

Jonckheere Double Star Photometry – Part XII: Mon I

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Abstract: If any double star discoverer is in urgent need of photometry then it is Jonckheere. There are over 3000 Jonckheere objects listed in the WDS catalog and a good part of them with magnitudes obviously far too bright. This report covers about half of the Jonckheere objects in the constellation Monoceros. At least one image per object was taken with V-filter to allow for visual magnitude measurement by differential photometry. All objects were additionally checked for common proper motion and about 10 qualify indeed as potential physical pairs.

Introduction

As follow up to the reports on J-objects photometry beginning with Knapp/Nanson 2016 we selected this time the J-objects in Monoceros. The number of J-objects in Mon is quite large and weather conditions did not allow for taking images for all objects so we decided to split this constellation into two separate reports with about 170 doubles covered in this paper including a few additional non Jonckheere objects by chance included in the images taken. Some objects were too close to be resolved with the equipment available to us but we kept these objects in the lists as we thought also the combined magnitude of interest.

Results of photometry and catalog checking

With a few exceptions for all selected J-objects one single image was taken with iTelescope iT27 with V-filter and 3s exposure time – iT27 was the telescope of choice because the constellation Mon is rather low in the northern sky and iT27 is located in Australia. The technical specifications of iT27 are even better than those of iT24 (our working horse telescope) but the image quality is overall not up to the expectations and plate solving was due to unexpected changes in image rotation and orientation from image to image a bit diffi-

cult so in hindsight this decision was despite the higher altitude of our targets not the best. While for these reasons the astrometry results have to be taken with caution beyond the given error range the effects seem less significant for the with V-filter measured magnitudes as a magnitude error of ~0.1 or even a bit larger seems negligible in comparison with those for the Jonckheere objects, which often have given magnitude errors in the range of up to 2 or more magnitudes. With the availability of precise GAIA positions for most of the listed components the value of astrometry results from processing of CCD images taken with traditional earth-bound telescopes seems anyway a bit questionable.

Several objects were too faint to be resolved with a 3s exposure time – additional images with longer exposure time were taken for these and stacked with AAVSO VPhot. The images were then plate solved with Astrometrica using the URAT1 catalog with reference stars in the Vmag range of 8.5 to 14.5 giving not only RA/Dec coordinates but also photometry results for all reference stars used including an average dVmag error. The J-objects were then located in the center of the image and astrometry/photometry was then done by the rather comfortable Astrometrica procedure with point and click at the components delivering RA/Dec coordinates and Vmag measurements based on all ref-

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erence stars used for plate solving.

The measurement results are given in table 1 below with the following structure:

- First row gives the WDS data:
 - * Name gives number and components of the J-object
 - * RA/Dec gives the position in the HH:MM:SS/ DD:MM:SS format for the primary
 - * Sep, PA, M1, M1, pmRA and pmDec give the WDS catalog data for this object
 - * Date gives the year of the last observation
 - * Source/Notes gives additional references to the WDS catalog
- Data rows give data from other checked catalogs like especially GAIA DR1:
 - * RA/Dec gives the position in degrees for the primary
 - * Sep gives the calculated separation in arcseconds if coordinates for both components are available
 - * PA gives the calculated position angle in degrees if coordinates for both components are available
 - * M1 and M2 if visual magnitudes are given in the used catalog or estimated visual magnitudes according to Knapp and Nanson 2018
 - * Proper motion data if available in the used catalogs or in some cases calculated from position comparison between catalog positions
 - * Ap and Me give aperture and used observation method
 - * CPM Rat gives the common proper motion rating based on the available PM data according to the description in Appendix A
 - * CPM % gives an estimated probability for being a physical pair (see Appendix A)
 - * Source/Notes refers to the used catalogs with additional comments if necessary
- Measurement row gives the results from processing of own images:
 - * RA/Dec gives the position in degrees for the primary
 - * Sep gives the calculated separation in arcseconds for resolved pairs
 - * PA gives the calculated position angle in degrees for resolved pairs
 - * M1 and M1 give Vmags for both components measured by differential photometry
 - * Date gives the Julian observation epoch
 - * Notes indicate the telescope used, number of images with exposure time and additional comments if considered necessary.

Summary

A good part of the listed J-objects in Mon show the expected significant magnitude difference compared with the WDS catalog data. Further about 10 of these objects qualify as solid or at least good CPM candidates based on a rating scheme using UCAC5 proper motion data if for both components available with the caveat of rather small proper motion values for some of them. For objects with G/J/H/K-magnitude values available we calculated also estimated visual magnitudes according to Knapp and Nanson 2018 to compare these estimated values with the results of the differential photometry as kind of proof of concept for this formula and found a very consistent pattern confirming the high quality of the calculated estimated Vmags.

Acknowledgements

The following tools and resources have been used for this research:

- 2MASS catalog
- 2MASS images
- AAVSO VPhot
- Aladin Sky Atlas v9.0
- Astrometrica v4.10.0.427
- AstroPlanner v2.2
- iTelescope
- iT24: 610mm CDK with 3962mm focal length. Resolution 0.625 arcsec/pixel. V-filter. No transformation coefficients available. Located in Auberry, California. Elevation 1405m
- iT27: 700mm CDK with 4531mm focal length. CCD: FLI PL09000. Resolution 0.53 arcsec/pixel. V-filter. Siding Spring, Australia. Elevation 1122m
- GAIA DR1 catalog
- MaxIm DL6 v6.08
- POSS images
- SIMBAD
- UCAC4 catalog
- UCAC5 catalog
- URAT1 catalog
- VizieR
- Washington Double Star Catalog

References

- Knapp, Wilfried R. A.; Nanson, John, 2016,
“Jonckheere Double Star Photometry – Part I:
Cyg”, *Journal of Double Star Observations*, **12** (2),
68-179.

(Text continues on page 640)

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Table 1. Measurement Results for J objects in Monoceros

