



HAL
open science

Orbital elements of double stars: A 1913 AB, COU 1394, COU 382

Josefina Ling, M. Scardia, Jean-Louis Prieur, L. Pansecchi, R. Argyle, E. Aristidi, A. Zanutta, Louis Abbe, Philippe Bendjoya, Jean-Pierre Rivet, et al.

► **To cite this version:**

Josefina Ling, M. Scardia, Jean-Louis Prieur, L. Pansecchi, R. Argyle, et al.. Orbital elements of double stars: A 1913 AB, COU 1394, COU 382. Information Circular - IAU Commission G1 Double Stars , 2023, ISSN: 1024-7769, Circular 209, pp.1-20. hal-04061259

HAL Id: hal-04061259

<https://hal.science/hal-04061259v1>

Submitted on 6 Apr 2023

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.

INTERNATIONAL ASTRONOMICAL UNION
COMMISSION G1 (BINARY AND MULTIPLE STAR SYSTEMS)
DOUBLE STARS INFORMATION CIRCULAR No. 209 (FEBRUARY 2023)

NEW ORBITS

| WDS | Name | P(yr) | T(yr) | e | a(") | i(°) | Ω(°) | ω(°) | 2023 | Author(s) | |
|------------|--------------|--------------|--------------|------------|-------------|-------------|-----------------|-----------------|-------------|------------------|-----------|
| HIP | ADS | σ_P | σ_T | σ_e | σ_a | σ_i | σ_Ω | σ_ω | 2024 | Last obs. | |
| 00003-4417 | I 1477 | 115.4 | 2011.58 | 0.717 | 0.435 | 65.6 | 147.5 | 297.3 | 185.3 | 0.212 | TOK |
| – | – | 2.9 | 0.86 | 0.020 | 0.014 | 2.6 | 1.5 | 2.2 | 189.0 | 0.212 | 2022.442 |
| 00026-0829 | A 428 | 761 | 1995.6 | 0.644 | 0.793 | 108.8 | 197.9 | 210.3 | 271.4 | 0.122 | TOK |
| – | 4 | ... | ... | ... | ... | ... | ... | ... | 266.6 | 0.127 | 2022.611 |
| 00098-3347 | SEE 3 | 268.9 | 1979.82 | 0.740 | 0.904 | 37.8 | 102.6 | 246.2 | 127.1 | 0.967 | D et al. |
| 794 | | 15.0 | 0.15 | 0.008 | 0.009 | 0.5 | 6.0 | 6.0 | 127.8 | 0.978 | 2022.8452 |
| 00111+0513 | TOK 869 | 8.659 | 2018.336 | 0.211 | 0.112 | 51.2 | 106.2 | 247.1 | 175.1 | 0.088 | TOK |
| – | – | 0.145 | 0.167 | 0.025 | 0.003 | 1.8 | 2.5 | 7.8 | 220.1 | 0.084 | 2023.006 |
| 00125-3219 | B 1023 | 300 | 1979.29 | 0.861 | 0.349 | 145.0 | 221.9 | 270.0 | 162.0 | 0.348 | TOK |
| – | – | ... | ... | ... | ... | ... | ... | ... | 161.5 | 0.352 | 2023.006 |
| 00153-4230 | RST 3344 | 136.9 | 2029.05 | 0.482 | 0.153 | 125.0 | 161.5 | 214.7 | 349.2 | 0.088 | TOK |
| – | – | ... | ... | ... | ... | ... | ... | ... | 345.1 | 0.086 | 2022.445 |
| 00160-4816 | TOK 808 | 7.08 | 2023.388 | 0.314 | 0.147 | 21.9 | 34.9 | 195.6 | 193.7 | 0.105 | TOK |
| – | – | 1.49 | 0.165 | 0.084 | 0.004 | 17.0 | 37.9 | 65.7 | 287.1 | 0.106 | 2022.774 |
| 00164-2235 | HDS 36 Aa,Ab | 28.83 | 2000.28 | 0.674 | 0.144 | 137.5 | 61.1 | 38.9 | 175.0 | 0.139 | TOK |
| – | – | 0.57 | 1.32 | 0.036 | 0.013 | 11.9 | 7.2 | 13.1 | 166.7 | 0.123 | 2022.445 |
| 00164-7024 | HEI 198 | 53.73 | 2010.32 | 0.412 | 0.114 | 137.1 | 153.6 | 205.7 | 172.4 | 0.123 | TOK |
| – | – | 4.41 | 1.46 | 0.098 | 0.007 | 10.0 | 9.6 | 16.0 | 168.7 | 0.129 | 2022.611 |
| 00261-1123 | YR 4 | 42.3 | 2026.17 | 0.617 | 0.255 | 162.1 | 35.2 | 16.1 | 114.1 | 0.160 | TOK |
| – | – | 6.0 | 0.82 | 0.112 | 0.005 | 6.2 | 106.0 | 116.0 | 94.6 | 0.133 | 2022.447 |
| 00271-0753 | A 431 AB | 53.30 | 2003.75 | 0.636 | 0.362 | 109.8 | 26.1 | 295.2 | 268.1 | 0.211 | D et al. |
| 2143 | 363 | 0.20 | 0.35 | 0.006 | 0.005 | 1.0 | 1.5 | 1.0 | 263.2 | 0.224 | 2022.4446 |

NEW ORBITS (continuation)

| WDS HIP | Name ADS | P(yr) σ_P | T(yr) σ_T | e σ_e | a(") σ_a | i(°) σ_i | Ω(°) σ_Ω | ω(°) σ_ω | 2023 2024 | Author(s) Last obs. | |
|---------------------|---------------------|--|--|------------------------------------|---------------------------------------|---------------------------------------|--|--|----------------------|--------------------------------|-----------------------|
| 00329-0434 — | JNN 12 AC — | 15.0 ... | 2012.836 ... | 0.000 ... | 0.226 ... | 90.0 ... | 17.7 ... | 0.0 ... | 197.7 197.7 | 0.100 0.009 | TOK 2022.445 |
| 00446-1856 3493 | HDS 99 AaAb | 8.672 0.032 | 2020.647 0.085 | 0.497 0.003 | 0.132 0.003 | 174.5 3.0 | 1.2 5.0 | 302.7 7.0 | 274.2 254.6 | 0.166 0.189 | D et al. 2022.4446 |
| 00516+4412 — | YR 19 AB — | 26.03 ... | 2021.257 ... | 0.859 ... | 0.065 ... | 35.0 ... | 56.6 ... | 252.9 ... | 82.2 91.6 | 0.044 0.057 | TOK 2018.650 |
| 01007-5235 — | I 49 — | 500 ... | 2005.8 ... | 0.836 ... | 0.710 ... | 100.7 ... | 31.9 ... | 118.3 ... | 199.2 198.3 | 0.204 0.204 | TOK 2022.611 |
| 01243-0655 6564 | BU 1163 1123 | 16.046 0.224 | 2021.134 0.008 | 0.929 0.003 | 0.1996 0.0010 | 117.0 0.5 | 28.9 0.5 | 348.6 0.5 | 224.4 221.3 | 0.191 0.251 | D et al. 2021.7556 |
| 01345+3440 7337 | A 1913 AB 1227 | 3361. 1049. | 1890.45 1.64 | 0.859 0.028 | 1.899 0.348 | 105.9 0.8 | 99.2 0.2 | 172.6 5.5 | 128.8 128.5 | 0.471 0.476 | L et al. 2021.8168 |
| 02290-1959 — | RST 2280 Aa,Ab — | 31.926 0.076 | 2020.773 0.014 | 0.654 0.002 | 0.525 0.006 | 163.8 2.6 | 164.8 8.5 | 15.2 8.3 | 49.7 32.7 | 0.323 0.410 | TOK 2022.611 |
| 02418-5300 — | SYU 4 Ba,Bb — | 5.121 0.300 | 2021.162 0.030 | 0.480 0.027 | 0.068 0.002 | 139.3 2.7 | 325.0 6.9 | 100.5 6.5 | 69.0 31.4 | 0.073 0.079 | TOK 2022.933 |
| 02433+0314 — | STF 299 2080 | 914. 450. | 2046.7 10 | 0.90 0.05 | 5.60 2.0 | 85.2 2.0 | 122.7 5.0 | 274.7 15.0 | 300.0 300.2 | 1.886 1.849 | ALZ 2023.04 |
| 02514-2139 — | DON 43 — | 121.5 5.8 | 1984.7 6.8 | 0.415 0.049 | 0.201 0.011 | 39.2 5.9 | 51.7 23.9 | 97.1 11.4 | 290.4 292.3 | 0.210 0.211 | TOK 2022.845 |
| 02554-2513 — | HDS 375 — | 65 ... | 2045.652 ... | 0.281 ... | 0.510 ... | 119.0 ... | 67.2 ... | 210.3 ... | 23.0 18.1 | 0.382 0.358 | TOK 2022.611 |
| 03053-4059 — | HDS 391 — | 41.654 0.854 | 2025.319 0.550 | 0.750 0.000 | 0.210 0.012 | 74.7 2.0 | 296.8 2.2 | 229.2 2.9 | 92.9 106.4 | 0.067 0.071 | TOK 2022.611 |
| 03124-4425 14913 | JC 8 AB | 45.018 0.300 | 2022.507 0.005 | 0.889 0.002 | 0.404 0.004 | 172.0 3.0 | 36.3 12.0 | 44.9 12.0 | 261.0 224.0 | 0.085 0.184 | D et al. 2022.8469 |
| 03184-2231 — | SEE 23 — | 58.65 0.70 | 2024.213 0.117 | 0.835 0.013 | 0.295 0.007 | 62.0 0.8 | 128.8 1.7 | 294.1 1.5 | 319.5 35.7 | 0.087 0.024 | TOK 2023.006 |

