INTERNATIONAL ASTRONOMICAL UNION

COMMISSION G1 (BINARY AND MULTIPLE STAR SYSTEMS)

DOUBLE STARS INFORMATION CIRCULAR No. 218 (FEBRUARY 2026)

NEW ORBITS

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	2026 2027	Author(s) Last obs.
02193-0259	Mira	276.50	2076.54	0.665	0.5329	126.6	149.9	212.6	89.65	0.4024	C et al.
10826	1778	$^{+48.2}_{-8.5}$	$^{+10.00}_{-2.80}$	$^{+0.0411}_{-0.1400}$	$^{+0.0064}_{-0.0390}$	$^{+0.4}_{-0.9}$	$^{+3.5}_{-9.5}$	$^{+6.2}_{-21.0}$	88.61	0.3956	2023.5530
13336+2944	A 1095	236.00	2046.68	0.320	0.395	49.8	92.6	285.7	306.82	0.2536	D et al.
66149	8943	± 15.00	± 1.50	± 0.030	± 0.020	± 2.0	± 2.0	± 6.0	309.15	0.2466	2025.4613
14189+5452	CHR 137	9.780	2020.307	0.510	0.075	116.1	14.8	159.1	19.1	0.110	D et al.
69958	...	± 0.300	± 0.350	± 0.005	± 0.002	± 0.3	± 0.3	± 0.3	12.2	0.101	2025.4613
14558+3939	A 1627	99.86	2063.66	0.031	0.226	57.2	24.1	346.9	220.63	0.2114	D et al.
73053	9441	± 0.80	± 0.50	± 0.003	± 0.002	± 0.5	± 0.5	± 5.0	222.92	0.2064	2025.4613
14588+3551	COU 1136	86.78	2011.80	0.715	0.173	124.3	66.2	87.2	213.23	0.1509	D et al.
...	...	± 2.20	± 0.05	± 0.010	± 0.003	± 1.0	± 1.0	± 1.0	211.12	0.1535	2025.4613
15078+3956	COU 1271	408.6	2038.34	0.000	0.448	34.9	55.2	331.6	21.35	0.4176	D et al.
...	...	± 50.0	± 12.00	± 0.100	± 0.030	± 3.0	± 6.0	± 15.0	22.18	0.4188	2025.4613
15152+0456	HDS 2143	1537.	489.	0.854	1.831	93.7	83.3	195.8	265.35	0.2573	D et al.
...	...	.	.	.	.	.	.	.	264.94	0.2494	2025.4614
16169+0113	A 2181	656.	1943.7	0.48	0.69	21.4	4.7	347.6	92.9	0.543	D et al.
79774	9989	± 50.	± 2.0	± 0.03	± 0.03	± 0.5	± 15.0	± 20.0	93.7	0.546	2025.4615
16235+3321	VBS 26	195.93	2020.00	0.246	0.204	180.0	18.6	42.1	317.84	0.1554	D et al.
...	...	± 6.50	± 1.50	± 0.010	± 0.005	± 8.0	± 13.0	± 9.0	314.78	0.1560	2025.4615
17161+2316	COU 315	128.27	2030.90	0.487	0.140	149.5	93.0	255.4	244.2	0.076	D et al.
84468	...	± 5.50	± 0.60	± 0.040	± 0.005	± 5.0	± 10.0	± 3.0	236.6	0.072	2025.4616
17207-0706	A 2593AB	73.68	1981.24	0.030	0.268	124.5	166.5	21.8	303.9	0.195	D et al.
84866	10480	± 1.50	± 0.50	± 0.030	± 0.005	± 2.0	± 2.0	± 20.0	298.4	0.186	2025.4615
17221+2310	COU 415	118.73	1990.07	0.472	0.344	134.6	138.4	136.7	207.09	0.3255	D et al.
84976	...	± 1.50	± 0.50	± 0.005	± 0.004	± 0.5	± 1.0	± 1.0	205.03	0.3314	2025.4616