Name	RA	Dec	Sep	PA	M1	M2	pmRA1	pmDecl	e_pm1	pmRA2	pmDec2	e_pm2	Ap	Me	Date	CPM Rate	CPM %	Source/Notes
J 21 AB	07 02 18.811 +10 30 47.9	3.2	277	10.59	11.20	73	-13								2016			WDS 07023+1030, WDS data as of August 2017.
	105.578377	10.513308	3.2442	274.905	10.64	11.09	1.10	-3.30	1.56	-4.00	-2.80	3.11	0.96	Hg	2015.000	CCCB	6	GAIA DR1. M1 and M2 are visual estimate from G-J-K-H mags. PM data from UCAC5 catalog
105.578372	10.513321	3.170	274.887									0.20	Eu		2000.888			UCAC5.
105.578271	10.513347	3.237	276.741	10.68	11.08							0.70	C	2016.022			it27 1x3s	
J 40 AB	06 41 49.391 -00 15 59.1	3.1	102	11.27	11.90	-47	9								2000			WDS 06418-0016, WDS data as of August 2017.
	100.455764	-0.2666428	3.154	102.377	10.97	11.82	-0.50	-0.90	1.56	-0.30	-1.00	1.70	0.96	Hg	2015.000	CACC	15	GAIA DR1. M1 is visual estimate from G-J-K-H mags. M2 is GAIA DR1 Gmag (secondary not identified in 2MASS and URAN). PM data from UCAC5 catalog
	100.455766	-0.2666424	3.151	102.369								0.20	Eu		2001.100			UCAC5.
	100.455825	-0.2666406	2.909	108.435	11.08	11.73						0.70	C	2016.096			it27 1x3s. Touching star disks	
J 55 AB	06 49 36.610 +01 59 54.2	2.2	166	10.85	11.16	-5	-1								1995			WDS 06496-0200, WDS data as of August 2017.
	102.402499	1.998374			11.14	-9.56	-0.86	1.92				0.96	Hg		2015.000			GAIA DR1. M1 is visual estimate from G-J-K-H mags. PM data from GAIA DR1 catalog. Secondary not identified in GAIA DR1.
	102.402361	1.999066				-8.00	0.30	4.38				0.20	Eu		2001.122			UCAC5. PM data from UCAC5 catalog. Secondary not identified in UCAC5.
	102.402350	1.999014	2.486	167.816	10.71	10.71						0.70	C	2016.090			it27 1x3s. Touching star disks	
J 56 AB	06 52 37.649 +03 14 17.8	1.5	334	9.39	9.72	-3	-2		-3	-2					2015			WDS 06526-0314, WDS data as of August 2017.
	103.156890	3.238159	1.546	332.907	9.67	9.59	16.05	-40.64	5.61			0.96	Hg		2015.000			GAIA DR1. M1 is visual estimate from G-J-K-H mags. M2 is GAIA DR1 Gmag. PM data from position comparison with 2MASS. Secondary not identified in 2MASS or URAN.
	103.156763	3.238394				8.91						0.20	Eu					UCAC5. Neither component identified in UCAC5.
	108.308469	-2.643527	1.288	34.144	8.93	9.47	-12.42	4.38	6.17			0.70	C	2016.022			it27 1x3s. Overlapping star disks. A and B too bright for resolution	
												0.20	Eu					UCAC5. Neither component identified in UCAC5.
	108.308542	-2.643483										0.70	C	2016.107			it27 1x3s. Heavily overlapping star disks. Both components too bright for resolution	

Table 1 continues on the next page.

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Table 1 (continued). Measurement Results for J Objects in Monoceros

Name	RA	Dec	Sep	PA	M1	M2	pmRA1	pmDec1	ϵ_{pm1}	pmRA2	pmDec2	ϵ_{pm2}	$\Delta\phi$	Me	Date	CPM Rate	CPM %	Source/Notes	
J 65 AB	07 44 12.580	-01 15 13.0	2.1	210	9.86	10.72	3	-7	3	-7					1995			WDS 07442-0115, WDS data as of August 2011.	
	116.052465	-1.253493	2.069	211.068	10.16	10.61	5.20	7.26	5.26			0.96	Hg	2015.000			Gaia DR1. M1 is visual estimate from G-J-K-H mags, M2 is Gaia DR1 mag. PM data from position comparison with 2MASS. Secondary not identified in UCAC5. UCAC5, PM data from UCAC5 catalog. Secondary not identified in UCAC5.		
	116.052436	-1.253520					7.00	6.50	1.84			0.20	Eu	2000.118			UCAC5, PM data from UCAC5 catalog. Secondary not identified in UCAC5.		
	116.052458	-1.253531			9.77							0.70	C	2015.022			iT27 1x3s. Heavily overlapping star disks. Both components too bright for clear resolution.		
J 66 AB	07 47 40.890	-00 54 23.3	3.9	196	10.54	11.58	0	5	-2	-1					2000			WDS 07477-0056, WDS data as of August 2011.	
	116.920319	-0.906510	3.872	196.226	10.30	11.54	-5.00	-0.80	1.56	-4.90	-1.40	3.25	0.96	Hg	2015.000	CACB 16	CACB	Gaia DR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog.	
	116.920340	-0.906507	3.8864	196.285								0.20	Eu	2000.128			UCAC5,		
	116.920338	-0.906517	3.856	195.801	10.44	11.55						0.70	C	2016.022			iT27 1x3s		
																		Gaia DR1 lists a parallax of 1.5 (2174.421 LY) for the primary and 1.45 (229.401 LY) for the secondary, which would indicate the two stars are too far apart for any physical relation to exist. (Parallax errors are listed as 0.62 and 0.33, respectively).	
J 187 AB	06 06 38.740	-04 11 37.8	29.5	145	5.38	11.60	-8	-5	6	-21					2010			WDS 06066-0412, WDS data as of August 2011.	
	91.661375	-4.193836	29.507	145.305	5.52	11.49	-9.28	-3.69	5.58	1.37	-14.37	5.58	0.20	Eu	2014.035	CCCC	6	URAT1. M1 and M2 are visual estimates from URAT1 J- and K-Bands. PM data from position comparison with 2MASS.	
						11.60												Gaia DR1. M2 is visual estimate from G-J-K-H mags. Primary not identified by Gaia DR1.	
												3.50	-16.80	1.41	0.20	Eu	2000.036		UCAC5, Primary not identified by UCAC5, PM data for secondary from UCAC5 catalog.
	91.661296	-4.193733	29.908	145.339		11.64						0.70	C	2016.164			iT27 1x3s. Primary star disc saturated.		
																		WDS 07456-0559, WDS data as of August 2011.	
	116.393177	-5.974959			10.38							0.96	Hg	2015.000			Gaia DR1. M1 is visual estimate from G-J-K-H mags. Secondary not identified in Gaia DR1.		
	116.393143	-5.975019				8.20	14.40	1.70				0.20	Eu	2000.087			UCAC5, PM data from UCAC5 catalog. Secondary not identified in UCAC5.		
	116.393092	-5.975000		10.18								0.70	C	2018.096			iT27 1x3s. No resolution of B.		
																		Note: Secondary not identified in URAT1 or 2MASS.	
J 265 AB	06 35 46.310	+05 07 23.3	4.2	242	11.18	11.70	61	32							2010			WDS 06355+0508, WDS data as of August 2011.	
	98.943006	5.123096	4.077	243.343	11.25	11.93	1.30	-2.90	1.70	-4.30	8.30	1.70	0.96	Hg	2015.000	BCCB	25	Gaia DR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog.	
	98.943000	5.123108	4.081	240.736								0.20	Eu	2000.155			UCAC5.		
	98.943008	5.123078	4.089	244.971	11.23	11.96						0.70	C	2016.022			iT27 1x3s		

Table 1 continues on the next page.

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Table 1 (continued). Measurement Results for J objects in Monoceros