NEW ORBITS (continuation)

| WDS | Name | P(yr) | T(yr) | e | a(") | i(°) | Ω(°) | ω(°) | 2023 | Author(s) | |
|------------|---------------|--------------|--------------|------------|-------------|-------------|-----------------|-----------------|-------------|------------------|-----------|
| HIP | ADS | σ_P | σ_T | σ_e | σ_a | σ_i | σ_Ω | σ_ω | 2024 | Last obs. | |
| 03271+1845 | CHR 10 AB | 8.399 | 2022.767 | 0.584 | 0.055 | 21.9 | 195.3 | 79.2 | 320.0 | 0.024 | TOK |
| – | – | 0.033 | 0.113 | 0.040 | 0.003 | 12.8 | 30.2 | 27.0 | 35.7 | 0.053 | 2022.685 |
| 03311-0029 | HDS 444 | 20.52 | 2025.082 | 0.570 | 0.079 | 37.3 | 228.2 | 159.9 | 279.1 | 0.052 | TOK |
| – | – | 1.47 | 0.458 | 0.079 | 0.005 | 8.6 | 10.9 | 15.6 | 318.6 | 0.035 | 2023.006 |
| 03489+1143 | A 831 | 300 | 2047.17 | 0.139 | 0.501 | 63.2 | 174.1 | 314.4 | 98.0 | 0.205 | TOK |
| – | – | ... | ... | ... | ... | ... | ... | ... | 101.1 | 0.207 | 2022.683 |
| 03526-0829 | RST 4762 AB | 154.6 | 1993.93 | 0.287 | 0.173 | 118.3 | 84.6 | 146.2 | 216.3 | 0.098 | TOK |
| – | – | ... | ... | ... | ... | ... | ... | ... | 212.9 | 0.096 | 2022.845 |
| 03544-4021 | FIN 344 AB | 14.060 | 2008.095 | 0.586 | 0.061 | 33.0 | 67.1 | 50.6 | 201.7 | 0.033 | TOK |
| – | – | 0.049 | 0.057 | 0.009 | 0.001 | 2.6 | 4.3 | 4.4 | 237.2 | 0.055 | 2022.685 |
| 03565-0624 | A 463 | 175.9 | 1992.8 | 0.787 | 0.246 | 155.2 | 93.5 | 228.2 | 76.5 | 0.295 | TOK |
| – | 2885 | 16.3 | 2.8 | 0.042 | 0.022 | 18.8 | 37.3 | 38.6 | 75.7 | 0.300 | 2023.006 |
| 04007+2023 | TOK 363 Aa,Ab | 16.728 | 2010.325 | 0.287 | 0.113 | 27.7 | 199.2 | 149.1 | 226.4 | 0.117 | TOK |
| – | – | 0.099 | 0.197 | 0.008 | 0.002 | 4.0 | 3.1 | 4.8 | 246.0 | 0.101 | 2022.686 |
| 04037-1545 | A 2913 | 257.8 | 1990.94 | 0.750 | 0.361 | 107.6 | 167.8 | 13.2 | 357.6 | 0.308 | TOK |
| – | – | 73.8 | 0.53 | 0.046 | 0.063 | 2.9 | 1.1 | 2.3 | 357.2 | 0.317 | 2023.006 |
| 04070+3934 | COU 1394 | 329.6 | 2016.89 | 0.176 | 0.419 | 70.0 | 134.5 | 354.1 | 135.9 | 0.345 | L et al. |
| – | – | 48.7 | 8.25 | 0.076 | 0.037 | 0.4 | 0.9 | 10.8 | 136.5 | 0.345 | 2022.0546 |
| 04108-4200 | HDS 530 | 23.6 | 2018.945 | 0.583 | 0.222 | 110.8 | 13.2 | 103.6 | 167.6 | 0.155 | TOK |
| – | – | ... | ... | ... | ... | ... | ... | ... | 158.0 | 0.145 | 2022.611 |
| 04119+2338 | CHR 14 Aa,Ab | 43.397 | 1993.282 | 0.925 | 0.423 | 77.5 | 335.9 | 79.0 | 228.8 | 0.167 | TOK |
| – | – | 0.255 | 0.403 | 0.014 | 0.046 | 1.6 | 1.1 | 1.5 | 233.4 | 0.159 | 2022.774 |
| 04159+3142 | STT 77 AB | 188.81 | 2075.36 | 0.440 | 0.565 | 56.5 | 74.3 | 31.1 | 310.4 | 0.433 | S et al. |
| 19883 | 3082 | 1.19 | 1.45 | 0.006 | 0.015 | 0.7 | 0.7 | 1.6 | 312.0 | 0.425 | 2023.0755 |
| 04287+2613 | HDS 576 | 47.5 | 1994.762 | 0.762 | 0.282 | 78.0 | 111.4 | 275.7 | 249.2 | 0.146 | TOK |
| – | – | ... | ... | ... | ... | ... | ... | ... | 252.8 | 0.154 | 2020.834 |
| 04312+0157 | HDS 585 | 72.16 | 2013.98 | 0.457 | 0.387 | 76.2 | 259.9 | 166.6 | 145.9 | 0.085 | TOK |
| – | – | 3.57 | 0.14 | 0.018 | 0.013 | 0.3 | 0.4 | 0.9 | 169.4 | 0.082 | 2022.774 |

NEW ORBITS (continuation)

| WDS HIP | Name ADS | P(yr) σ_P | T(yr) σ_T | e σ_e | a(") σ_a | i(°) σ_i | Ω(°) σ_Ω | ω(°) σ_ω | 2023 2024 | Author(s) Last obs. |
|--------------------|---------------------|--|--|------------------------------------|---------------------------------------|---------------------------------------|--|--|----------------------------|--------------------------------|
| 04330-1633 – | CRI 7 Aa,Ab – | 5.708 0.186 | 2017.370 0.230 | 0.197 0.054 | 0.088 0.003 | 99.1 1.9 | 171.1 1.2 | 76.9 7.3 | 148.3 0.027 355.0 0.076 | TOK 2022.774 |
| 04400-3105 – | HDS 602 – | 28.017 0.232 | 2021.799 0.016 | 0.698 0.007 | 0.310 0.006 | 118.1 1.0 | 174.8 1.5 | 81.8 1.1 | 0.9 0.147 348.0 0.211 | TOK 2022.683 |
| 04507-8202 – | HDS 625 – | 300 ... | 2017.152 ... | 0.838 ... | 0.500 ... | 99.0 ... | 117.8 ... | 256.7 ... | 119.8 0.147 118.8 0.166 | TOK 2022.774 |
| 04553-1625 – | HDS 635 – | 150 ... | 1997.182 ... | 0.829 ... | 0.483 ... | 126.0 ... | 136.2 ... | 84.7 ... | 271.5 0.432 270.5 0.438 | TOK 2021.730 |
| 04590-1623 – | BU 314 AB 3588 | 55.38 0.58 | 2034.26 0.37 | 0.921 0.015 | 0.467 0.004 | 119.3 2.2 | 131.6 2.8 | 339.2 4.0 | 315.2 0.673 314.6 0.643 | TOK 2022.129 |
| 05033-2315 – | BEU 7 – | 15.34 0.21 | 2022.16 0.91 | 0.093 0.020 | 0.324 0.003 | 136.5 3.3 | 93.4 1.7 | 254.1 25.4 | 172.5 0.217 139.0 0.251 | TOK 2022.842 |
| 05162-1121 – | CHR 225 – | 11.00 ... | 1985.84 ... | 0.973 ... | 0.044 ... | 66.2 ... | 205.2 ... | 53.6 ... | 51.5 0.059 53.2 0.060 | TOK 2022.195 |
| 05174-3522 – | TSN 1 – | 0.713 0.001 | 2022.373 0.035 | 0.219 0.042 | 0.059 0.003 | 108.7 3.6 | 164.0 2.7 | 141.1 16.8 | 110.3 0.020 267.5 0.021 | TOK 2022.845 |
| 05508-3945 – | I 1494 AB – | 277.66 ... | 2026.03 ... | 0.292 ... | 0.511 ... | 104.6 ... | 88.8 ... | 217.9 ... | 260.4 0.316 259.5 0.308 | TOK 2010.068 |
| 06115-7214 – | JNN 48 – | 100 ... | 2006.56 ... | 0.441 ... | 0.323 ... | 130.7 ... | 169.0 ... | 188.5 ... | 218.2 0.232 214.3 0.245 | TOK 2022.290 |
| 06312-7031 – | HDS 889 – | 34.07 ... | 2001.61 ... | 0.650 ... | 0.105 ... | 135.4 ... | 58.5 ... | 71.8 ... | 155.4 0.118 150.7 0.115 | TOK 2023.009 |
| 06319-0938 – | A 670 5172 | 281.1 29.9 | 1988.319 0.555 | 0.753 0.026 | 0.557 0.030 | 72.9 1.2 | 3.8 0.6 | 30.6 1.9 | 180.2 0.528 180.5 0.539 | TOK 2023.007 |
| 06337-2853 – | B 700 – | 190.6 19.5 | 2008.26 1.00 | 0.810 0.021 | 0.218 0.014 | 113.6 2.5 | 147.1 2.4 | 134.7 3.4 | 245.4 0.066 240.7 0.068 | TOK 2022.843 |
| 06354-0403 – | JNN 271 – | 10.40 ... | 2022.024 ... | 0.217 ... | 0.186 ... | 88.2 ... | 171.5 ... | 341.2 ... | 172.6 0.132 177.9 0.048 | TOK 2022.774 |