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	2025 2026		Author(s) Last obs.
17420+1557	BU 1251 AB	152.39	1952.34	0.475	1.016	164.3	106.4	195.9	93.8	1.494	D et al.
86623	10723	± 1.50	± 3.50	± 0.020	± 0.003	± 6.0	± 10.0	± 15.0	93.0	1.494	2025.4615
17471+4737	CHR 64	261.88	1977.420	0.3780	0.4820	68.7	155.2	263.3	160.39	0.4647	D et al.
87045	...	± 30.00	± 2.50	± 0.100	± 0.040	± 3.0	± 3.0	± 8.0	160.89	0.4666	2025.4616
18015-1014	BU 47	423.64	2013.62	0.461	1.247	60.0	87.9	338	92.5	0.698	D et al.
...	10977	± 35.00	± 1.50	± 0.008	± 0.050	± 3.0	± 3.0	± 3.0	93.7	0.699	2025.4616
18043+4206	COU 1786	48.96	2036.67	0.197	0.126	34.6	25.9	140.8	60.2	0.117	D et al.
88498	...	± 0.50	± 0.30	± 0.010	± 0.003	± 0.5	± 1.5	± 3.0	67.4	0.112	2025.4616
23438-1517	R Aqr	39.585	2020.300	0.4616	0.0541	112.91	93.07	277.98	87.91	0.0434	C et al.
...	...	± 0.257	± 0.020	± 0.0053	± 0.0010	± 0.20	± 0.20	± 0.40	83.26	0.0452	2023.6000

C *et al.* = Pedro Pablo Campo, José Ángel Docobo, Javier Alcolea, Jean-F. Desmurs, Arancha Castro, Krystian Ilkiewicz, Miguel Gómez, Joanna Mikolajewska, Miguel Santander, & Valentin Bujarrabal

D *et al.* = José Ángel Docobo, Pedro Pablo Campo, Luca Piccotti, Valeri Orlov, Francy Carolina Rojas & René A. Méndez

NEW DOUBLE STARS

Discovered by A. Debackère using LCO Global Telescope Network.

- E10 T2.0m Siding Spring Observatory-Faulkes Telescope South
- F65 T2.0m Haleakala Observatory-Faulkes Telescope North
- K91 T1.0m South African Astronomical Observatory-Sutherland-LCO A
- K92 T1.0m South African Astronomical Observatory -Sutherland-LCO B
- Q63 T1.0m Siding Spring Observatory-LCO A
- V37 T1.0m McDonald Observatory-LCO A
- Z24 T1.0m Teide Observatory-Tenerife-LCO B
- L09 T0.4m South African Astronomical Observatory-Sutherland-LCO Aqawan A #1
- W89 T0.4m Cerro Tololo Interamerican Observatory-LCO Aqawan A #1
- Z21 T0.4m Teide Observatory-Tenerife-LCO Aqawan A #1

STAR	**Precise Coord (2000)**		**G**	**Plx**	**pmRA**	**pmDE**	**Epoch**	θ	ρ	**#**	**Obs**
GAIA-DR3 Id.	**RA**	**DE**	**mag**	e_{Plx}	e_{pmRA}	e_{pmDE}		(°)	(″)		
DBR 350 A	020848.455	+243642.49	12.8	5.4676	61.065	-70.391	2025.896	200.57	2.302	1	Z21
104474568374919296				0.0223	0.024	0.024		0.02	0.042		
DBR 350 B	020848.392	+243640.49	12.9	5.6189	59.541	-70.120					
104474568374919424				0.0267	0.029	0.029					
DBR 351 A	060849.358	+240119.50	13.8	1.9794	-0.281	-11.133	2025.023	234.31	234.31	1	F65
3425504149643398144				0.0250	0.029	0.020		0.44	0.002		
DBR 351 B	060849.231	+240118.25	13.8	2.0299	-0.909	-10.351					
3425504149645109888				0.0323	0.037	0.026					
DBR 352 A	063344.059	-110412.55	13.2	2.3866	-2.687	-15.849	2025.042	264.91	4.620	1	E10
3001781406576999936				0.0128	0.014	0.014		0.20	0.016		
DBR 352 B	063343.746	-110412.97	13.3	2.4018	-2.642	-15.461					
3001781406577000960				0.0130	0.013	0.014					
DBR 353 A	081301.350	-053548.84	11.8	1.1753	-1.909	9.936	2025.908	119.44	2.982	3	K92
3064539881016664832				0.0147	0.015	0.013		0.08	0.008		Z24
DBR 353 B	081301.525	-053550.29	12.4	1.2081	-2.141	9.951					Q63
3064539881016661888				0.0191	0.019	0.017					
DBR 354 A	104331.108	+113014.97	13.9	1.1734	5.477	-1.233	2025.066	97.12	2.254	1	K91
3870754686140026368				0.0209	0.020	0.019		-	-		
DBR 354 B	104331.257	+113014.65	15.5	1.1925	5.537	-1.144					
3870754681846247040				0.0415	0.041	0.037					
DBR 355 A	111549.897	+550959.15	12.8	2.4216	-25.392	-6.249	2025.096	68.09	4.093	1	V37
843954034213727360				0.0127	0.009	0.011		-	-		
DBR 355 B	111550.345	+551000.68	15.6	2.3878	-25.627	-6.246					
843954034213727232				0.0309	0.041	0.027					
DBR 356 A	123906.552	-115016.58	13.2	6.4644	-31.833	-19.282	2025.224	93.09	3.960	1	K91
3530124609465821696				0.0170	0.018	0.014		-	-		
DBR 356 B	123906.821	-115016.80	13.5	6.3871	-31.164	-19.306					
3530124609465821824				0.0213	0.022	0.017					

NEW DOUBLE STARS (continuation)

Discovered by A. Debackère using LCO Global Telescope Network.