Name	RA	Dec	Sep	PA	M1	M2	pmRA1	pmRA2	pmDec1	e_pm1	pmDec2	e_pm2	Ap	Me	Date	CPM	CPM	Source/Notes
J 266 AB	06 36 41.070 +03 18 56.8	4.5	176	9.65	12.00	1	9			-8					2000			WDS 0636+0319, WDS data as of August 2017.
99.171143	3.315769			9.71	1.03	-4.46	1.92					0.96	Hg	2015,000			GAIADR1. M1 is visual estimate from G-J-K-H mags. PM data from GAIADR1 catalog. Secondary not identified in GAIADR1.	
99.171138	3.315788			1.20	-4.60	1.70					0.20	Eu	2000,138			UCAC5, PM data from UCAC5 catalog. Secondary not identified in UCAC5.		
99.171125	3.315758	4.438	174.773	9.57	11.30						0.70	C	2016,022			Note: Secondary not identified in DR4; both components are identified in 2MASS.		
J 314 AB	06 47 07.320 -03 51 30.4	3.7	48	11.40	13.40	1	-1								2000			WDS 06472-0351, WDS data as of August 2017.
101.780506	-3.858482	3.743	47.988	11.32	13.45	0.20	-1.70	1.63	0.30	-0.60	2.05	Hg	2015,000	CCCC	6	GAIADR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog.		
101.780506	-3.858475	3.730	48.163														UCAC5,	
101.780500	-3.858492	3.584	47.307	11.45	13.35												IT27 1x3s	
J 348 AB	06 29 49.170 +11 07 49.8	3.7	144	12.67	12.89	-6	13	6	-14					2003			WDS 06295+1110, WDS data as of August 2017.	
97.454715	11.130877	3.849	141.644	12.59	12.80	-7.10	10.20	1.70	-6.90	10.20	1.70	Hg	2015,000	AACB	78	GAIADR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog.		
97.454744	11.130837	3.846	141.689								0.20	Eu	2000,890			UCAC5,		
97.454750	11.130867	3.617	141.491	12.53	12.74						0.70	C	2016,022			IT27 1x3s		
																	Good CPM candidate with qualifier that UCAC5 error rates are somewhat high given the minimal proper motion of the components.	
J 349 AB	06 32 59.371 +04 56 22.4	5.5	100	9.63	11.60	-4	4	5	1					2014			WDS 06330+0457, WDS data as of August 2017.	
98.247395	4.939586	5.461	100.317	9.60	12.07	-2.10	1.40	1.98	-3.80	-2.30	4.17	Hg	2015,000	ACCC	30	GAIADR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog. Error rates high relative to minimal motion.		
98.247404	4.939580	5.476	99.704														UCAC5,	
98.247408	4.939594	5.463	100.868	9.60	12.17											IT27 1x3s		
J 350 AB	06 35 41.829 +00 29 31.1	3.7	103	9.50	9.50	-21	11							2002			WDS 06354+0029, WDS data as of August 2017.	
98.923851	0.492130	3.681	105.656	12.42	12.62	0.90	5.50	1.41	1.40	3.90	1.41	Hg	2015,000	CCCB	6	GAIADR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog.		
98.923847	0.492108	3.666	105.339														UCAC5,	
98.923913	0.492203	3.395	108.195	12.38	12.59											IT27 1x3s		
J 351 AB	06 37 58.389 +11 33 19.1	3.6	208	10.81	12.70	-4	-4							2000			WDS 06389+1135, WDS data as of August 2017.	
99.493287	11.555327	3.587	208.326	10.60	12.96	-5.80	-7.30	1.70	-5.90	-4.80	4.68	Hg	2015,000	CCCB	6	GAIADR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog.		
99.493310	11.555355	3.618	208.035														UCAC5,	
99.493313	11.555333	3.681	209.936	10.67	12.79											IT27 1x3s		
J 352 AB	06 38 39.990 -08 15 37.8	4.7	93	10.22	12.70	-7	-2							2010			WDS 06389-0815, WDS data as of August 2017.	
99.666653	-8.260511	4.588	94.360	10.08	12.46	-3.10	1.00	1.56	-4.30	1.50	2.05	Hg	2015,000	ACCC	30	GAIADR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog. Error rates high relative to minimal motion.		
99.666666	-8.260515	4.607	94.446														UCAC5,	
99.666675	-8.260533	4.459	92.828	10.35	12.56											IT27 1x3s		

Table 1 continues on the next page.

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Table 1 (continued). Measurement Results for J objects in Monoceros

Name	RA	Dec	PA	M1	M2	pmRA1	pmRA2	e_pm1	pmDec1	pmDec2	e_pm2	Ap	Me	Date	CPM	CPM	Source/Notes
J 354 AB	06 53 51.779	+01 43 28.2	6.0	264	9.50	10.50	-2	-2	-44	-13				2014			WDS 06539+0144, WDS data as of August 2017.
103.465759	1.724496	5.924	262.875	11.65	13.09	-3.80	-4.40	1.41	0.60	-1.20	1.56	0.96	Hg	2015.000	CCCC	6	GAIA DR1. M1 and M2 are visual estimate from G-J-K-H mags. PM data from UCAC5 catalog.
103.465774	1.724514	5.995	262.505								0.70	Eu	2000.125				UCAC5.
103.465788	1.724461	5.944	263.625	11.73	13.15						0.70	C	2016.090				iT27 1x3s
J 360 AB	07 05 11.330	+00 54 01.5	3.8	30	11.78	12.73	-5	-10	-7	50				2000			WDS 07052+0054, WDS data as of August 2017.
106.297071	0.900133	3.845	29.714	12.05	12.47	-2.50	-0.80	1.70	-3.10	0.10	1.70	0.96	Hg	2015.000	CCCC	6	GAIA DR1. M1 and M2 are visual estimate from G-J-K-H mags. PM data from UCAC5 catalog.
106.297081	0.900136	3.836	29.925								0.20	Eu	2000.117				UCAC5.
106.297063	0.900192	3.670	29.635	12.22	12.55						0.70	C	2016.090				iT27 1x3s
J 363 AB	07 16 02.840	-06 36 52.1	2.8	292	10.60	12.80	3	1						2000			WDS 07161-0637, WDS data as of August 2017.
109.011837	-6.614480			10.61		-2.30	0.74	1.92			0.96	Hg	2015.000				GAIA DR1. M1 is visual estimate from G-J-K-H mags. PM data from GAIA DR1 catalog. Secondary not identified in GAIA DR1.
109.011840	-6.614484					-0.80	1.00	1.70			0.20	Eu	2000.067				UCAC5. PM data from UCAC5 catalog. Secondary not identified in UCAC5.
109.011833	-6.614486			10.65							0.70	C	2016.164				iT27 1x3s. Hint of elongation but no resolution of B.
																	Note: Secondary not identified by URAT1 or 2MASS.
J 364 AB	07 16 09.540	-06 34 38.8	5.3	340	9.40	13.00	3	-18	-22	25				2000			WDS 07162-0634, WDS data as of August 2017.
109.039701	-6.577413	5.272	339.779	11.19	13.67	-4.50	0.30	1.84	-5.50	-0.50	3.96	0.96	Hg	2015.000	ACCC	30	GAIA DR1. M1 and M2 are visual estimate from G-J-K-H mags. PM data from UCAC5 catalog. Error rates high relative to minimal motion.
109.039719	-6.577414	5.278	339.989								0.20	Eu	2000.069				UCAC5.
109.039708	-6.577444	5.156	339.529	11.08	13.62						0.70	C	2016.164				iT27 1x3s
J 365 AB	07 17 17.130	-06 35 27.0	3.2	262	12.57	14.80	27	5						2000			WDS 07173-0635, WDS data as of August 2017.
109.321354	-6.590867	3.053	264.716	12.84	14.33	-8.40	-6.90	1.77	2.40	2.20	9.14	0.96	Hg	2015.000	BCCB	25	GAIA DR1. M1 is visual estimate from UCAC5 G-J-K-H mags, M2 is GAIA DR1 catalog (secondary not identified in 2MASS and URAT1). PM data from UCAC5 catalog. Error rate of secondary unusually high.
109.321389	-6.590838		3.228	262.573							0.20	Eu	2000.069				UCAC5. No J-K-H mags in UCAC5 for the secondary.
109.321358	-6.590919	2.072	271.106	12.84	14.93						0.70	C	2016.164				iT27 1x3s. Touching star disks, B barely resolved. SNR B<10
J 417 AB	07 40 11.870	-08 56 18.8	1.9	356	11.01	13.00	-4	-5						1911			WDS 07402-0857, WDS data as of August (1911) in WDS, but not coded X.
115.049468	-8.938581										0.96	Hg	2015.000				GAIA DR1. M1 is visual estimate from G-J-K-H mags. Secondary not identified in GAIA DR1.
115.049478	-8.938564										0.20	Eu	2000.063				UCAC5. PM data from UCAC5 catalog. Secondary not identified in UCAC5.
115.049458	-8.938561										0.70	C	2016.164				iT27 1x3s. Slightest hint of elongation but no resolution of B

Table 1 continues on the next page.