NEW ORBITS (continuation)

| WDS HIP | Name ADS | P(yr) σ_P | T(yr) σ_T | e σ_e | a(") σ_a | i(°) σ_i | Ω(°) σ_Ω | ω(°) σ_ω | 2023 2024 | Author(s) Last obs. |
|--------------------|---------------------|----------------------------|----------------------------|------------------------|---------------------------|---------------------------|--|--|----------------------|--------------------------------|
| 06390-5850 | B 1962 | 300 | 1970.96 | 0.108 | 0.520 | 105.1 | 15.0 | 230.0 | 36.1 0.300 | TOK |
| – | – | ... | ... | ... | ... | ... | ... | ... | 35.2 0.308 | 2022.933 |
| 06493-0216 | FIN 322 | 61.41 | 1969.57 | 0.263 | 0.152 | 111.1 | 240.5 | 72.3 | 241.1 0.132 | TOK |
| – | – | 0.92 | 0.53 | 0.021 | 0.002 | 0.9 | 0.6 | 1.3 | 238.3 0.127 | 2023.007 |
| 06508-1423 | RST 4323 | 190 | 2022.327 | 0.935 | 0.473 | 105.6 | 24.7 | 317.4 | 14.6 0.041 | TOK |
| – | – | ... | ... | ... | ... | ... | ... | ... | 350.9 0.040 | 2022.843 |
| 06510+0551 | HDS 950 | 29.13 | 2017.086 | 0.444 | 0.127 | 98.9 | 165.3 | 278.1 | 157.5 0.102 | TOK |
| – | – | ... | ... | ... | ... | ... | ... | ... | 154.6 0.094 | 2022.774 |
| 06586-0016 | RST 5252 | 600 | 1907.424 | 0.595 | 0.750 | 108.7 | 23.3 | 162.5 | 53.9 0.469 | TOK |
| – | – | ... | ... | ... | ... | ... | ... | ... | 53.5 0.475 | 2023.007 |
| 07091-5905 | RST 4340 | 132.25 | 2013.28 | 0.112 | 0.284 | 56.9 | 91.2 | 149.4 | 272.5 0.256 | TOK |
| – | – | ... | ... | ... | ... | ... | ... | ... | 274.3 0.256 | 2022.933 |
| 07166+0920 | A 2854 | 300 | 1979.21 | 0.660 | 0.360 | 96.0 | 27.4 | 119.3 | 190.8 0.124 | TOK |
| – | 5946 | ... | ... | ... | ... | ... | ... | ... | 190.0 0.120 | 2022.774 |
| 07508+0317 | A 2880 | 109.75 | 1991.893 | 0.601 | 0.182 | 47.7 | 91.9 | 292.6 | 175.5 0.169 | TOK |
| – | 6405 | 2.77 | 0.101 | 0.009 | 0.003 | 0.7 | 1.4 | 1.5 | 177.5 0.171 | 2022.774 |
| 07513-0924 | BU 1195 | 500 | 2012.39 | 0.970 | 0.319 | 65.6 | 74.4 | 196.9 | 69.3 0.120 | TOK |
| – | 6412 | ... | ... | ... | ... | ... | ... | ... | 69.7 0.128 | 2022.774 |
| 08021-1710 | HDS 1140 AB | 34.875 | 2001.248 | 0.299 | 0.372 | 119.3 | 92.3 | 156.6 | 91.1 0.463 | TOK |
| – | – | ... | ... | ... | ... | ... | ... | ... | 87.9 0.449 | 2023.007 |
| 08230-7102 | HDS 1196 AB | 20.99 | 2023.603 | 0.292 | 0.078 | 115.5 | 10.8 | 167.4 | 205.9 0.049 | TOK |
| – | – | 0.99 | 0.343 | 0.050 | 0.002 | 2.2 | 2.3 | 10.7 | 190.7 0.055 | 2023.009 |
| 08277-0425 | A 550 | 21.049 | 2002.362 | 0.887 | 0.107 | 141.4 | 63.7 | 76.1 | 92.3 0.031 | TOK |
| – | 6825 | 0.051 | 0.122 | 0.021 | 0.010 | 7.2 | 8.5 | 7.6 | 229.3 0.042 | 2022.846 |
| 08331-2436 | BU 205 AB | 143.83 | 1955.09 | 0.295 | 0.532 | 142.6 | 172.5 | 86.7 | 273.8 0.550 | TOK |
| – | 6871 | 0.84 | 0.49 | 0.007 | 0.005 | 0.9 | 1.5 | 1.4 | 272.0 0.550 | 2023.007 |
| 08369-7857 | KOH 79 AB | 47.9 | 1989.35 | 0.268 | 0.172 | 110.0 | 4.1 | 70.5 | 37.1 0.108 | TOK |
| – | – | 11.4 | 2.08 | 0.204 | 0.016 | 1.6 | 5.0 | 16.2 | 31.4 0.118 | 2022.129 |

NEW ORBITS (continuation)

| WDS HIP | Name ADS | P(yr) σ_P | T(yr) σ_T | e σ_e | a(") σ_a | i(°) σ_i | Ω(°) σ_Ω | ω(°) σ_ω | 2023 2024 | Author(s) Last obs. | |
|--------------------|---------------------|--|--|------------------------------------|---------------------------------------|---------------------------------------|--|--|----------------------|--------------------------------|-----------|
| 08375-3906 | B 1618 | 180 | 2020.46 | 0.395 | 0.167 | 52.7 | 75.0 | 231.7 | 306.7 | 0.071 | TOK |
| – | – | ... | ... | ... | ... | ... | ... | ... | 313.1 | 0.068 | 2022.845 |
| 08423+2002 | COU 382 | 1447.2 | 1959.64 | 0.856 | 1.032 | 130.5 | 80.6 | 327.4 | 346.3 | 0.357 | L et al. |
| – | – | 423.4 | 0.66 | 0.025 | 0.183 | 1.3 | 2.5 | 2.9 | 345.6 | 0.361 | 2020.1116 |
| 08507+1800 | A 2473 | 234.8 | 2050.42 | 0.139 | 0.305 | 33.1 | 37.3 | 126.9 | 106.9 | 0.236 | TOK |
| – | 6412 | ... | ... | ... | ... | ... | ... | ... | 109.1 | 0.235 | 2022.197 |
| 08563-3707 | RST 2593 | 132.38 | 1915.70 | 0.361 | 0.842 | 156.8 | 20.5 | 181.6 | 310.6 | 0.776 | TOK |
| – | – | 6.93 | 4.40 | 0.060 | 0.033 | 8.2 | 13.0 | 15.6 | 307.8 | 0.760 | 2023.007 |
| 08589+0829 | DEL 2 | 5.532 | 2006.441 | 0.771 | 0.391 | 123.7 | 280.1 | 19.8 | 285.1 | 0.094 | TOK |
| – | – | 0.002 | 0.007 | 0.002 | 0.001 | 0.4 | 0.3 | 0.6 | 106.2 | 0.464 | 2022.846 |
| 08594-2412 | RST 2597 | 400 | 1970.38 | 0.707 | 0.282 | 145.9 | 54.1 | 103.7 | 182.1 | 0.242 | TOK |
| – | – | ... | ... | ... | ... | ... | ... | ... | 181.4 | 0.245 | 2023.007 |
| 09017-5211 | HJ 4165 | 900 | 2293.62 | 0.163 | 1.416 | 67.5 | 77.7 | 210.5 | 156.8 | 0.592 | TOK |
| – | – | ... | ... | ... | ... | ... | ... | ... | 157.7 | 0.590 | 2022.857 |
| 09082-2829 | B 177 AB | 400 | 2035.805 | 0.700 | 0.180 | 85.2 | 197.0 | 142.9 | 210.6 | 0.025 | TOK |
| – | – | ... | ... | ... | ... | ... | ... | ... | 214.0 | 0.020 | 2022.441 |
| 09125-4032 | B 1115 | 136.36 | 2005.756 | 0.442 | 0.330 | 142.1 | 103.4 | 270.4 | 98.4 | 0.278 | TOK |
| – | – | 5.18 | 0.271 | 0.016 | 0.006 | 1.5 | 2.2 | 3.5 | 95.9 | 0.284 | 2022.441 |
| 09210+3811 | STF 1338 AB | 381.5 | 2001.4 | 0.202 | 1.480 | 29.8 | 164.4 | 120.4 | 318.9 | 1.174 | S et al. |
| 45858 | 7307 | 23.8 | 8.1 | 0.019 | 0.015 | 1.4 | 6.2 | 17.3 | 320.1 | 1.180 | 2023.0760 |
| 09455-2824 | B 188 | 293.2 | 1983.85 | 0.838 | 0.387 | 46.3 | 22.3 | 175.4 | 356.8 | 0.383 | TOK |
| – | – | 45.6 | 0.81 | 0.018 | 0.040 | 5.6 | 3.6 | 4.5 | 357.3 | 0.390 | 2023.009 |
| 10056-8405 | TOK 396 Aa,Ab | 34.75 | 2022.012 | 0.252 | 0.210 | 80.7 | 5.7 | 147.6 | 183.2 | 0.154 | TOK |
| – | – | ... | ... | ... | ... | ... | ... | ... | 186.0 | 0.163 | 2022.047 |
| 10087-2538 | B 193 | 450 | 1952.52 | 0.500 | 0.542 | 107.6 | 70.2 | 26.2 | 263.7 | 0.417 | TOK |
| – | 7659 | ... | ... | ... | ... | ... | ... | ... | 263.4 | 0.424 | 2023.009 |
| 10089-2945 | HDS 1462 | 120 | 2023.863 | 0.850 | 0.291 | 89.6 | 67.9 | 202.0 | 247.7 | 0.046 | TOK |
| – | – | ... | ... | ... | ... | ... | ... | ... | 248.2 | 0.037 | 2022.933 |