- E10 T2.0m Siding Spring Observatory-Faulkes Telescope South
- F65 T2.0m Haleakala Observatory-Faulkes Telescope North
- K91 T1.0m South African Astronomical Observatory-Sutherland-LCO A
- K92 T1.0m South African Astronomical Observatory -Sutherland-LCO B
- Q63 T1.0m Siding Spring Observatory-LCO A
- V37 T1.0m McDonald Observatory-LCO A
- Z24 T1.0m Teide Observatory-Tenerife-LCO B
- L09 T0.4m South African Astronomical Observatory-Sutherland-LCO Aqawan A #1
- W89 T0.4m Cerro Tololo Interamerican Observatory-LCO Aqawan A #1
- Z21 T0.4m Teide Observatory-Tenerife-LCO Aqawan A #1

STAR	**Precise Coord (2000)**		**G**	**Plx**	**pmRA**	**pmDE**	**Epoch**	θ	ρ	**#**	**Obs**
GAIA-DR3 Id.	**RA**	**DE**	**mag**	e_{Plx}	e_{pmRA}	e_{pmDE}		(°)	(″)		
DBR 357 A	123949.973	-113018.04	12.8	2.0841	-16.602	20.024	2025.224	221.05	7.400	1	K91
3530172571367471360				0.0257	0.030	0.024		-	-		
DBR 357 B	123949.640	-113023.60	14.9	2.0197	-16.380	19.671					
3530172575660603008				0.0426	0.051	0.038					
DBR 358 A	144041.054	+581135.6	9.2	10.1164	-31.408	-72.326	2025.693	170.54	12.870	1	Z21
1616884114102880000				0.0320	0.035	0.041		0.27	0.017		
DBR 358 B	144041.324	+581122.94	14.6	10.1149	-30.817	-72.097					
1616884114102879872				0.0982	0.112	0.118					
DBR 359 A	232928.359	+050623.12	12.2	0.6291	0.180	1.802	2025.857	257.82	4.432	2	W89
2660340538854800000				0.0145	0.018	0.013		0.53	0.055		L09
DBR 359 B	232928.067	+050622.19	15.8	0.5775	0.141	1.865					
2660340538856305536				0.0454	0.055	0.037					

PAPERS PUBLISHED IN 2025

1. ABUSHATTAL, AHMAD *et al.*: *Precise Physical Parameters, Habitability, and Orbital Stability of Sun-like SB2 Systems: HD 130669, HD 184467, HD 191854, and HD 214222* The Astronomical Journal, **170**, (5), id.268, 15 pp. (2025).

2. CHEN, KUN *et al.*: *The Binary Fraction of B-type Runaway Stars from LAMOST DR8* The Astrophysical Journal, **988**, (2), id.228, 8 pp. (2025).

3. CHILDS, ANNA C. & GELLER, AARON M.: *Stellar Dynamics in Open Clusters Increases the Binary Fraction and Mass Ratios: Evidence from Photometric Binaries in 35 Open Clusters* The Astrophysical Journal, **989**, (1), id.104, 17 pp. (2025).

4. CHULKOV, DMITRY; STRAKHOV, IVAN; SAFONOV, BORIS: *Resolving Pleiades Binary Stars with Gaia and Speckle Interferometric Observations* The Astronomical Journal, **169**, (3), id.145, 14 pp. (2025).

5. CONZO, GIUSEPPE *et al.*: *Characterization of the Visual Binary TOI-6883AB and its Dynamical Implications for the Planetary Companion TOI-6883Ab* Research Notes of the AAS, **9**, (6), id.139 (2025).

6. CRAINE, ERIC R. *et al.*: *MG1-1995959: An Eclipsing Binary Star with a Pronounced O'Connell Effect* The Astrophysical Journal, **986**, (2), id.192, 14 pp. (2025).

7. DANNER, CHRISTOPHER A. *et al.*: *Precise Age for the Binary HD 21278 in the Young α Persei Cluster* The Astrophysical Journal, **988**, (1), id.113, 22 pp. (2025).