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Table 1 (continued). Measurement Results for J objects in Monoceros

Name	RA	Dec	Sep	PA	M1	M2	pmRA1	pmRA2	e_pm1	pmDec1	e_pm2	Ap	Me	Date	CPM Rat	CPM %	Source/Notes		
J 595 AB	06 26 24.319	+11 27 47.5	4.8	42	10.81	10.80	-3	12	0	16				2016			WDS 0626+1128, WDS data as of August 2017.		
	96.601338	11.463268	4.807	42.206	10.72	10.95	-5.10	9.00	1.41	-4.10	8.00	2.55	0.96	Hg	2015,000	ACCB	31	GAI A DR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog.	
96.601358	11.463233	4.808	41.972									0.20	Eu	2000,890				WDS 0626+1128, WDS data as of August 2017.	
96.601329	11.463242	4.879	41.750	10.76	10.97							0.70	C	2016,022				Note: GAI A DR1 shows a parallax of 4.44 (807.334 LY) for the primary; no parallax for the secondary, B, is shown.	
J 595 AC	06 26 24.319	+11 27 47.5	43.7	245	10.81	10.96	-3	12	2	-1				2016			WDS 0626+1128, WDS data as of August 2017.		
	96.601338	11.463268	43.970	244.721	10.70	10.76	-5.10	9.00	1.41	3.30	-5.60	1.41	0.96	Hg	2015,000	ACCC	30	GAI A DR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog.	
96.601358	11.463233	43.990	245.031									0.20	Eu	2000,890				UCAC5.	
96.601329	11.463242	43.783	244.673	10.76	10.88							0.70	C	2016,022				WDS 0626+1128, WDS data as of August 2017.	
J 596 AB	06 41 03.801	+02 14 21.4	5.0	48	10.60	11.00	6	-2	40	26				2010				Note: GAI A DR1 shows a parallax of 4.04 (807.334 LY) for the primary and a parallax of 0.34 (9593 LY) for the secondary, C, which indicates the absence of any physical relation between the two stars (parallax errors are 0.25 and 0.84, respectively).	
	100.2395846	2.239279	4.898	47.053	10.68	11.14	-2.20	-2.50	1.56	1.30	-1.80	3.25	0.96	Hg	2015,000	BCCC	24	GAI A DR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog.	
100.2395855	2.239289	4.853	46.721									0.20	Eu	2000,118				UCAC5.	
100.2395871	2.239272	4.804	46.116	10.79	11.18							0.70	C	2016,090				WDS 06410+0215, WDS data as of August 2017.	
J 597 AB	06 41 21.619	+02 06 05.8	5.3	52	10.27	10.90	0	1	1	-6				2010				GAI A DR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog.	
	100.340116	2.101614	5.167	52.582	10.25	10.87	-0.50	1.70	1.56	-0.80	-4.60	3.25	0.96	Hg	2015,000	CCCC	6	Identified in GAI A DR1.	
100.340118	2.101607	5.229	51.811									0.20	Eu	2000,118				UCAC5.	
100.340142	2.101589	5.062	53.089	10.42	10.93							0.70	C	2016,090				WDS 06414+0206, WDS data as of August 2017.	
J 659 AB	06 28 40.529	+04 52 47.3	1.9	240	10.51	12.30	4	-3						1992				WDS 062874+0452, WDS data as of August 2017.	
	97.168910	4.879846			10.53	-4.06	-3.72	1.92				0.96	0.96	Hg	2015,000	GAI A DR1. M1 is visual estimate from G-J-K-H mags. PM data from UCAC5 catalog. Secondary not identified in GAI A DR1.			GAI A DR1. M1 and M2 are GAI A DR1. Mags (primary not identified in 2MASS and URAT1, URAT1 Mag for secondary different from GAI A DR1). PM data from UCAC5 catalog.
97.168924	4.879850					-3.30	-0.90	1.56				0.20	Eu	2000,138				UCAC5. No J-K-H mags in UCAC5 for the primary.	
97.168929	4.879828	1.882	243.828	10.49	11.15							0.70	C	2016,022				WDS 062874+0452. Touching/star disks	
																		Note: Secondary not identified by URAT1 or 2MASS.	
J 660 AB	06 28 40.801	+04 50 11.9	2.5	99	10.29	10.40	-19	-15	0	-17				2008				WDS 0628+0448, WDS data as of August 2017.	
	97.169701	4.836627	2.633	97.351	10.07	10.25	0.20	-12.80	1.70	2.70	-12.50	2.26	0.96	Hg	2013,000	CACB	16	GAI A DR1. M1 and M2 are GAI A DR1. Mags (primary not identified in 2MASS and URAT1, URAT1 Mag for secondary different from GAI A DR1). PM data from UCAC5 catalog.	
97.169700	4.836680	2.597	97.542									0.20	Eu	2000,136				UCAC5.	
97.169700	4.836681	2.589	99.113	10.19	10.27							0.70	C	2016,022				WDS 0627+0452. Touching star disks	

Table 1 continues on the next page.

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Table 1 (continued). Measurement Results for J objects in Monoceros

Name	RA	Dec	Sep	PA	M1	M2	pmRA1	pmRA2	e_pm1	pmDec1	e_pm2	Ap	Me	Date	CPM Rat	CPM %	Source/Notes
J 690 AB	06 30 47.051	+10 03 46.6	1.7	359	9.38	10.82	-6	-16	-6	-16	-6			2015			WDS 06308+1004, WDS data as of August 2017.
97.696055	10.062879				9.32		-2.49	-5.03	1.92			0.96	Hg	2015,000	GAI A DRI. GAI A DRI. M1 is visual estimate from G-J-K-H mags. PM data from UCAC5 catalog. Secondary not identified in GAI A DRI.		
97.696055	10.062943						0.10	-16.50	2.26			0.20	Eu	2000.879	UCAC5, PM data from UCAC5 catalog. Secondary not identified in UCAC5.		
97.696117	10.062922				9.27							0.70	C	2016.022	ir27 1x3s. Hint of elongation but no resolution of B		
															Note: Secondary not identified by URAT1 or 2MASS.		
J 691 AB	06 30 52.431	+04 38 59.7	1.3	205	9.40	10.37	-1	-5	-1	-5	-1			2008	WDS 06309+0439, WDS data as of August 2017.		
97.718477	4.649950				9.46							0.96	Hg	2015,000	GAI A DRI. GAI A DRI. M1 is visual estimate from G-J-K-H mags. PM data from UCAC5 catalog. Secondary not identified in GAI A DRI.		
97.718469	4.649894						1.80	13.60	2.69			0.20	Eu	2000.144	UCAC5, PM data from UCAC5 catalog. Secondary not identified in UCAC5.		
97.718425	4.649944				9.25							0.70	C	2016.022	ir27 1x3s. Hint of elongation but no resolution of B		
															Note: Secondary not identified by URAT1 or 2MASS.		
J 697 AB	06 43 33.811	+11 09 04.6	2.0	182	9.15	10.53	-2	1	-2	1	-2			2015	WDS 06436+1109, WDS data as of August 2017.		
100.890860	11.151347				9.21							0.96	Hg	2015,000	GAI A DRI. GAI A DRI. M1 is visual estimate from G-J-K-H mags. PM data from UCAC5 catalog. Secondary not identified in GAI A DRI.		
100.890869	11.151312						-2.30	9.00	2.83			0.20	Eu	2000.895	UCAC5, PM data from UCAC5 catalog. Secondary not identified in UCAC5.		
100.890825	11.151358	2.001			181.686	9.04	9.96					0.70	C	2016.022	ir27 1x3s. Touching star disks		
															Note: Secondary not identified by URAT1 or 2MASS.		
J 700 AB	06 54 44.440	+10 14 47.4	1.7	103	9.50	9.50			18	-3				2011	WDS 06547+1014, WDS data as of August 2017.		
103.685103	10.246579	3.031			106.884	12.00	-4.60	5.00	1.56	-4.40	3.20	1.63	0.96	2015,000	CCCB 6 GAIA DRI. M1 is visual estimate from G-J-K-H mags. M2 is GAIA DRI. Gmag (secondary not identified in 2MASS and URAT1). PM data from UCAC5 catalog. Error rate of secondary unusually high.		
103.685122	10.246559	3.020			106.444							0.20	Eu	2000.883	UCAC5,		
103.685096	10.246558	2.841			104.890	11.89	12.21					0.70	C	2016.022	ir27 1x3s. Touching star disks		