NEW ORBITS (continuation)

| WDS HIP | Name ADS | P(yr) | T(yr) | e | a(") | i(°) | Ω(°) | ω(°) | 2023 | 2024 | Author(s) |
|------------|---------------|------------|------------|------------|------------|------------|-----------------|-----------------|-------|-------|-----------|
| | | σ_P | σ_T | σ_e | σ_a | σ_i | σ_Ω | σ_ω | | | Last obs. |
| 10112-3245 | HDS 1469 | 34.6 | 2018.330 | 0.623 | 0.174 | 114.7 | 71.9 | 166.3 | 120.7 | 0.085 | TOK |
| – | – | ... | ... | ... | ... | ... | ... | ... | 109.6 | 0.110 | 2022.933 |
| 10142-7636 | KOH 88 | 49.72 | 1995.073 | 0.500 | 0.197 | 119.9 | 276.1 | 182.0 | 270.8 | 0.288 | TOK |
| – | – | ... | ... | ... | ... | ... | ... | ... | 269.3 | 0.283 | 2022.283 |
| 10214-2616 | HDS 1491 | 22.11 | 2024.12 | 0.198 | 0.119 | 149.6 | 72.1 | 183.1 | 273.4 | 0.095 | TOK |
| – | – | 0.76 | 0.31 | 0.016 | 0.001 | 2.7 | 5.3 | 11.6 | 252.0 | 0.095 | 2022.933 |
| 10255-6504 | HDS 1499 | 13.39 | 2022.271 | 0.700 | 0.073 | 47.0 | 101.6 | 178.2 | 18.8 | 0.028 | TOK |
| – | – | ... | ... | ... | ... | ... | ... | ... | 62.6 | 0.058 | 2023.010 |
| 10275+0334 | STT 218 | 300 | 2038.91 | 0.645 | 0.725 | 50.4 | 41.6 | 221.8 | 191.5 | 0.339 | TOK |
| – | 7779 | ... | ... | ... | ... | ... | ... | ... | 194.2 | 0.335 | 2021.318 |
| 10283-2416 | TOK 537 Aa,Ab | 29.18 | 2021.841 | 0.680 | 0.320 | 54.7 | 158.0 | 370.7 | 245.0 | 0.087 | TOK |
| – | – | 4.15 | 0.032 | 0.030 | 0.029 | 0.8 | 1.6 | 0.9 | 289.6 | 0.147 | 2022.933 |
| 10375-0932 | RST 3708 | 153.51 | 1968.18 | 0.449 | 0.412 | 44.4 | 194.3 | 9.6 | 4.7 | 0.555 | TOK |
| – | – | 8.08 | 2.08 | 0.030 | 0.005 | 3.8 | 4.7 | 9.2 | 5.6 | 0.559 | 2023.009 |
| 10476-1538 | TOK 71 4Aa,Ab | 6.146 | 2015.102 | 0.505 | 0.049 | 116.2 | 103.0 | 308.8 | 359.1 | 0.028 | TOK |
| – | – | 0.092 | 0.151 | 0.024 | 0.002 | 2.7 | 2.2 | 5.0 | 318.6 | 0.047 | 2023.009 |
| 10595-4130 | RST 2720 | 156.05 | 2029.46 | 0.000 | 0.214 | 55.4 | 51.6 | 0.0 | 43.0 | 0.209 | TOK |
| – | – | ... | ... | ... | ... | ... | ... | ... | 44.4 | 0.210 | 2022.441 |
| 11005-5022 | B 1695 | 160 | 1920.89 | 0.700 | 0.344 | 60.9 | 44.8 | 120.6 | 17.6 | 0.427 | TOK |
| – | – | ... | ... | ... | ... | ... | ... | ... | 18.1 | 0.427 | 2023.010 |
| 11049-3548 | HDS 1582 | 20.94 | 2021.318 | 0.850 | 0.067 | 99.8 | 52.1 | 349.5 | 243.7 | 0.035 | TOK |
| – | – | 5.50 | 0.369 | 0.055 | 0.006 | 2.3 | 2.8 | 17.0 | 240.2 | 0.055 | 2022.933 |
| 11122-4616 | HDS 1596 | 50.08 | 2018.829 | 0.400 | 0.213 | 53.1 | 80.8 | 141.5 | 278.7 | 0.143 | TOK |
| – | – | ... | ... | ... | ... | ... | ... | ... | 287.5 | 0.142 | 2022.441 |
| 11128-7402 | B 2009 | 143.4 | 1971.48 | 0.239 | 0.278 | 140.0 | 113.5 | 118.5 | 209.6 | 0.251 | TOK |
| – | – | ... | ... | ... | ... | ... | ... | ... | 207.3 | 0.252 | 2022.443 |
| 11192-1950 | TOK 383 Aa,Ab | 12.99 | 2020.254 | 0.370 | 0.041 | 141.3 | 10.7 | 166.2 | 82.6 | 0.034 | TOK |
| – | – | 0.82 | 0.258 | 0.043 | 0.002 | 7.9 | 12.1 | 16.5 | 59.0 | 0.042 | 2023.009 |

NEW ORBITS (continuation)

| WDS HIP | Name ADS | P(yr) σ_P | T(yr) σ_T | e σ_e | a(") σ_a | i(°) σ_i | Ω(°) σ_Ω | ω(°) σ_ω | 2023 2024 | Author(s) Last obs. | |
|--------------------|---------------------|----------------------------|----------------------------|------------------------|---------------------------|---------------------------|--|--|----------------------|--------------------------------|----------|
| 11255-2114 | I 881 | 450 | 1997.224 | 0.343 | 0.589 | 78.2 | 148.5 | 100.4 | 319.8 | 0.336 | TOK |
| – | 8156 | ... | ... | ... | ... | ... | ... | ... | 320.2 | 0.344 | 2022.441 |
| 11336-4035 | I 78 | 600 | 2064.253 | 0.112 | 1.063 | 84.5 | 93.7 | 93.6 | 104.2 | 0.447 | TOK |
| – | – | ... | ... | ... | ... | ... | ... | ... | 104.6 | 0.436 | 2022.446 |
| 11415-7703 | TOK 845 | 30.0 | 2023.344 | 0.395 | 0.127 | 111.7 | 46.8 | 140.6 | 250.3 | 0.054 | TOK |
| – | – | ... | ... | ... | ... | ... | ... | ... | 234.3 | 0.074 | 2023.010 |
| 11436-1401 | YSC 210 | 17.73 | 2008.88 | 0.177 | 0.163 | 117.9 | 27.4 | 314.1 | 185.7 | 0.131 | TOK |
| – | – | 0.85 | 0.50 | 0.045 | 0.003 | 1.0 | 1.8 | 5.8 | 165.3 | 0.092 | 2023.009 |
| 11486+1417 | BU 603 AB | 133.12 | 1938.51 | 0.788 | 0.685 | 147.4 | 255.1 | 96.3 | 326.3 | 0.996 | TOK |
| – | 8311 | 2.06 | 0.94 | 0.020 | 0.035 | 6.0 | 9.1 | 6.8 | 325.6 | 0.991 | 2022.130 |
| 12096-6727 | HDS 1716 | 61.50 | 2018.80 | 0.508 | 0.149 | 47.5 | 56.1 | 348.4 | 106.4 | 0.073 | TOK |
| – | – | 5.84 | 0.38 | 0.026 | 0.005 | 2.5 | 3.9 | 3.0 | 120.3 | 0.075 | 2022.047 |
| 12111-5302 | HU 1604 | 215.2 | 2055.34 | 0.300 | 0.355 | 56.0 | 103.7 | 15.6 | 43.8 | 0.197 | TOK |
| – | – | ... | ... | ... | ... | ... | ... | ... | 46.7 | 0.198 | 2021.160 |
| 12117-5222 | RIZ 2 | 3.615 | 2019.034 | 0.736 | 0.058 | 130.0 | 282.9 | 99.2 | 69.3 | 0.040 | TOK |
| – | – | 0.110 | 0.106 | 0.026 | 0.001 | 0.0 | 6.7 | 3.8 | 15.0 | 0.062 | 2022.441 |
| 12228-0405 | BWL 29AB | 10.02 | 2024.21 | 0.591 | 0.183 | 108.4 | 21.6 | 68.5 | 39.5 | 0.115 | TOK |
| – | – | 0.44 | 0.37 | 0.115 | 0.024 | 3.6 | 3.2 | 3.4 | 9.4 | 0.068 | 2023.010 |
| 12268-0536 | A 78 | 110.03 | 1998.612 | 0.773 | 0.294 | 57.1 | 257.5 | 38.0 | 85.3 | 0.395 | TOK |
| – | 8551 | 1.63 | 0.224 | 0.005 | 0.003 | 0.9 | 0.9 | 1.6 | 85.9 | 0.402 | 2023.010 |
| 12570-5435 | HDS 1815 | 100 | 2041.025 | 0.160 | 0.310 | 71.2 | 17.4 | 34.6 | 357.7 | 0.210 | TOK |
| – | – | ... | ... | ... | ... | ... | ... | ... | 0.1 | 0.220 | 2021.245 |
| 13117-2633 | FIN 305 | 20.093 | 2022.917 | 0.938 | 0.119 | 130.0 | 230.4 | 129.7 | 163.8 | 0.011 | TOK |
| – | – | 0.098 | 0.100 | 0.020 | 0.012 | 10.8 | 11.9 | 3.3 | 115.9 | 0.077 | 2022.441 |
| 13123-5955 | SEE 170 AB | 27.51 | 2022.175 | 0.661 | 0.166 | 61.9 | 101.6 | 197.4 | 346.8 | 0.036 | TOK |
| – | – | 0.50 | 0.036 | 0.006 | 0.001 | 0.8 | 0.8 | 1.9 | 56.7 | 0.062 | 2022.441 |
| 13138-6756 | HDS 1853 | 93.7 | 2021.58 | 0.444 | 0.198 | 110.0 | 87.9 | 270.0 | 138.6 | 0.047 | TOK |
| – | – | ... | ... | ... | ... | ... | ... | ... | 122.6 | 0.061 | 2022.441 |