8. DENKER, CARSTEN *et al.*: *The Calm before the Storm: High Spatial Resolution Mosaic of Active Region NOAA 14274 at the Onset of an X1.2 Flare* Research Notes of the AAS, **9**, (11), id.321 (2025).

9. DEWBERRY, JANOSZ W. & WU, YANQIN: *Testing Tidal Theory Using Gaia Binaries: The Red Giant Branch* The Astrophysical Journal, **984**, (2), id.137, 14 pp. (2025).

10. DING, XU *et al.*: *Detection of Semidetached Eclipsing Binaries from TESS* The Astronomical Journal, **169**, (4), id.202, 10 pp. (2025).

11. FULLER, JIM *et al.*: *Tidally Distorted Stars Are Triaxial Pulsators* The Astrophysical Journal, **979**, (1), id.80, 17 pp. (2025).

12. GABITOVA, ILFA A. *et al.*: *Dynamical Masses and Radiative Transfer Modeling of HD 698: A Be Binary in Evolutionary Transition* The Astrophysical Journal, **995**, (2), id.180, 20 pp. (2025).

13. GUERRERO, C. A. *et al.*: *PCA-enhanced Speckle Interferometry with Bicubic Interpolation at the OAN-SPM México* The Astronomical Journal, **170**, (6), id.311, 17 pp. (2025).

14. HABOUBI, HASSAN B. *et al.*: *Revised Orbital, Physical, Stability, and Habitability Parameters of the Binary System HD 25811 Using Gaia Observations* Research in Astronomy and Astrophysics, **25**, (12), id.125011, 10 pp. (2025).

15. HAGHIGHIPOUR, NADER & ANDREWS, MICHAEL: *Secular Resonances in Planet-hosting Binary Stars. II. Application to Terrestrial Planet Formation* The Astrophysical Journal, **988**, (2), id.231, 11 pp. (2025).

16. HAYASHI, TOSHINORI; TRANI, ALESSANDRO A.; SUTO, YASUSHI: *Stability of Hierarchical Triples Comprising a Central Massive Body and a Tight Binary: The Effect of Inner and Outer Eccentricities on the Binary Breakup Condition* The Astrophysical Journal, **985**, (1), id.97, 13 pp. (2025).

17. HUANG, SHUNQUAN; MARTIN, REBECCA G.; LUBOW, STEPHEN H.: *Excitation of Post-asymptotic Giant Branch Star Binary Eccentricity by Massive Polar-aligned Circumbinary Disks* The Astrophysical Journal, **985**, (1), id.65, 8 pp. (2025).

18. JING, YINGJIE *et al.*: *Half a Million Binary Stars Identified from the Low-resolution Spectra of LAMOST* The Astrophysical Journal Supplement Series, *277*, (1), id.15, 8 pp. (2025).

19. JOHNSON, TED M. *et al.*: *The Fraction of Polar-aligned Circumbinary Disks* The Astronomical Journal, **170**, (2), id.77, 11 pp. (2025).

20. JONES, NATHALIE K. *et al.*: *HD 143811 AB b: A Directly Imaged Planet Orbiting a Spectroscopic Binary in Sco-Cen* The Astrophysical Journal Letters, **995**, (2), id.L41, 12 pp. (2025).

21. KALARI, V. M. *et al.*: *A Search for Be Stars in Multiple Systems within the Solar Neighborhood* The Astrophysical Journal, **993**, (2), id.192, 19 pp. (2025).

22. KUTRA, TAYLOR *et al.*: *Sites of Planet Formation in Binary Systems. II. Double the Disks in DF Tau* The Astronomical Journal, **169**, (1), id.20, 13 pp. (2025).

23. LAMITINA, LUKE; HILLENBRAND, LYNNE; POON, MICHAEL: *Continued Photometric Monitoring Supports Long-term Dynamical Evolution in the Young Binary Star–Disk System KH 15D* The Astronomical Journal, **170**, (2), id.79, 8 pp. (2025).

24. LI, JIADONG *et al.*: *Identification of 30,000 White Dwarf–Main-sequence Binary Candidates from Gaia DR3 BP/RP (XP) Low-resolution Spectra* The Astrophysical Journal Supplement Series, **279**, (2), id.47, 20 pp. (2025).

25. LIU, RONGRONG; SHAO, ZHENGYI; LI, LU: *Mass-dependent Radial Distribution of Single and Binary Stars in the Pleiades and Their Dynamical Implications* The Astrophysical Journal Letters, **982**, (2), id.L43, 6 pp. (2025).

26. MACLEOD, MORGAN *et al.*: *Radial Velocity and Astrometric Evidence for a Close Companion to Betelgeuse* The Astrophysical Journal, **978**, (1), id.50, 31 pp. (2025).