Table 1 continues on the next page.

Jonckheere Double Star Photometry – Part XII: Mon I

Table 1 (continued). Measurement Results for J objects in Monoceros

Name	RA	Dec	Sep	PA	M1	M2	pmRA1	pmDec1	e_pm1	pmRA2	pmDec2	e_pm2	Ap	Me	Date	CPM Rat	CPM %	Source/Notes
J 723 AB	06 45 03.419 +09 58 31.0	2.3	74	11.20	13.00	-3	-6								2000			WDS 06450+0958, WDS data as of August 2017.
101.264239	9.975243	2.3331	73.604	11.98	12.18	2.20	-6.80	1.84	10.30	-6.50	3.11	0.96	Hg	2015.000	CCCC	6	GaIA DR1. M1 is visual estimate from G-J-K-H mags., M2 is GaIA DR1 Gmag (secondary not identified in 2MASS and URAT1). PM data from UCAC5 catalog.	
101.264230	9.975270	2.2221	72.897								0.20	Eu		2000.880				UCAC5. No J-K-H mags in UCAC5 for the secondary.
101.264196	9.975294	2.192	76.010	11.64	11.96					0.70	C	2016.022					int27 1x3s. Touching star disks	
J 726 AB	06 46 51.920 +10 10 00.2	2.3	128	9.50	9.50	-2	-14								2008			WDS 0646+1008, WDS data as of August 2017.
101.716349	10.166654			12.26		-	10.26	-6.71	1.92			0.96	Hg	2015.000			GaIA DR1. M1 is visual estimate from G-J-K-H mags., PM data from GaIA DR1 catalog. Secondary not identified in GaIA DR1.	
101.716388	10.166685					-9.80	-8.10	1.70			0.20	Eu		2000.882			UCAC5. PM data from UCAC5 catalog. Secondary not identified in UCAC5.	
101.715800	10.167081	2.641	131.494	12.22	11.93					0.70	C	2016.022					int27 1x3s. Touching star disks	
J 730 AB	07 18 20.250 -02 35 28.6	2.9	144	9.50	9.80	-16	-21								2000			WDS 0718-0236, WDS data as of August 2017.
109.584505	-2.591624	3.080	147.406	11.58	11.87	10.30	-56.80	1.70	10.20	-59.30	1.70	0.96	Hg	2015.000	ABAA	80	GaIA DR1. M1 is visual estimate from G-J-K-H mag., M2 is GaIA DR1 Gmag (secondary not identified in 2MASS and URAT1). PM data from UCAC5 catalog.	
109.584463	-2.591389	3.049	147.010								0.20	Eu		2000.099			UCAC5. No J-K-H mags in UCAC5 for the secondary.	
109.584571	-2.591597	2.751	154.855	11.27	11.83					0.70	C	2016.096					int27 1x3s. Touching star disks	
J 733 AB	08 05 33.421 -03 46 10.1	2.7	147	11.10	11.30	9	-12								2005			WDS 0805-0346, WDS data as of August 2017.
121.389360	-3.769616			11.01		16.13	-24.08	1.92			0.96	Hg	2015.000				GaIA DR1. M1 is visual estimate from G-J-K-H mags. PM data from GaIA DR1 catalog. Secondary not identified in GaIA DR1.	
121.389312	-3.769530					11.50	-20.70	1.84			0.20	Eu		2000.110			UCAC5. PM data from UCAC5 catalog. Secondary not identified in UCAC5.	
121.389329	-3.769639	2.115	149.369	10.81	11.78					0.70	C	2016.022					int27 1x3s. Touching/overlapping star disks. SNR B < 20	
J 741 AB	06 22 52.531 -08 12 34.2	3.6	91	10.90	12.60	-15	-1								2000			WDS 0622-0809, WDS data as of August 2017.
95.718834	-8.209484	3.511	91.257	10.95	13.69	-1.60	0.50	1.56	-1.10	-0.70	2.05	0.96	Hg	2015.000	CCCC	6	GaIA DR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog.	
95.718841	-8.209486	3.504	90.960								0.20	Eu		1999.998			UCAC5.	
95.718879	-8.209503	3.355	90.512	10.95	12.77					0.70	C	2016.172					int27 1x3s. Touching star disks	

Table 1 continues on the next page.