NEW ORBITS (continuation)

| WDS HIP | Name ADS | P(yr) σ_P | T(yr) σ_T | e σ_e | a(") σ_a | i(°) σ_i | Ω(°) σ_Ω | ω(°) σ_ω | 2023 2024 | Author(s) Last obs. | |
|--------------------|---------------------|--|--|------------------------------------|---------------------------------------|---------------------------------------|--|--|----------------------|--------------------------------|----------|
| 13217-3919 | HDS 1875 | 41.40 | 2019.508 | 0.528 | 0.203 | 118.8 | 196.5 | 231.8 | 219.7 | 0.115 | TOK |
| – | – | 1.80 | 0.137 | 0.014 | 0.006 | 2.6 | 2.7 | 4.2 | 211.1 | 0.146 | 2023.010 |
| 13344-5931 | TOK 403 | 17.109 | 2021.073 | 0.462 | 0.143 | 117.0 | 72.6 | 269.9 | 71.7 | 0.114 | TOK |
| – | – | 0.468 | 0.032 | 0.011 | 0.002 | 0.5 | 0.8 | 2.0 | 60.3 | 0.130 | 2023.010 |
| 13437-4204 | FIN 353 AB | 46.56 | 2020.55 | 0.890 | 0.066 | 83.0 | 45.8 | 198.4 | 42.8 | 0.038 | TOK |
| – | – | 2.94 | 0.63 | 0.017 | 0.006 | 2.1 | 2.2 | 15.9 | 43.8 | 0.050 | 2023.010 |
| 14001+0416 | HDS 1965 | 150 | 2083.24 | 0.244 | 0.226 | 96.9 | 159.1 | 52.9 | 314.3 | 0.076 | TOK |
| – | – | ... | ... | ... | ... | ... | ... | ... | 311.6 | 0.069 | 2022.441 |
| 14106+0528 | YSC 52 Aa,Ab | 27.06 | 2026.88 | 0.600 | 0.103 | 142.5 | 101.2 | 80.9 | 137.4 | 0.090 | TOK |
| – | – | ... | ... | ... | ... | ... | ... | ... | 124.8 | 0.079 | 2022.130 |
| 14190-0636 | HDS 2016 AB | 18.891 | 2003.708 | 0.300 | 0.348 | 107.9 | 285.6 | 72.1 | 205.6 | 0.076 | TOK |
| – | – | 0.043 | 0.051 | 0.005 | 0.001 | 0.2 | 0.2 | 0.4 | 132.5 | 0.154 | 2022.444 |
| 15042-1530 | RST 3906 | 52.25 | 2020.54 | 0.672 | 0.178 | 89.8 | 154.9 | 18.4 | 333.9 | 0.019 | TOK |
| – | – | 1.89 | 0.27 | 0.011 | 0.006 | 0.5 | 0.8 | 5.6 | 334.5 | 0.052 | 2022.682 |
| 15092-7614 | RST 1816 | 300 | 2024.12 | 0.866 | 0.212 | 155.3 | 70.0 | 7.9 | 95.0 | 0.031 | TOK |
| – | – | ... | ... | ... | ... | ... | ... | ... | 66.4 | 0.028 | 2022.441 |
| 15157-2736 | BU 350 9552 | 600 | 2021.04 | 0.828 | 0.858 | 139.5 | 171.1 | 181.0 | 333.4 | 0.148 | TOK |
| – | – | ... | ... | ... | ... | ... | ... | ... | 324.8 | 0.148 | 2022.444 |
| 15251-2340 | RST 2957 | 55.6 | 2027.56 | 0.568 | 0.213 | 85.4 | 92.8 | 342.4 | 285.7 | 0.050 | TOK |
| – | – | 3.0 | 0.77 | 0.050 | 0.009 | 0.5 | 0.3 | 5.6 | 307.6 | 0.018 | 2021.078 |
| 15433-0515 | TOK 594 Aa,Ab | 3.783 | 2019.081 | 0.858 | 0.058 | 53.3 | 155.4 | 126.0 | 29.0 | 0.018 | TOK |
| – | – | 0.052 | 0.047 | 0.041 | 0.005 | 5.0 | 9.8 | 10.5 | 102.7 | 0.065 | 2022.307 |
| 15462-2804 | KOH 49 Ca,Cb | 19.02 | 2038.69 | 0.322 | 0.118 | 136.3 | 99.0 | 212.5 | 136.9 | 0.097 | TOK |
| – | – | 0.57 | 0.53 | 0.022 | 0.007 | 3.6 | 3.9 | 8.4 | 121.1 | 0.117 | 2022.444 |
| 15537-0429 | TOK 725 | 12.97 | 2020.778 | 0.617 | 0.094 | 150.0 | 269.5 | 44.5 | 91.4 | 0.101 | TOK |
| – | – | 0.53 | 0.032 | 0.014 | 0.002 | 0.0 | 5.9 | 5.2 | 78.0 | 0.122 | 2022.130 |
| 16016-7843 | HDS 2259 | 64.0 | 2004.496 | 0.824 | 0.365 | 88.4 | 156.6 | 45.5 | 337.6 | 0.498 | TOK |
| – | – | ... | ... | ... | ... | ... | ... | ... | 337.6 | 0.501 | 2022.441 |

NEW ORBITS (continuation)

| WDS | Name | P(yr) | T(yr) | e | a(") | i(°) | Ω(°) | ω(°) | 2023 | Author(s) | |
|------------|---------------|--------------|--------------|------------|-------------|-------------|-----------------|-----------------|-------------|------------------|----------|
| HIP | ADS | σ_P | σ_T | σ_e | σ_a | σ_i | σ_Ω | σ_ω | 2024 | Last obs. | |
| 16038+1406 | HDS 2265 | 50.43 | 2021.182 | 0.841 | 0.335 | 59.3 | 177.7 | 344.1 | 285.5 | 0.081 | TOK |
| – | – | 1.00 | 0.021 | 0.003 | 0.003 | 0.7 | 0.6 | 1.3 | 307.3 | 0.127 | 2022.283 |
| 16402-2800 | VOU 44 AB | 108.9 | 1956.5 | 0.272 | 0.219 | 48.5 | 217.9 | -64.3 | 8.8 | 0.236 | TOK |
| – | – | 7.5 | 10.0 | 0.069 | 0.015 | 10.1 | 8.4 | 25.0 | 10.6 | 0.238 | 2022.684 |
| 16430-0857 | YSC 155 | 10.793 | 2021.643 | 0.742 | 0.066 | 116.2 | 149.2 | 13.9 | 343.4 | 0.057 | TOK |
| – | – | 0.175 | 0.082 | 0.018 | 0.002 | 2.3 | 2.4 | 6.0 | 334.9 | 0.086 | 2022.684 |
| 16567+1539 | HDS 2395 | 26.22 | 2020.522 | 0.854 | 0.130 | 133.2 | 157.5 | 2.3 | 1.6 | 0.106 | TOK |
| – | – | ... | ... | ... | ... | ... | ... | ... | 355.9 | 0.135 | 2022.389 |
| 17191-4638 | BSO 13 Ba,Bb | 0.241 | 2015.901 | 0.773 | 0.042 | 59.4 | 244.5 | 165.2 | 236.5 | 0.073 | TOK |
| – | – | ... | 0.016 | ... | 0.006 | 9.3 | 18.4 | 41.8 | 242.6 | 0.070 | 2022.684 |
| 17191-4638 | BSO 13 AB | 954.2 | 1908.206 | 0.816 | 12.751 | 35.2 | 320.1 | 150.3 | 259.9 | 10.883 | TOK |
| – | – | ... | ... | ... | ... | ... | ... | ... | 260.2 | 10.949 | 2016.000 |
| 17304-0104 | STF 2173 AB | 46.520 | 1962.294 | 0.173 | 0.972 | 99.2 | 151.6 | 326.3 | 42.0 | 0.179 | TOK |
| – | 10598 | 0.099 | 0.158 | 0.004 | 0.004 | 0.1 | 0.1 | 1.2 | 14.9 | 0.247 | 2022.217 |
| 17362-1752 | YSC 158 Aa,Ab | 20.70 | 2016.26 | 0.277 | 0.078 | 69.7 | 99.4 | 228.2 | 102.6 | 0.090 | TOK |
| – | – | 6.96 | 0.94 | 0.163 | 0.010 | 5.8 | 2.8 | 22.3 | 106.9 | 0.090 | 2022.195 |
| 17387-2155 | HDS 2492 | 21.454 | 2006.710 | 0.399 | 0.103 | 27.9 | 34.6 | 203.1 | 106.3 | 0.103 | TOK |
| – | – | 0.527 | 1.963 | 0.059 | 0.012 | 22.8 | 28.2 | 48.7 | 121.3 | 0.092 | 2022.195 |
| 17556+0204 | HDS 2527 | 66.28 | 2036.91 | 0.500 | 0.114 | 129.6 | 58.5 | 73.0 | 104.1 | 0.096 | TOK |
| – | – | ... | ... | ... | ... | ... | ... | ... | 99.9 | 0.096 | 2022.390 |
| 18003+2154 | WSI 106 Aa,Ab | 12.40 | 2017.316 | 0.256 | 0.061 | 124.2 | 146.4 | 111.3 | 215.6 | 0.045 | TOK |
| – | – | 0.44 | 0.116 | 0.021 | 0.002 | 1.8 | 2.5 | 4.9 | 190.8 | 0.053 | 2022.444 |
| 18136-3158 | B 1353 | 130 | 1994.773 | 0.696 | 0.111 | 58.7 | 113.7 | 218.2 | 117.8 | 0.141 | TOK |
| – | – | ... | ... | ... | ... | ... | ... | ... | 118.4 | 0.144 | 2022.444 |
| 18281-2645 | HDS 2615 AB | 43.48 | 1985.42 | 0.500 | 0.383 | 100.0 | 173.5 | 80.1 | 178.7 | 0.301 | TOK |
| – | – | ... | ... | ... | ... | ... | ... | ... | 176.6 | 0.294 | 2022.444 |
| 18282-5230 | B 1362 | 153.32 | 2004.31 | 0.556 | 0.235 | 79.7 | 56.4 | 333.2 | 112.4 | 0.043 | TOK |
| – | – | 12.33 | 0.99 | 0.046 | 0.014 | 1.2 | 1.2 | 9.6 | 123.8 | 0.040 | 2022.441 |

