LIST OF MINIMA AND ACCURATE DETERMINATION OF MEAN MINIMUM FOR V 566 OPH

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1. LIST OF MINIMA

In this issue 127 minima are given; they were determined from 1977 to 1980 by the following observers:

C. AGNESONI I - Siena AGN
R. BONINSEGNA B - Dourbes BNN
A. BUZZONI I - Ferrara BUZ
M. FRANCHINI I - Cerro Maggiore FCH
J.F. LE BORGNE F - Toulouse FLB
P. MATAGNE B - Bruxelles MAT
E. NEZRY F - Toulouse NZY
C. PAMPALONI I - Firenze PMP
M. PENNA I - Asti MPN
E. PORETTE I - Arconate POI
Ph. RALINCOURT F - Nantes RAL
A. ROYER F - Epinac ROY

The table gives the current number, the star designation, the order of the minimum, the heliocentric time, the O-C, the number of visual estimates and the initials of the observer. Imprecise timings are marked "\":". The O-C's are referred to the linear elements published in the GCVS 1969, except for RW Com (GCVS 1971), VW Cep, EO Tau, W UMa, ER Vul (GCVS 1976), UW CMa, CW Cep (SAC no55), NN Cep (IBVS 1881), all stars for which these elements are either missing or too imprecise.

The methods of reduction used are all based on symmetry: the timings have been analysed to palliate possible systematic errors caused by the different methods used.

REMARKS - AB And: the given minimum is the mean of 3 individual minima (O-C: +0.042,+0.012,+0.032) observed by ROY from JD 2443425 to JD 2443433;
VW Cep: the first 7 minima (observer POI) have been
forgotten in the print of GEOS EB 6; in the GEOS EB 9 other minima have been published;

AH Tau: the given minimum is the mean of 4 individual minima (O-C: -0.034; -0.017; -0.022; -0.045) observed by ROY from JD 2443482 to JD 2443496;

EQ Tau: the given minimum is the mean of 2 individual minima (O-C: +0.013, +0.003) observed by ROY at JD 2443482 and JD 2443496.

2. MEAN MINIMUM OF V566 OPH

O-C's published in the present GEOS EB and in the previous EB 3 and EB 6 show that the period given by GCVS 1969 (0.40964101 d) is too short. It is not possible to calculate a mean O-C in the interval 2442500 - 2444800 because a drift is present. For this reason, O-C's have been recalculated with the aim of the ephemeris published by the SAC n°55 (1984), that gives a period more satisfactory:

Min I = JD hel. 2443281.5034 + 0.409644660 x E

Proceeding as described in the GEOS EB 6, the following data have been calculated:

<table>
<thead>
<tr>
<th>Obs</th>
<th>ni</th>
<th>O-Ci</th>
<th>Si</th>
<th>Pi</th>
<th>Wi</th>
</tr>
</thead>
<tbody>
<tr>
<td>BNN</td>
<td>2</td>
<td>0.0000</td>
<td>0.0042</td>
<td>0.0030</td>
<td>11</td>
</tr>
<tr>
<td>BUZ</td>
<td>5</td>
<td>-0.0066</td>
<td>0.0039</td>
<td>0.0017</td>
<td>35</td>
</tr>
<tr>
<td>FGR</td>
<td>3</td>
<td>-0.0003</td>
<td>0.0085</td>
<td>0.0049</td>
<td>4</td>
</tr>
<tr>
<td>MPN</td>
<td>2</td>
<td>-0.0180</td>
<td>0.0141</td>
<td>0.0100</td>
<td>1</td>
</tr>
<tr>
<td>PMP</td>
<td>6</td>
<td>-0.0018</td>
<td>0.0056</td>
<td>0.0023</td>
<td>19</td>
</tr>
<tr>
<td>POI</td>
<td>13</td>
<td>-0.0081</td>
<td>0.0081</td>
<td>0.0022</td>
<td>21</td>
</tr>
<tr>
<td>RAL</td>
<td>24</td>
<td>+0.0012</td>
<td>0.0072</td>
<td>0.0015</td>
<td>44</td>
</tr>
</tbody>
</table>

in which all O-C's are referred to the ephemeris of the SAC.

The weighted mean O-Cw = -0.0029 ± 0.003 and pw = ±0.0009 ± 0.0011 d can be calculated.

Starting from the published minima, we determine thus the following elements:

MEAN MINIMUM (1976-1981): JD hel. 2443700.569 ± 0.001

O-C SAC n°55: - 0.003 ± 0.001 d

O-C GCVS 1969: + 0.035 ± 0.001 d

The secondary minimum has been assumed to take phase.
REMARK - As a rule, the $s_i$ of an observer with few minima is imprecise and a mean value is preferable. However, in this case, the large $p_i$'s make negligible the contributions of these observers: from the observers with $n_i > 4$ we obtain $\bar{O-C} = -0.003 \pm 0.001$ d again.

3. ERRATA

In the GEOS EB 6 the observer of the minimum n°188 is RAL (not MPN).