Jonckheere Double Star Photometry – Part XII: Mon I

Table 1 (continued). Measurement Results for J objects in Monoceros

Name	RA	Dec	Sep	PA	M1	M2	pmRA1	pmRA2	pmDec1	e_pm1	pmRA2	pmDec2	e_pm2	Ap	Me	Date	CPM Rat	CPM %	Source/Notes
J 802 AB	06 46 43.570	-04 13 36.5	4.3	132	10.85	12.40	-2	23								2010			WDS 05468-0114, WDS data as of August 2017.
101.681569	-4.226796	4.1119	132.637	10.90	11.90					1.30	E2	1998.757							2MASS, M1 and M2 are visual estimates from 2MASS J- and K-bands.
101.681592	-4.226736	4.2447	135.630	11.11	11.47	5.32	14.00	5.54	1.39	-2.05	5.55	0.20	Eu	2014.068	CCCB	6			URAT1, M1 and M2 are visual estimates from URAT1 G-J-K-H mags. Note the URAT1 Vmags for the two components are identical, 10.431. PM data from comparison with 2MASS positions.
101.681583	-4.226736	4.3226	135.967	10.89	11.98									0.70	C	2016.164			it27 1x3s
J 979 AB	06 30 34.200	+11 40 00.8	2.9	263	11.50	12.00	18	-7							2000				Note: Neither of the two components are identified in GATA DR1 and UCAC5.
97.642538	11.666820	2.984	262.603	11.24	12.26	9.20	-11.50	1.70	5.30	-12.70	1.84	0.96	Hg	2015.000	CCCB	12			GATA DR1, M1 is visual estimate from G-J-K-H mags, M2 is GATA DR1 Vmag (secondary not identified in 2MASS and URAT1). PM data from UCAC5 catalog
97.642501	11.666865	2.928	262.916											0.20	Eu	2000.896			UCAC5.
97.642442	11.666833	2.639	265.217	11.23	12.15									0.70	C	2016.022			it27 1x3s. Touching star disks
J 982 AB	06 32 22.470	+03 29 08.1	3.1	216	10.10	10.60	23	9	9	-12					2015				WDS 0532+0329, WDS data as of August 2017.
98.093662	3.485544			10.33										0.36	Hg	2015.000			GATA DR1, M1 is visual estimate from G-J-K-H mags. Secondary not identified in GATA DR1.
98.093656	3.485586				1.60	-10.30	1.56							0.20	Eu	2000.137			UCAC5. PM data from UCAC5 catalog. Secondary not identified in UCAC5.
98.093654	3.485544	3.345	215.587	10.07	10.75									0.70	C	2016.022			it27 1x3s. Touching star disks
																			Note: Secondary not identified by URAT1 or 2MASS.
J 984 AB	06 36 31.330	+05 19 53.8	4.8	305	11.82	-5	-9		-18	0					2010				WDS 05336+0521, WDS data as of August 2017.
99.130413	5.331365	4.941	306.226	11.30	11.52	-1.80	-4.40	1.70	-1.60	-4.10	1.70	0.96	Hg	2015.000	ABCC	61			GATA DR1, M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog
99.130420	5.331383	4.940	306.159											0.20	Eu	2000.155			UCAC5.
99.130408	5.331331	5.080	307.462	11.40	11.62									0.70	C	2016.022			it27 1x3s
																			Note: Possible CPM candidate. However motion is minimal and error rates relative to motion are high. No parallax data for either component in GATA DR1.
J 993 AB	06 48 18.791	+11 37 31.7	4.8	146	9.80	11.50	-1	-3							2000				WDS 0548+1143, WDS data as of August 2017.
102.078301	11.625483	4.849	146.516	12.97	15.25	-0.20	-2.20	1.70	-0.40	-4.50	4.53	0.96	Hg	2015.000	ACCC	30			GATA DR1, M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog
102.078302	11.625491	4.823	146.267											0.20	Eu	2000.896			UCAC5.
102.078354	11.625494													0.70	C	2016.022			it27 1x3s. No resolution of B. Has to be fainter than 14.5mag. Estimation from G/J/H/K-mags: 15.25Vmag
																			Note: High error rate relative to minimal motion. No parallax data available in GATA DR1 for either component.

Table 1 continues on the next page.

Jonckheere Double Star Photometry – Part XII: Mon I

Table 1 (continued). Measurement Results for J objects in Monoceros

Name	RA	Dec	Sep	PA	M1	M2	pmRA1	pmRA2	e_pm1	pmDec1	pmDec2	e_pm2	Ap	Me	Date	CPM Rat	CPM %	Source/Notes
J 996 AB	07 00 05.461	+09 18 26.9	5.0	138	11.24	12.60	-1	-5		2	-12				2000			WDS 07001+0918, WDS data as of August 2017.
	105.022760	9.307442	5.002	137.463	11.34	12.93	-0.50	-3.50	1.41	-0.30	-1.70	1.70	Hg	2015.000	ACCC	30	GATA DR1. M1 and M2 are visual estimate from G-J-K-H mags. PM data from UCAC5 catalog.	
	105.022762	9.307456	5.019	137.690	5.058	138.365	11.14	12.97					0.20	Bu	2000.874			it27 1x3s
	105.022771	9.307444											0.70	C	2016.022			Note: High error rate relative to minimal motion. GATA DR1 lists a parallax of 0.87 (3749 lV) for the primary, none for the secondary.
J 1005 AB	06 34 00.420	-04 44 09.5	2.7	282	9.60	10.80	7	-9							2000			WDS 06340-0445, WDS data as of August 2017.
	98.501830	-4.736034	2.858	284.553	11.91	13.04	2.90	-10.20	1.70	-2.90	-0.70	2.76	Hg	2015.000	CCCB	6	GATA DR1. M1 is visual estimate from G-J-K-H mags. M2 is GATA DR1. Gmag (secondary not identified in 2MASS and USATII). PM data from UCAC5 catalog.	
	98.501818	-4.735992	2.742	282.127	2.873	286.791	11.80	12.83					0.20	Bu	2000.062			it27 1x3s. Touching star disks
	98.501800	-4.736111	2.874	286.791									0.70	C	2016.164			WDS 06343-0444, WDS data as of August 2017.
J 1006 AB	06 34 18.270	-04 43 40.4	3.4	291	9.30	9.70	7	-2							2002			GATA DR1. M1 is visual estimate from GATA DR1. M2 is GATA DR1. Gmag (secondary not identified in 2MASS and USATII). PM data from UCAC5 catalog. Error rate of secondary unusually high.
	98.576142	-4.727899	3.382	291.856	11.33	11.97	-2.10	1.40	1.63	-2.70	2.10	1.77	Hg	2015.000	CCCC	24	GATA DR1. M1 is visual estimate from G-J-K-H mags. M2 is GATA DR1. Gmag (secondary not identified in 2MASS and USATII). PM data from UCAC5 catalog.	
	98.576150	-4.727904	3.369	291.743									0.20	Bu	2000.061			UCAC5.
	98.576167	-4.727917	2.879	287.172	11.28	11.89							0.70	C	2016.164			it27 1x3s. Touching star disks
	105.7 AB	06 53 11.849	-00 12 35.9	3.0	35	11.56	13.30	-5	-6						2014			WDS 06532-0013, WDS data as of August 2017.
J 1057 AB	06 53 11.849	-0.209935	3.000	35.134	11.88	12.85	-1.10	-0.20	1.84	1.00	1.20	2.26	Hg	2015.000	CCCC	6	GATA DR1. M1 is visual estimate from G-J-K-H mags. M2 is GATA DR1. Gmag (secondary not identified in 2MASS and USATII). PM data from UCAC5 catalog.	
	103.299380	-0.209934	2.964	34.860	36.717	12.00	12.24						0.20	Bu	2000.111			UCAC5.
	103.299384	-0.209934	2.258	36.717									0.70	C	2016.096			it27 1x3s. Touching star disks
	103.299392	-0.2099894	2.258	36.717														WDS 06533-0013, WDS data as of August 2017.
J 1057 AC	06 53 11.849	-00 12 35.9	11.4	84	11.56	11.34	-5	-6	1	0				2014				
	103.299380	-0.209935	11.339	83.940	11.88	11.26	-1.10	-0.20	1.84	1.00	1.20	2.26	Hg	2015.000	CCCC	6	GATA DR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog.	
	103.299384	-0.209934	11.341	84.022									0.20	Bu	2000.110			UCAC5.
	103.299392	-0.209894	11.318	86.353	12.00	11.32							0.70	C	2016.096			it27 1x3s. Touching star disks
J 1057 AD	06 53 11.849	-00 12 35.9	23.4	53	11.56	13.4	-5	-6	1	-2				2014				
	103.299380	-0.209935	23.173	52.723	11.88	13.36	-1.10	-0.20	1.84	-2.20	0.60	1.77	Hg	2015.000	CCCC	24	GATA DR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog.	
	103.299384	-0.209934	23.178	52.770	12.00	13.40							0.20	Bu	2000.110			it27 1x3s. SNR D<20
	103.299392	-0.209894	22.764	52.810									0.70	C	2016.096			WDS 06532-0013, WDS data as of August 2017. This is the AD pairing of J 1057.
BAL 732 CB	06 53 11.849	-00 12 35.9	27.9	44	11.34	12.82	1	0	2	-1				2014				
	103.299380	-0.209935	23.173	52.723	11.88	13.36	-1.10	-0.20	1.84	-2.20	0.60	1.77	Hg	2015.000	CCCC	24	GATA DR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog.	
	103.299384	-0.209934	23.178	52.770	12.00	13.40							0.20	Bu	2000.110			it27 1x3s. SNR D<20
	103.299392	-0.209894	22.764	52.810									0.70	C	2016.096			WDS 06532-0013, WDS data as of August 2017. This includes the E component of the J 1057 cluster.
	103.302512	-0.209603	27.559	43.610	11.71	12.57	-1.30	0.90	1.63	-1.20	0.20	1.70	0.96	Hg	2015.000	CCCC	6	GATA DR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog.
	103.302518	-0.209606	27.565	43.593									0.20	Bu	2000.110			UCAC5.
	103.302529	-0.209694	27.483	42.847	11.32	12.62							0.70	C	2016.096			it27 1x3s

Table 1 continues on the next page.