NEW ORBITS (continuation)

| WDS | Name | P(yr) | T(yr) | e | a(") | i(°) | Ω(°) | ω(°) | 2023 | Author(s) | |
|------------|----------------|--------------|--------------|------------|-------------|-------------|-------------------------------|-------------------------------|-------------|------------------|----------|
| HIP | ADS | σ_P | σ_T | σ_e | σ_a | σ_i | σ_Ω | σ_ω | 2024 | Last obs. | |
| 18305-1052 | HDS 2623 Aa,Ab | 55.0 | 2024.105 | 0.650 | 0.183 | 81.7 | 19.6 | 175.8 | 191.1 | 0.050 | TOK |
| – | – | ... | ... | ... | ... | ... | ... | ... | 198.4 | 0.063 | 2022.682 |
| 19093+1138 | HDS 2716 | 150 | 2019.56 | 0.940 | 0.190 | 68.8 | 97.6 | 104.9 | 312.3 | 0.041 | TOK |
| – | – | ... | ... | ... | ... | ... | ... | ... | 318.3 | 0.044 | 2022.289 |
| 19105-5813 | B 2468 | 670 | 2013.44 | 0.955 | 1.594 | 138.1 | 186.3 | 18.6 | 26.0 | 0.428 | TOK |
| – | – | ... | ... | ... | ... | ... | ... | ... | 24.5 | 0.462 | 2022.444 |
| 19200-1435 | RST 4037 | 311.8 | 2025.525 | 0.256 | 0.277 | 58.8 | 57.6 | 192.1 | 241.2 | 0.205 | TOK |
| – | – | ... | ... | ... | ... | ... | ... | ... | 242.3 | 0.204 | 2022.444 |
| 19264-1433 | HDS 2760 | 80.0 | 1971.614 | 0.270 | 0.274 | 118.8 | 260.8 | 121.0 | 274.7 | 0.302 | TOK |
| – | – | ... | ... | ... | ... | ... | ... | ... | 273.0 | 0.304 | 2022.444 |
| 19301-4904 | HDS 2772 | 80.0 | 2020.248 | 0.700 | 0.301 | 66.8 | 168.4 | 153.6 | 12.8 | 0.094 | TOK |
| – | – | ... | ... | ... | ... | ... | ... | ... | 26.8 | 0.087 | 2019.375 |
| 19326+1203 | HEI 574 | 400 | 1967.845 | 0.800 | 0.472 | 85.9 | 150.8 | 200.0 | 149.8 | 0.492 | TOK |
| – | – | ... | ... | ... | ... | ... | ... | ... | 149.8 | 0.498 | 2018.485 |
| 19466+0703 | TOK 368 | 13.76 | 2023.356 | 0.537 | 0.101 | 0.0 | 63.5 | 0.0 | 28.5 | 0.050 | TOK |
| – | – | 0.43 | 0.151 | 0.025 | 0.002 | 0.0 | 1.7 | 0.0 | 121.8 | 0.056 | 2022.682 |
| 19561-3208 | BWL 53 Ba,Bb | 40.0 | 2022.412 | 0.194 | 0.199 | 54.2 | 58.7 | 274.2 | 349.0 | 0.098 | TOK |
| – | – | ... | ... | ... | ... | ... | ... | ... | 8.1 | 0.111 | 2022.441 |
| 19581-4808 | HDS 2842 | 41.89 | 2015.885 | 0.742 | 0.256 | 70.4 | 71.5 | 236.3 | 79.2 | 0.278 | TOK |
| – | – | 2.17 | 0.043 | 0.013 | 0.006 | 0.7 | 0.6 | 1.1 | 80.8 | 0.292 | 2022.441 |
| 20012+0120 | A 2275 | 400 | 2039.863 | 0.200 | 0.492 | 47.2 | 126.6 | 58.6 | 152.6 | 0.361 | TOK |
| – | 13248 | ... | ... | ... | ... | ... | ... | ... | 153.7 | 0.358 | 2022.390 |
| 20050+2313 | CHR 92 | 5.111 | 2022.842 | 0.405 | 0.043 | 150.9 | 85.7 | 177.5 | 243.0 | 0.026 | TOK |
| – | – | 0.010 | 0.033 | 0.013 | 0.001 | 4.6 | 8.8 | 10.0 | 138.4 | 0.044 | 2022.682 |
| 20073-5127 | RST 1059 | 166.0 | 2013.0 | 0.276 | 0.172 | 18.3 | 102.5 | 106.8 | 249.0 | 0.128 | TOK |
| – | – | 25.3 | 5.2 | 0.064 | 0.010 | 9.8 | 55.8 | 73.6 | 252.5 | 0.130 | 2022.441 |
| 20158+2749 | MCA 60 AB | 45.40 | 2012.40 | 0.595 | 0.177 | 85.2 | 142.3 | 182.1 | 139.1 | 0.185 | TOK |
| – | – | 0.47 | 0.75 | 0.016 | 0.003 | 0.7 | 0.4 | 6.4 | 139.6 | 0.202 | 2022.682 |

NEW ORBITS (continuation)

| WDS HIP | Name ADS | P(yr) | T(yr) | e | a(") | i(°) | Ω(°) | ω(°) | 2023 | | Author(s) |
|------------|----------------|------------|------------|------------|------------|------------|-----------------|-----------------|-------|-----------|-----------|
| | | σ_P | σ_T | σ_e | σ_a | σ_i | σ_Ω | σ_ω | 2024 | Last obs. | |
| 20521+0205 | A 2286 AB | 252.9 | 2014.484 | 0.667 | 0.217 | 58.9 | 111.7 | 203.1 | 21.4 | 0.049 | TOK |
| – | 14372 | ... | ... | ... | ... | ... | ... | ... | 31.4 | 0.052 | 2022.289 |
| 20598-2028 | TOK 370 | 22.50 | 2015.924 | 0.389 | 0.141 | 95.5 | 184.7 | 81.2 | 358.9 | 0.121 | TOK |
| – | – | 1.56 | 0.243 | 0.082 | 0.006 | 0.8 | 0.7 | 3.5 | 356.7 | 0.104 | 2022.390 |
| 21116+2620 | LSC 95 | 50.0 | 2013.766 | 0.326 | 0.103 | 122.9 | 118.9 | 223.8 | 137.6 | 0.090 | TOK |
| – | – | ... | ... | ... | ... | ... | ... | ... | 133.1 | 0.098 | 2022.682 |
| 21214+1020 | A 617 | 6.058 | 1991.838 | 0.800 | 0.099 | 126.9 | 278.2 | 9.9 | 112.5 | 0.103 | TOK |
| – | 14893 | 0.003 | 0.022 | 0.005 | 0.001 | 1.1 | 1.6 | 2.7 | 100.5 | 0.159 | 2022.842 |
| 21344-0745 | YSC 72 | 12.12 | 2013.03 | 0.828 | 0.110 | 129.5 | 134.2 | 150.5 | 137.2 | 0.139 | TOK |
| – | – | 0.17 | 0.43 | 0.029 | 0.011 | 12.2 | 7.8 | 16.8 | 127.8 | 0.095 | 2022.444 |
| 22225-0727 | A 2694 | 94.88 | 2000.456 | 0.950 | 0.435 | 53.0 | 52.9 | 287.6 | 157.2 | 0.424 | TOK |
| – | 15877 | ... | ... | ... | ... | ... | ... | ... | 157.9 | 0.433 | 2022.611 |
| 22255-1536 | HDS 3179 | 200 | 2000.98 | 0.882 | 0.523 | 58.8 | 40.7 | 344.0 | 194.0 | 0.422 | TOK |
| – | – | ... | ... | ... | ... | ... | ... | ... | 194.7 | 0.437 | 2021.330 |
| 22299-3101 | HDS 3187 | 120 | 2030.293 | 0.400 | 0.375 | 103.3 | 187.5 | 41.7 | 189.8 | 0.249 | TOK |
| – | – | ... | ... | ... | ... | ... | ... | ... | 188.3 | 0.246 | 2022.845 |
| 22313-0633 | CHR 111 | 1.7317 | 2019.147 | 0.375 | 0.068 | 66.5 | 262.3 | 172.1 | 221.6 | 0.041 | TOK |
| – | – | 0.0004 | 0.008 | 0.010 | 0.001 | 1.6 | 0.9 | 1.8 | 294.6 | 0.044 | 2021.732 |
| 22397-7806 | HDS 3218 | 95.0 | 2039.204 | 0.183 | 0.265 | 140.8 | 147.1 | 22.2 | 199.8 | 0.209 | TOK |
| – | – | ... | ... | ... | ... | ... | ... | ... | 195.2 | 0.211 | 2022.611 |
| 22508-6543 | HDS 3246 | 20.18 | 2016.35 | 0.414 | 0.210 | 93.9 | 272.7 | 146.2 | 280.5 | 0.123 | TOK |
| – | – | 0.35 | 0.11 | 0.013 | 0.002 | 0.4 | 0.3 | 2.2 | 278.1 | 0.167 | 2022.390 |
| 22532-3750 | HDS 3250 Aa,Ab | 13.03 | 2012.14 | 0.084 | 0.125 | 41.0 | 220.2 | 150.1 | 299.0 | 0.092 | TOK |
| – | – | 0.35 | 0.33 | 0.024 | 0.002 | 2.0 | 4.5 | 14.2 | 338.6 | 0.093 | 2022.685 |
| 23029-1320 | HD S3283 AB | 76.27 | 2035.29 | 0.692 | 0.139 | 120.8 | 42.3 | 255.0 | 268.6 | 0.096 | TOK |
| – | – | ... | ... | ... | ... | ... | ... | ... | 264.9 | 0.095 | 2021.566 |
| 23133-4937 | I 1467 | 250 | 2029.1 | 0.791 | 0.304 | 122.5 | 159.7 | 310.3 | 310.5 | 0.084 | TOK |
| – | – | ... | ... | ... | ... | ... | ... | ... | 303.1 | 0.070 | 2022.442 |

