UMA | max     | 57908    |     | 6.6  | SWZ M       | 14  |
| T        | UMA | max     | 57652    |     | 8.2  | VOH M       | 48  |
| T        | UMA | max     | 57913    |     | 6.7  | VOH M       | 39  |
| Z        | UMA | max     | 57976    |     | 6.3  | SWZ SRB     | 22  |
| Z        | UMA | min     | 57532    |     | 9.4  | VOH SRB     | 35  |
| Z        | UMA | max     | 57579    |     | 7.2  | VOH SRB     | 48  |
| Z        | UMA | max     | 57648    |     | 7.1  | VOH SRB     | 48  |
| Z        | UMA | min     | 57719    |     | 9.6  | VOH SRB     | 43  |
| Z        | UMA | max     | 57779    |     | 7.6  | VOH SRB     | 48  |
| Z        | UMA | min     | 57881    |     | 8.9  | VOH SRB     | 61  |
| RS       | UMA | max     | 57958    |     | 8.6  | VOH M       | 30  |
| RY       | UMA | min     | 57595    |     | 7.8  | NMN SRB     | 37  |
| RY       | UMA | max     | 57725.5  |     | 7.1  | NMN SRB     | 37  |
| RY       | UMA | min     | 57829.5  |     | 7.8  | NMN SRB     | 37  |
| RY       | UMA | max     | 57469    |     | 7.1  | VOH SRB     | 97  |
| RY       | UMA | min     | 57575    |     | 7.8  | VOH SRB     | 54  |
| RY       | UMA | max     | 57742    |     | 7.0  | VOH SRB     | 89  |
| RY       | UMA | min     | 57862    |     | 7.9  | VOH SRB     | 71  |
| S        | UMI | max     | 57579    |     | 8.5  | VOH M       | 114 |
| S        | UMI | min     | 57764    |     | 12.0 | VOH M       | 85  |
| T        | UMI | max     | 57549    |     | 10.8 | VOH M       | 47  |
| T        | UMI | min     | 57673    |     | 11.8 | VOH M       | 49  |
| T        | UMI | max     | 57745    |     | 10.6 | VOH M       | 43  |
| T        | UMI | max     | 57842    |     | 11.3 | VOH M       | 44  |
| T        | UMI | min     | 57871    |     | 11.6 | VOH M       | 44  |
| T        | UMI | max     | 57903    |     | 11.3 | VOH M       | 44  |
| T        | UMI | min     | 57959    |     | 11.6 | VOH M       | 44  |
| U        | UMI | min     | 57564    |     | 11.6 | VOH M       | 86  |

| Variable | Ext | HJD 24+   | U | Mag  | Obs | Type | n   |
|----------|-----|-----------|---|------|-----|------|-----|
| U        | UMI | max 57721 |   | 8.3  | VOH | M    | 89  |
| U        | UMI | min 57883 |   | 11.5 | VOH | M    | 95  |
| V        | UMI | min 57750 |   | 8.4  | VOH | SRB  | 47  |
| V        | UMI | max 57825 |   | 7.7  | VOH | SRB  | 33  |
| V        | UMI | max 57924 |   | 7.9  | VOH | SRB  | 43  |
| R        | VIR | max 57812 |   | 6.5  | VOH | M    | 23  |
| R        | VUL | max 57610 |   | 7.7  | VOH | M    | 31  |
| R        | VUL | max 57740 | : | 7.7  | VOH | M    | 17  |
| R        | VUL | max 57896 | : | 8.3  | VOH | M    | 24  |
| NSV2106  | ORI | max 57712 |   | 8.2  | NMN |      | 21  |
| CHI      | CYG | max 57647 |   | 4.8  | VOH |      | 120 |

### Observers

|     |                   |           |
|-----|-------------------|-----------|
| BRW | Braunwarth, Horst | Hamburg   |
| NMN | Neumann, Joerg    | Leipzig   |
| SM  | Sturm, Arthur     | Saarburg  |
| SV  | Struever, Helmut  | Duisburg  |
| SWZ | Schwarz, Bernd    | Laubach   |
| VOH | Vohla, Frank      | Altenburg |

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