Jonckheere Double Star Photometry – Part XII: Mon I

Table 1 (continued). Measurement Results for J objects in Monoceros

Name	RA	Dec	Sep	PA	M1	M2	pmRA1	pmRA2	e_pm1	pmDec1	e_pm2	Ap	Me	Date	CPM Rat	CPM %	Source/Notes
J 1065 AB	07 31 08.170	-03 43 06.0	2.7	334	11.67	9.60	25	-84	-36	31				2005			WDS 07312-0343, WDS data as of August 2017.
112.783906	-3.718409	2.691	334.883	11.76	11.47	-	-22.10	1.56	-14.60	-20.10	1.56	0.96	Hg	2015,000	CABB 18	GATA DR1. M1 is visual estimate from G-J-K-H mags. M2 is GATA DR1 Gmag (secondary not identified in 2MASS and URAT1). PM data from UCAC5 catalog	
112.783959	-3.718317	2.654	335.094								0.20	Eu		2000,096			UCAC5.
112.783917	-3.718419	2.727	332.545	11.43	11.60						0.70	C	2016,096			it27 1x3s. Touching star disks	
																	Note: Possible CPM candidate. However GATA DR1 doesn't list a parallax for either component.
J 1065 AC	07 31 08.170	-03 43 06.0	8.0	155	11.67	15.00	25	-84						2000			WDS 07312-0343, WDS data as of August 2017.
112.783906	-3.718409	5.098	150.932	11.76	12.41	-	-22.10	1.56	-4.80	2.60	5.59	0.96	Hg	2015,000	CCCB 6	GATA DR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog	
112.783959	-3.718317	5.369	153.967								0.20	Eu		2000,097		UCAC5.	
112.783746	-3.718283			11.36							0.70	C	2016,096			it27 1x3s. No resolution of C. Has to be fainter than 14.5mag	
J 1106 AB	06 44 28.581	+10 05 37.0	1.4	249	10.50	10.95	-13	-16	-13	-16				1991			WDS 06444+1005, WDS data as of August 2017.
101.119131	10.093629	1.464	249.066	10.27	10.42	23.36	4.48	5.59			0.96	Hg		2015,000		GATA DR1. M1 and M2 are GATA DR1 Gmags. PM data from position comparison with 2MASS. Secondary not identified in 2MASS (or URAT1).	
101.119036	10.093617						23.80	3.00	1.84		0.20	Eu		2000,885		UCAC5. PM data from UCAC5 catalog. Secondary not identified in UCAC5.	
101.118967	10.093556					9.99					0.70	C	2016,022			it27 1x3s. No resolution of B. Not even a hint of an elongation	
																	Note: GATA DR1 shows a Gmag for the primary of 10.273, URAT1 shows a Gmag of 10.531. The G-J-K-H formula results in a visual estimate of 10.702 using the GATA DR1 Gmag value, and 11.090 using the URAT1 Gmag value.
J 1467 AB	07 38 32.090	-10 03 01.8	119.0	101	8.78	11.31	1	-1	-8	6				2000			WDS 07385-1003, WDS data as of August 2017.
114.633724	-10.050530	118.838	100.918	8.67	11.87	-1.60	-0.20	2.69	-9.30	7.70	1.70	0.96	Hg	2015,000	CCCB 6	GAIA DR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog	
114.633730	-10.050529	118.975	100.963								0.20	Eu		2000,056		UCAC5.	
114.633704	-10.050542	119.009	100.908	8.78	11.63						0.70	C	2016,164			it27 1x3s	
J 1467 BC	07 38 40.000	-10 03 24.5	7.6	35	11.20	11.20	-8	6	16	2				2000			WDS 07385-1003, WDS data as of August 2017.
114.666642	-10.056782	7.564	36.693	111.87	12.64	-9.30	7.70	1.70	-3.40	-2.30	1.70	0.96	Hg	2015,000	BCCB 25	GAIA DR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog	
114.666681	-10.056814	7.632	35.491								0.20	Eu		2000,057		UCAC5.	
114.666671	-10.056797	7.444	36.811	111.63	12.46						0.70	C	2016,164			it27 1x3s	

Table 1 continues on the next page.