NEW ORBITS (continuation)

| WDS HIP | Name ADS | P(yr) σ_P | T(yr) σ_T | e σ_e | a(") σ_a | i(°) σ_i | Ω(°) σ_Ω | ω(°) σ_ω | 2023 2024 | Author(s) Last obs. |
|--------------------|---------------------|----------------------------|----------------------------|------------------------|---------------------------|---------------------------|--|--|----------------------|--------------------------------|
| 23167-1534 | HU 399 | 600 | 2012.05 | 0.846 | 0.504 | 70.3 | 141.4 | 326.2 | 169.4 0.089 | TOK |
| – | – | ... | ... | ... | ... | ... | ... | ... | 173.0 0.087 | 2022.447 |
| 23209+1643 | HEI 88 | 33.83 | 2002.882 | 0.629 | 0.171 | 26.5 | 113.3 | 273.8 | 218.8 0.244 | TOK |
| – | 16643 | 0.19 | 0.167 | 0.008 | 0.003 | 2.3 | 7.9 | 6.6 | 222.5 0.240 | 2022.682 |
| 23216-2018 | HU 292 | 300 | 1991.892 | 0.606 | 0.516 | 126.4 | 101.7 | 227.0 | 116.2 0.387 | TOK |
| – | – | ... | ... | ... | ... | ... | ... | ... | 115.3 0.397 | 2022.444 |
| 23218-1217 | HU 95 | 161.73 | 1943.30 | 0.371 | 0.400 | 155.6 | 19.3 | 290.7 | 268.1 0.505 | TOK |
| – | – | 6.00 | 1.33 | 0.021 | 0.016 | 7.0 | 12.0 | 9.2 | 267.0 0.505 | 2022.445 |
| 23286-3821 | HDS 3342 | 47.81 | 2014.875 | 0.363 | 0.118 | 128.5 | 125.9 | 156.4 | 232.0 0.071 | TOK |
| – | – | 2.03 | 0.435 | 0.033 | 0.005 | 2.5 | 3.2 | 4.4 | 220.3 0.073 | 2022.442 |
| 23296-4001 | HDS 3346 AB | 48.5 | 2020.44 | 0.577 | 0.121 | 80.8 | 8.3 | 241.8 | 358.5 0.047 | TOK |
| – | – | 21.6 | 0.61 | 0.097 | 0.035 | 4.7 | 3.1 | 13.4 | 2.9 0.068 | 2022.685 |
| 23328-1645 | VOU 28BC | 44.265 | 2024.979 | 0.239 | 0.846 | 89.5 | 176.6 | 237.9 | 356.9 0.562 | TOK |
| – | – | 0.207 | 0.338 | 0.022 | 0.007 | 0.3 | 0.1 | 4.3 | 357.1 0.461 | 2021.566 |
| 23455-1610 | MTG 5 | 21.10 | 2024.274 | 0.498 | 0.410 | 99.1 | 9.5 | 353.9 | 33.6 0.093 | TOK |
| – | – | 0.71 | 0.235 | 0.044 | 0.013 | 0.7 | 0.4 | 2.9 | 13.2 0.194 | 2022.845 |
| 23456-4841 | HDS 3376 | 41.26 | 1990.33 | 0.750 | 0.365 | 67.2 | 68.9 | 99.3 | 41.5 0.322 | TOK |
| – | – | ... | ... | ... | ... | ... | ... | ... | 44.4 0.318 | 2022.444 |
| 23587-0333 | BU 730 | 500 | 2151.27 | 0.230 | 1.249 | 60.0 | 83.8 | 18.3 | 335.8 0.687 | TOK |
| – | 15075 | ... | ... | ... | ... | ... | ... | ... | 337.0 0.682 | 2022.447 |

TOK = TOKOVININ

D et al. = DOCOBO, CAMPO, MÉNDEZ & COSTA

L et al. = LING, SCARDIA, PRIEUR, PANSECCHI, ARGYLE, ARISTIDI, ZANUTTA,
ABE, BENDJOYA, RIVET, VERNET & MACCARINI

ALZ = ALZNER

S et al. = SCARDIA, PRIEUR, LING, PANSECCHI, ARGYLE, ARISTIDI, ZANUTTA,
ABE, BENDJOYA, RIVET, VERNET & MACCARINI

NEW DOUBLE STARS

Discovered by André Debackère using LCO global telescope network.

- F65 : T 2m Faulkes Telescope North FTN, Haleakala, Hawaii
- V37 : T 1m Mc Donald Observatory, Fort Davis, Texas, USA
- V38 : T 0.40m Mc Donald Observatory, Fort Davis, Texas, USA
- Z17 : T 0.4m Teide Observatory, Tenerife, Canary Islands, Spain

| STAR | Precise Coord | GAIA-EDR3 Id. | G Mag. | Plx e-plx | pmRA e-pmRA | pmDE e-pmDE | Epoch | θ ($^{\circ}$) | ρ ($''$) | Obs |
|-----------|----------------------|---------------------|--------|------------------|-----------------|------------------|----------|----------------------------|----------------------|-------------|
| DBR 331 A | 041941.595+29152837 | 164858853621879552 | 9.27 | 1.7033 0.0195 | -2.459 0.023 | -2.012 0.021 | 2022.928 | 207.10 ± 0.41 | 5.678 ± 0.030 | 3V38 Z17 |
| B | 041941.395+291523.24 | 164858853621880576 | 12.61 | 1.8271 0.0241 | -2.666 0.030 | -2.219 0.020 | | | | |
| DBR 332 A | 063740.114+292029.89 | 3434649513701792000 | 10.52 | 2.0097 0.0261 | 7.189 0.029 | -10.137 0.024 | 2022.998 | 26.1 | 2.54 | 1V37 |
| B | 063740.203+292033.19 | 3434649513701791872 | 12.66 | 1.9785 0.0140 | 6.450 0.017 | -9.592 0.014 | | | | |
| DBR 333 A | 063821.417+292304.26 | 3434643324652286080 | 11.53 | 8.9695 0.0337 | 7.760 0.036 | -55.104 0.029 | 2022.998 | 60.1 | 1.55 | 1V37 |
| B | 063821.273+292305.79 | 3434643328949108224 | 12.13 | 8.9655 0.0225 | 6.316 0.023 | -52.755 0.019 | | | | |

NEW DOUBLE STARS

Discovered by André Debackère using LCO global telescope network.
(continuation)

| STAR | Precise Coord | GAIA-EDR3 Id. | G Mag. | Plx e-plx | pmRA e-pmRA | pmDE e-pmDE | Epoch | θ ($^{\circ}$) | ρ ($''$) | Obs |
|-----------|----------------------|---------------------|--------|--------------|----------------|----------------|----------|----------------------------|--------------------|----------|
| DBR 334 A | 181458.412+363853.49 | 4606018933638349440 | 13.38 | 0.7876 | -0.797 | 11.939 | 2022.686 | 140.1 | 2.02 | 1F65 |
| B | 181458.503+36385179 | 4606018933638349312 | 14.25 | 0.0098 | 0.010 | 0.012 | | | | |
| | | | | 0.8000 | -0.829 | 11.718 | | | | |
| DBR 335 A | 205903.907+442049.42 | 2162237414729717760 | 12.93 | 2.0552 | -7.071 | -8.930 | 2022.361 | 210.10 | 5.758 | 1F65 (1) |
| B | 205903.636+442044.41 | 2162237414729717504 | 12.95 | 0.0132 | 0.015 | 0.015 | | ± 0.17 | ± 0.020 | |
| | | | | 2.0396 | -7.145 | -8.496 | | | | |
| | | | | 0.0128 | 0.014 | 0.014 | | | | |
| DBR 336 A | 222806.778+522233.35 | 2001447479981110784 | 13.47 | 1.8767 | 32.441 | -3.680 | 2022.424 | 226.56 | 1.533 | 1F65 (2) |
| B | 222806.656+522232.28 | 2001447479967044352 | 16.09 | 0.0145 | 0.015 | 0.014 | | ± 0.54 | ± 0.013 | |
| | | | | 1.8160 | 32.434 | -3.463 | | | | |
| | | | | 0.0480 | 0.065 | 0.057 | | | | |

(1) in NGC 7000 field

(2) in NGC 7296 field

PAPERS PUBLISHED IN 2022

1. ABU-DHAIM, A. et al.: *Studying the Physical Parameters of the Stellar Binary System Hip 42455 (HD 73900)*. *AcA*, **72**, 171A (2022).
2. BANYARD, G. et al.: *The observed multiplicity properties of B-type stars in the Galactic young open cluster NGC 6231*. *A&A*, **658**, A 69B (2022).
3. BASHI, D. et al.: *Gaia spectroscopic orbits validated with LAMOST and GALAH radial velocities*. *MNRAS*, **517**, (3) 3888B (2022).
4. BROŽ, M. et al.: *Towards a consistent model of the hot quadruple system HD 93206 = QZ Carinæ. II. N-body model*. *A&A*, **666**, A 24B (2022).
5. CHRISTIAN, S. et al.: *A Possible Alignment Between the Orbits of Planetary Systems and their Visual Binary Companions*. *AJ*, **163**, (5) 207C (2022).
6. CHULKOV, D. & MALKOV, O. et al.: *Visual binary stars with known orbits in Gaia EDR3*. *MNRAS*, **517**, (2) 2925C (2022).
7. CLARK, C. A.: *A New Stellar Companion to GJ 1292*. *RNAAS*, **6**, (11) 242C (2022).
8. CLARK, C. A. et al.: *A Dearth of Close-in Stellar Companions to M-dwarf TESS Objects of Interest*. *AJ*, **163**, (5) 232C (2022).
9. CLARK, C. A. et al.: *The POKEMON Speckle Survey of Nearby M Dwarfs. I. New Discoveries*. *AJ*, **164**, (2) 33C (2022).
10. CVETKOVIĆ, Z. & PAVLOVIĆ, R.: *Recalculated Orbits Of Binaries and New Linear Solutions*. *AJ*, **164**, (3) 98C (2022).
11. DE FURIO, M. et al.: *The Small Separation A-star Companion Population: First Results with CHARA/MIRC-X*. *ApJ*, **941**, (2) 118D (2022).
12. DSILVA, K. et al.: *A spectroscopic multiplicity survey of Galactic Wolf-Rayet stars. II. The northern WNE sequence*. *A&A*, **664**, A93D (2022).
13. EISNER, N. L. et al.: *Planet Hunters TESS IV: a massive, compact hierarchical triple star system TIC 470710327*. *MNRAS*, **511**, (4) 4710E (2022).
14. EL-BADRY, K. & RIX, H-W.: *What are the spectroscopic binaries with high-mass functions near the Gaia DR3 main sequence?* *MNRAS*, **515**, (1) 1266E (2022).
15. EL-BADRY, K. et al.: *Unicorns and giraffes in the binary zoo: stripped giants with subgiant companions*. *MNRAS*, **512**, (4) 5620E (2022).
16. EL-BADRY, K. et al.: *Birth of a Be star: an APOGEE search for Be stars forming through binary mass transfer*. *MNRAS*, **516**, (3) 3602E (2022).