E. PORETTI

BIBLIOGRAPHY

GUDUR N., GULMEN O., 1980, IBVS n° 1881


PORETTI E., 1979, GEOS EB 3

PORETTI E., 1981, GEOS EB 6

RALINCOURT Ph., 1983, GEOS EB 9

RUDNICKI et al., 1983, Supplemento ad Annuario Cracoviense n° 55
| 233 AB | 3430.298 | +0.029 | ROY |
| 234 Q4 | 3699.603 | -0.048 | 15 NZY |
| 235 UW | 3946.331 | 0.000 | 10 NZY |
| 236 | 4282.398 | -0.028 | 10 NZY |
| 237 VW | 3041.517 | -0.003 | 14 POI |
| 238 | 3042.353 | -0.002 | 13 POI |
| 239 | 3042.492 | -0.002 | 16 POI |
| 240 | 3059.329 | 0.003 | 15 POI |
| 241 | 3060.301 | -0.006 | 15 POI |
| 242 | 3061.278 | -0.003 | 17 POI |
| 243 | 3062.285 | 0.000 | 13 POI |
| 244 | 3639.476 | -0.006 | 14 RAL |
| 245 | 3654.502 | -0.009 | 22 RAL |
| 246 | 3657.433 | 0.000 | 11 RAL |
| 247 | 3657.557 | -0.016 | 10 RAL |
| 248 | 3659.508 | -0.013 | 16 RAL |
| 249 | 3685.534 | -0.009 | 20 RAL |
| 250 | 3688.486 | 0.000 | 26 RAL |
| 251 | 3770.425 | -0.005 | 13 RAL |
| 252 | 3845.256 | -0.001 | 16 RAL |
| 253 | 3957.447 | -0.011 | 14 RAL |
| 254 | 4013.398 | -0.002 | 18 RAL |
| 255 | 4014.367 | -0.007 | 21 RAL |
| 256 | 4043.447 | -0.011 | 20 RAL |
| 257 | 4045.394 | -0.012 | 24 RAL |
| 258 | 4046.368 | -0.012 | 19 RAL |
| 259 | 4046.312 | -0.007 | 17 RAL |
| 260 | 4047.344 | -0.010 | 13 RAL |
| 261 | 4048.457 | -0.011 | 18 RAL |
| 262 | 4167.306 | -0.003 | 19 RAL |
| 263 | 4207.234 | -0.013 | 7 RAL |
| 264 | 4464.399 | -0.012 | 14 RAL |
| 265 | 4464.526 | -0.024 | 20 RAL |
| 266 | 4467.460 | -0.012 | 15 RAL |
| 267 | 4468.361 | 0.004 | 24 RAL |
| 268 | 4469.413 | -0.008 | 22 RAL |
| 269 | 4470.392 | -0.003 | 16 RAL |
| 270 | 4547.335 | -0.014 | 20 RAL |
| 271 | 4554.288 | -0.019 | 19 RAL |
| 272 | 4574.326 | -0.020 | 17 RAL |
| 273 CW | 3173.29 | -0.04 | 15 MPN |
| 274 | 3293.40 | -0.01 | 9 MPN |
| 275 | 3306.361 | -0.004 | 7 MPN |
| 276 | 3342.541 | 0.000 | 16 MPN |
| 277 | 3420.28 | -0.004 | 5 MPN |
| 278 | 3495.33 | -0.04 | 10 POI |
| 279 | 4835.37 | -0.00 | 14 MAT |
| 280 NN | 3306.368 | -0.014 | 6 MPN |
| 281 | 3307.590 | -0.021 | 9 MPN |
| 282 | 3444.201 | -0.015 | 13 POI |
| 283 | 3410.315 | -0.012 | 5 MPN |
| 284 | 3449.410 | -0.024 | PMP |
| 285 V1073Cyg | 3722.521 | +0.005 | 14 RAL |
| 286 | 3731.542 | -0.011 | 13 RAL |
| 287 RW | 4704.423 | -0.001 | 16 BNN |
| 288 | 4704.538 | -0.004 | 13 BNN |
| 289 TX | 3659.381 | -0.001 | 30 POI |
| 290 | 3729.412 | -0.004 | 37 BUZ |
| 291 AK | 3685.398 | -0.026 | BUZ |
| 292 | 3713.420 | -0.035 | BUZ |
| 293 | 3732.396 | -0.028 | BUZ |
| 294 | 3759.375 | -0.026 | BUZ |
| 295 AM | 4014.372 | -0.040 | 16 RAL |
| 296 V566 Oph | 3688.496 | +0.046 | 26 RAL |
| 297 318 | 3718.379 | +0.025 | BUZ |
| 298 | 3718.396 | +0.042 | 22 RAL |
| 299 | 3723.513 | +0.039 | 12 RAL |
| 300 | 3726.379 | +0.037 | 25 RAL |
| 301 | 3729.449 | +0.035 | BUZ |
| 302 | 3729.461 | +0.047 | 15 RAL |
| 303 | 3729.462 | +0.048 | 13 FCH |
| 304 | 3730.485 | +0.047 | 20 RAL |
| 305 | 3731.508 | +0.046 | 20 RAL |
| 306 | 3774.302 | +0.032 | BUZ |
| 307 | 3781.269 | +0.035 | BUZ |
| 308 | 3782.287 | +0.029 | BUZ |
| 309 | 4016.402 | +0.034 | 10 RAL |
| 310 | 4043.448 | +0.044 | 31 RAL |
| 311 | 4048.362 | +0.042 | 20 RAL |
| 312 | 4078.471 | +0.043 | 8 RAL |
| 313 | 4101.417 | +0.049 | 13 RAL |
| 314 | 4463.530 | +0.039 | 15 RAL |
| 315 | 4466.404 | +0.046 | PMP |
| 316 | 4468.463 | +0.056 | 30 RAL |
| 317 | 4470.502 | +0.047 | 21 RAL |
| 318 | 4774.449 | +0.041 | PMP |
| 319 | 4788.391 | +0.055 | PMP |
| 320 | 4814.406 | +0.058 | PMP |
| 321 | 4814.423 | +0.051 | PMP |
| 322 | 4814.493 | +0.048 | PMP |
| 323 V639 Oph | 3369.466 | +0.021 | FLB |
| 324 | 3370.481 | +0.013 | FLB |