27. MAJEWSKI, STEVEN R. *et al.*: *Characterizing TESS-identified Quadruple- and Higher-order Eclipsing Binaries. I. Speckle Imaging with DSSI and HRCam* The Astrophysical Journal, **994**, (1), id.133, 16 pp. (2025).

28. MAKAROV, VALERI V.: *Distributions of Wide Binary Stars in Theory and in Gaia Data. II. Reconstruction of Sample Probability Density of True Orbit Sizes* The Astronomical Journal, **170**, (3), id.138, 8 pp. (2025).

29. MASON, BRIAN D. *et al.*: *Binary Star Orbits. VI. The Interferometric-spectroscopic Binary 73 Leo* The Astronomical Journal, **170**, (2), id.83, 12 pp. (2025).

30. MENDEZ, RENE A. *et al.*: *Southern Binaries with the Zorro Speckle Camera @ Gemini South* The Astronomical Journal, **169**, (4), id.226, 23 pp. (2025).

31. NAZAR, NAUFA *et al.*: *Stellar Parameters and Evolutionary Pathways of the Subgiant system HIP 72217* eprint arXiv:2510.26224, DOI: https://ui.adsabs.harvard.edu/link_gateway/2025arXiv251026224N/do (2025).

32. PECK, ANNE E. *et al.*: *Characterization of the Host Binary of the Directly Imaged Exoplanet HD 143811 AB b* The Astrophysical Journal Letters, **995**, (2), id.L40, 16 pp. (2025).

33. PERETTO, IVO *et al.*: *The Nature of BZ Del: Variability Discovered* Research Notes of the AAS, **9**, (12), id.349 (2025).

34. PÉREZ-COUTO, XABIER; MANTEIGA, MINIA; VILLAVER, EVA *Finding White Dwarfs' Hidden Companions Using an Unsupervised Machine Learning Technique* The Astrophysical Journal, **988**, (1), id.51, 12 pp. (2025).

35. POPA, SILVIA A. & DE MINK, SELMA E.: *Very Massive, Rapidly Spinning Binary Black Hole Progenitors through Chemically Homogeneous Evolution—The Case of GW231123* The Astrophysical Journal Letters, **995**, (2), id.L76, 9 pp. (2025).

36. SAFONOV, BORIS S. *et al.*: *Disk in the Circumstellar Envelope of Carbon Mira V Cygni* The Astronomical Journal, **169**, (3), id.140, 20 pp. (2025).

37. SCARDIA, M. *et al.*: *Speckle Observations With PISCO in Calern (France): II. Astrometric Measurements of Visual Double Stars in 2017-2018 and New or Revised Orbits for A1913 AB, A1710, COU1394, BU1185, A122, A570, HU577, COU812, HU332, A2095 AB, and A884* Astronomische Nachrichten, **346**, (6), id.e70000, 17 pp. (2025).

38. SRIVASTAVA, PHILIPP M. *et al.*: *Irregularly Sampled Time Series Interpolation for Detailed Binary Evolution Simulations* The Astrophysical Journal, **984**, (2), id.154, 15 pp. (2025).

39. TOKOVININ, A.: *Populations of hierarchical stellar systems* Contributions of the Astronomical Observatory Skalnaté Pleso, **55**, (3), p. 243-254. (2025).

40. TOKOVININ, ANDREI: *Orbits of Six Triple Systems* The Astronomical Journal, **169**, (3), id.124, 12 pp. (2025).

41. TOKOVININ, ANDREI: *Spectroscopic Orbits of Subsystems in Multiple Stars. XI* The Astronomical Journal, **170**, (3), id.143, 11 pp. (2025).

42. TSUNA, DAICHI & LU, WENBIN: *Stellar Tidal Disruptions by Newborn Neutron Stars or Black Holes: A Mechanism for Hydrogen-poor (Super)luminous Supernovae and Fast Blue Optical Transients* The Astrophysical Journal, **986**, (1), id.84, 20 pp. (2025).

43. WAISBERG, IDEL; KLEIN, YGAL; KATZ, BOAZ: *Hidden Companions to Intermediate-mass Stars. XXXIII. Unveiling a 2.35$M_\odot$, 0.06 au Companion to Acamar = Theta Eridani A* Research Notes of the AAS, **9**, (12), id.347 (2025).

44. WEN, SHIMING *et al.*: *The Orbital Period of the Long-period and Colliding-wind Binary WR 146 from Radio Interferometry of the Shock Cone* The Astronomical Journal, **169**, (4), id.218, 13 pp. (2025).

****

The deadline for contributions to Information Circular No. 219 is:

June 15th 2026

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