17. FEKEL, F. C. et al.: *An Analysis of the Eclipsing Binaries HD 71636, V1022 Cassiopeiae, and OT Andromedae*. AJ, **164**, (5) 224F (2022).
18. FOWLER, C., PLUFF, J. & THOMAS, J.: *Updated Orbit and Observations of Spectroscopic Binary HD 2019*. RNAAS, **6**, 211F (2022).
19. FROST, A. J. et al.: *HR 6819 is a binary system with no black hole. Revisiting the source with infrared interferometry and optical integral field spectroscopy*. A&A, **659**, L 3F (2022).
20. GARDNER, T. et al.: *ARMADA. II. Further Detections of Inner Companions to Intermediate-mass Binaries with Microarcsecond Astrometry at CHARA and VLTI*. AJ, **164**, (5) 184G (2022).
21. GILI, R. et al.: *Measurements of visual double stars with PISCO2 at the Nice 76-cm refractor in 2013-2014*. AN, **343**, (8) e20224008 (2022).
22. GOMEZ, J. et al.: *20 Orbits of binaries based on soar speckle observations*. MNRAS, **509**, (3) 4229G (2022).
23. GUO, Y. et al.: *The Binarity of Early-type Stars from LAMOST medium-resolution Spectroscopic Survey*. RAA, **22**, (2), B 5009G (2022).
24. HEINTZ, T. M. et al.: *Testing White Dwarf Age Estimates Using Wide Double White Dwarf Binaries from Gaia EDR3*. ApJ, **934**, (2) 148H (2022).
25. HUSSEIN, A. M. et al.: *Atmospheric and Fundamental Parameters of Eight Nearby Multiple Stars*. AJ, **163**, (4) 182H (2022).
26. HWANG, H-C. et al.: *Wide binaries from the H3 survey: the thick disc and halo have similar wide binary fractions*. MNRAS, **513**, (1) 754H (2022).
27. HWANG, H-C. et al.: *Wide Twin Binaries are Extremely Eccentric: Evidence of Twin Binary Formation in Circumbinary Disks*. ApJ, **933**, (2), L 32H (2022).
28. JACK, D. et al.: *Yet another star in the Albireo system. The discovery of Albireo Ad*. A&A, **661**, A 49J (2022).
29. JACK, D. et al.: *Bright spectroscopic binaries: II. A study of five systems with orbital periods of $P \leq 500$ days*. AN, **343**, (3), 10015J (2022).
30. JANSSENS, S. et al.: *Uncovering astrometric black hole binaries with massive main-sequence companions with Gaia*. A&A, **658**, A 129J (2022).
31. KERVELLA, P. et al.: *The binary system of the spinning-top Be star Achernar*. A&A, **667**, 111K (2022).
32. KLEMENT, R. et al.: *Interferometric Detections of sdO Companions Orbiting Three Classical Be Stars*. ApJ, **926**, 21) 231K (2022).
33. KLEMENT, R. et al.: *Dynamical Masses of the Primary Be Star and Secondary sdB Star in the Single-lined Binary κ Dra (B6 IIIe)*. ApJ, **940**, (1) 86K (2022).

34. LESTER, K.V. et al.: *Visual Orbits of Spectroscopic Binaries with the CHARA Array. IV. HD 61859, HD 89822, HD 109510, and HD 191692.* AJ, **164**, (6) 228L (2022).
35. LENNON, D. J. et al.: *The VLT-FLAMES survey of massive stars. NGC 2004#115: A triple system hosting a possible short period B+BH binary.* A&A, **665**, A 180L (2022).
36. LI, J. et al.: *Mass-ratio Distribution of Binaries from the LAMOST-MRS Survey.* ApJ, **933**, (2) 119L (2022).
37. LING, J. F. et al.: *Speckle Observations with PISCO in Calern (France): Orbit and Mass Determinations for 22 Visual Binaries.* AcA, **72**, 113L (2022).
38. MAHY, L. et al.: *Identifying quiescent compact objects in massive Galactic single-lined spectroscopic binaries.* A&A, **664**, 159M (2022).
39. MALKOV, O. & KNIAZEV, A.: *Wide binary stars with non-coeval components.* OAst, **31**, (1) 327M (2022).
40. MAYER, P. et al.: *Towards a consistent model of the hot quadruple system HD 93206 = QZ Carinæ. I. Observations and their initial analyses.* A&A, **666**, A 23M (2022).
41. MAZEH, T. et al.: *Probable dormant neutron star in a short-period binary system.* MNRAS, **517**, (3) 4005M (2022).
42. MOLINA, F. et al.: *Orbital and atmospheric parameters of two wide O-type subdwarf binaries: BD-11 °162 and Feige 80.* A&A, **658**, A 122M (2022).
43. MORALES, L. M. et al.: *The Interferometric Binary ϵ Cnc in Praesepe: Precise Masses and Age.* AJ, **164**, (2) 34M (2022).
44. PAVLOVSKI, K. et al.: *Dynamical parallax, physical parameters, and evolutionary status of the components of the bright eclipsing binary α Draconis.* A&A, **658**, 92P (2022).
45. PREECE, H.P. et al.: *Forming hot subluminous stars from hierarchical triples - I. The role of an outer tertiary on formation channels.* MNRAS, **517**, (2) 2111P (2022).
46. PILECKI, B. et al.: *Discovery of a Binary-origin Classical Cepheid in a Binary System with a 59 day Orbital Period.* ApJ, **940**, (2) L48P (2022).
47. POWELL, B. P. et al.: *TIC 114936199: A Quadruple Star System with a 12 Day Outer-orbit Eclipse.* ApJ, **938**, (2) 133P (2022).
48. PUTKURI, C. et al.: *The double-lined spectroscopic binary orbit of the massive supergiant HD 152147: A new target for interferometry.* MNRAS, **517**, (2) 3101P (2022).

49. REGGIANI, M. et al.: *Probing the low-mass end of the companion mass function for O-type stars.* A&A, **660**, A 122R (2022).
50. SALAMA, M. et al.: *An Adaptive Optics Census of Companions to Northern Stars Within 25 pc with Robo-AO.* AJ, **163**, (5) 200S (2022).
51. SANCHEZ-BERMUDEZ, J. et al.: *The outer orbit of the high-mass stellar triple system Herschel 36 determined with the VLTI.* MNRAS, **514**, (1) 1162S (2022).
52. SHAKHT, N. A., IZMAILOV, I. S. & GORSHANOV, D. L.: *Checking the possibility of determining the relative orbits of stars rotating around the center body of the Galaxy.* OAst, **31**, (1) 136s (2022).
53. SHARA, M. M. et al.: *A speckle-imaging search for close and very faint companions to the nearest and brightest Wolf-Rayet stars.* MNRAS, **509**, (2) 2897S (2022).
54. SHENAR, T. et al.: *The Tarantula Massive Binary Monitoring. VI. Characterisation of hidden companions in 51 single-lined O-type binaries: A flat mass-ratio distribution and black-hole binary candidates.* A&A, **665**, 148S (2022).
55. SUCHOMSKA, K. et al.: *Evolved eclipsing binary systems in the Galactic bulge: Precise physical and orbital parameters of OGLE-BLG-ECL-305487 and OGLE-BLG-ECL-116218.* A&A, **6658**, 30S (2022).
56. TOKOVININ, A.: *The Family of V1311 Ori: a Young Sextuple System or a Mini-cluster?.* AJ, **163**, (3) 127T (2022).
57. TOKOVININ, A.: *Spectroscopic Orbits of Subsystems in Multiple Stars. VIII.* AJ, **163**, (4) 161T (2022).
58. TOKOVININ, A.: *Resolved Gaia Triples..* ApJ, **926**, (1) 1T (2022).
59. TOKOVININ, A. et al.: *Speckle Interferometry at SOAR in 2021.* AJ, **164**, (2) 58T (2022).
60. TORRES, G.: *Orbital solution and dynamical masses for the nearby binary system GJ67 AB.* MNRAS, **514**, (4) 5183T (2022).
61. TORRES, G. et al.: *The Orbits and Dynamical Masses of the Castor System.* ApJ, **941**, (1) 8T (2022).
62. TORRES, G. & SAKANO, K.: *η Geminorum: an eclipsing semiregular variable star orbited by a companion surrounded by an extended disc.* MNRAS, **516**, (2) 2514T (2022).
63. UZUNDAG, M. et al.: *Volume-limited sample of low-mass red giant stars, the progenitors of hot subdwarf stars. I. Sample selection and binary classification method.* A&A, **668**, A 89U (2022).
64. VRIJMOET, E .H. et al.: *The Solar Neighborhood. XLIX. New Discoveries and Orbits of M-dwarf Multiples with Speckle Interferometry at SOAR.* AJ, **163**, (4) 178T (2022).

65. VYNATHEYA, P. et al.: *Algebraic and machine learning approach to hierarchical triple-star stability*. MNRAS, **516**, (3) 4146V (2022).
66. ZARRILLI, S. et al.: *Characterising the orbit and circumstellar environment of the high-mass binary MWC 166 A*. A&A, **665**, 146Z (2022).
67. ZHENG, L-L. et al.: *A White Dwarf-Main-sequence Binary Unveiled by Time-domain Observations from LAMOST and TESS*. ApJ, **936**, (1) 33Z (2022).

The deadline for contributions to Information Circular No. 210 is:

June 15th 2023

J. A. Docobo (joseangel.docobo@usc.es) [1,2]

J. F. Ling (josefinaf.ling@usc.es) [1]

Tel: +34 881 815 016

[1] Observatorio Astronómico R. M. Aller
P. O. Box 197
<http://www.usc.es/astro>
Universidade de Santiago de Compostela
SPAIN

[2] Real Academia de Ciencias de Zaragoza
Facultad de Ciencias
C/ Pedro Cerbuna, 12
50009 Zaragoza
SPAIN

ISSN: 1024-7769