Jonckheere Double Star Photometry – Part XII: Mon I

Table 1 (continued). Measurement Results for J objects in Monoceros

Name	RA	Dec	Sep	PA	M1	M2	pmRA1	pmRA2	pmDec1	e_pm1	pmDec2	e_pm2	Ap	Me	Date	CPM Rat	CPM %	Source/Notes
J 1472 AB	06 24 15.931	-07 34 30.1	8.2	327	9.88	12.90	4	-7							2000			WDS 06250-0724, WDS data as of August 2017.
	96.066338	-7.575029	8.274	326.431	11.81	15.01	-0.70	-2.80	1.56	-2.20	-1.00	2.83	0.96	Hg	2015.000	CCCC	6	GAI A DR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog.
96.066341	-7.575017	8.238	326.458	8.5058	327.432	11.69	15.13								0.20 Eu	2000.009		
J 1474 AB	06 33 35.681	-08 10 28.8	6.8	330	8.89	11.10	-1	3							0.31 C	2018.088		WDS 06336-0810, WDS data as of August 2017.
	98.398699	-8.174681	6.742	330.036	9.08	10.64	0.38	-2.25	5.64	-0.33	0.20	5.64	0.20	Eu	2014.075	CCCC	6	GAI A DR1. M1 is URAT1 Vmag, M2 is visual estimate from URAT1 j- and K-bands (no Gnag for the secondary in URAT1). M1 is visual estimate from G-J-K-H mags. PM data from GAI A DR1 catalog. Secondary not identified in GAI A DR1 catalog. Secondary not identified in UCAC5 catalog.
	98.398682	-8.174679			8.84		-3.79	1.26	1.92						0.96 Hg	2015.000		
	98.398689	-8.174679					-1.90	0.10	2.69						0.20 Eu	2000.009		
	98.398606	-8.174683	6.795	330.263	8.93	10.84									0.70 C	2016.172		UCAC5, PM data from GAI A DR1 catalog. Secondary not identified in UCAC5.
J 1475 AB	06 42 55.841	-08 50 18.5	9.3	224	9.20	10.40	0	-2		-8	-5				2014			WDS 06420-0850, WDS data as of August 2017.
	100.732638	-8.838477	9.290	223.617	11.19	12.52	-3.30	-0.30	1.56	-3.70	1.70	1.63	0.96	Hg	2015.000	CCCC	6	GAI A DR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog.
	100.732652	-8.838475	9.308	223.465											0.20 Eu	2000.011		
	100.732613	-8.838486	9.489	223.172	11.03	12.60									0.70 C	2016.172		UCAC5,
J 1479 AB	06 49 16.660	-04 55 41.4	6.9	317	11.30	12.10	5	-5	-8	6					2000			WDS 06491-0453, WDS data as of August 2017.
	102.319413	-4.928158	6.898	317.204	11.23	12.08	-2.10	-0.30	1.70	-1.40	0.50	1.70	0.96	Hg	2015.000	CCCC	6	GAI A DR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog.
	102.319421	-4.928157	6.898	317.076											0.20 Eu	2000.073		
	102.319404	-4.928150	7.006	316.953	11.57	12.36									0.70 C	2016.164		UCAC5,
J 1481 AB	06 53 44.870	-05 34 29.3	5.2	59	10.00	11.80	-11	-30	5	-7					2000			WDS 06530-0536, WDS data as of August 2017.
	103.436934	-5.574868	5.209	58.560	10.37	12.37	2.80	-13.30	2.69	0.50	-12.50	3.82	0.96	Hg	2015.000	CBCB	12	GAI A DR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog.
	103.436922	-5.574813	5.232	58.869											0.20 Eu	2000.066		
	103.436933	-5.574864	5.179	59.864	10.17	11.90									0.70 C	2016.164		UCAC5,
HJ 2353 AC	06 53 44.870	-05 34 29.3	15.9	150	10.00	11.10	-11	-30	10	-4					2000			WDS 06530-0536, WDS data as of August 2017. This is the C component of J 1481.
	103.436934	-5.574868	15.827	149.946	10.37	11.70	2.80	-13.30	2.69	5.30	-6.50	1.70	0.96	Hg	2015.000	CCCC	6	GAI A DR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog.
	103.436922	-5.574813	15.896	150.248											0.20 Eu	2000.066		
	103.436933	-5.574864	16.027	149.862	10.17	11.52									0.70 C	2016.164		
J 1482 AB	06 53 31.970	-09 58 48.8	8.4	351	10.59	10.73	9	-19	2	-5					2010			WDS 06530-0536, WDS data as of August 2017.
	103.383206	-9.980253	8.394	350.756	10.98	11.24	-1.20	-6.50	1.56	-1.40	-5.30	1.56	0.96	Hg	2015.000	BCCC	24	GAI A DR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog.
	103.383211	-9.980226	8.376	350.753											0.20 Eu	2000.006		
	103.383213	-9.980281	8.347	351.245	10.97	11.16									0.70 C	2016.172		
																		Note: Error rates high relative to minimal motion of components. No parallax for either component available in GAI A DR1.

Table 1 continues on the next page.

Jonckheere Double Star Photometry – Part XII: Mon I

Table 1 (continued). Measurement Results for J objects in Monoceros

Name	RA	Dec	Sep	PA	M1	M2	pmRA1	pmRA2	e_pm1	pmDec1	pmDec2	e_pm2	Ap	Me	Date	CPM Rat	CPM %	Source/Notes
J 1483 AB	06 59 46.650	-08 42 39.0	4.0	330	10.59	11.60	0	-13							1941			WDS 06590-0841, WDS data as of August 2017. Only 1 Obs recorded in WDS, not coded X in WDS.
104.944402	-8.710901				10.56	1.34	-11.45	1.92				0.96	Hg	2015.000			GAIADR1. M1 is visual estimate from G-J-K-H mags. Secondary not identified in GAIADR1.	
104.944401	-8.710852					0.40	-11.70	1.98				0.20	Eu	2000.031			UCAC5. PM data from UCAC5 catalog. Secondary not identified in UCAC5.	
104.944433	-8.710964				10.52							0.61	C	2018.088			it24 5x1s. No resolution. B would have to be fainter than 15.5mag to get resolved - bogus assumed.	
																		Note: Secondary not identified by URAT1 or 2MASS. No hint of elongation in the Aladin image.
J 1484 AB	07 01 25.010	-10 35 44.7	4.0	61	11.00	12.50	-1	-8			31	7			2000			WDS 07014-1036, WDS data as of August 2017.
105.354215	-10.595768	4.045	60.789	12.04	13.28	0.80	-4.90	1.56	0.50	-4.90	1.91	0.96	Hg	2015.000	RACB	62	GAIADR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog	
105.354211	-10.595748	4.050	60.832									0.20	Eu	2000.006				
105.354254	-10.595800	3.952	59.936	12.10	13.41							0.70	C	2016.172			UCAC5,	
DAM 1197 AC	07 01 25.010	-10 35 44.7	9.0	39	11.00	14.30	-1	-8										WDS 07014-1036, WDS data as of August 2017. This is the C component of J 1484.
105.354215	-10.595768	9.129	37.658	12.04	14.86	0.80	-4.90	1.56	-2.60	7.60	2.91	0.96	Hg	2015.000	CCCC	6	GAIADR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog	
105.354211	-10.595748	9.013	38.650									0.20	Eu	2000.007				
105.354254	-10.595800	9.017	38.057	12.10	14.63							0.70	C	2016.172			UCAC5,	
DAM 1197 AD	07 01 25.010	-10 35 44.7	10.6	89	11.00	14.40	-1	-8										WDS 07014-1036, WDS data as of August 2017. This is the D component of J 1484.
105.354215	-10.595768	10.575	87.760	12.04	14.96	0.80	-4.90	1.56	-6.50	10.10	2.48	0.96	Hg	2015.000	CCCC	6	GAIADR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog	
105.354211	-10.595748	10.679	88.992									0.20	Eu	2000.008				
105.354254	-10.595800	10.690	89.357	12.10	14.90							0.70	C	2016.172			it27 1x3s, SNR D<20	
J 1485 AB	07 03 22.299	-08 44 28.3	6.7	8	10.81	11.20	2	-6	1	-4				2013			WDS 07033-0843, WDS data as of August 2017.	
105.842981	-8.741213	6.632	8.407	10.91	11.18	-0.40	-1.00	1.56	-0.20	0.30	1.98	0.96	Hg	2015.000	CCCC	6	GAIADR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog	
105.842982	-8.741209	6.612	8.416									0.20	Eu	2000.037				
105.842967	-8.741242	6.667	8.698	11.02	11.32							0.70	C	2016.172			it27 1x3s	
J 1487 AB	07 12 03.690	-05 26 42.5	4.2	154	10.84	12.80	1	35	2	1				2000			WDS 07120-0526, WDS data as of August 2017.	
108.015637	-5.445333	3.544	159.340	11.58	13.02	34.60	-30.50	1.27	-4.70	2.90	2.12	0.96	Hg	2015.000	CCCB	6	GAIADR1. M1 is visual estimate from G-J-K-H mag, M2 is GAIADR1 mag (secondary not identified in 2MASS and URAT1). PM data from UCAC5 catalog	
108.015493	-5.445206	4.233	154.292									0.20	Eu	2000.079				
108.015683	-5.445381	3.499	161.075	11.50	13.08							0.70	C	2016.164			UCAC5,	

Note: Significant difference in separation and PA between UCAC5 and GAIADR1. M1 is visual estimate from G-J-K-H mag, M2 is GAIADR1 mag (secondary not identified in 2MASS and URAT1). PM data from UCAC5 catalog

Table I continues on the next page.

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Table 1 (continued). Measurement Results for J Objects in Monoceros

Name	RA	Dec	Sep	PA	M1	M2	pmRA1	pmDec1	e_pm1	pmRA2	pmDec2	e_pm2	Ap	Me	Date	CPM Rat	CPM %	Source/Notes
J 1488 AB	07 12 04.880	-05 26 03.6	8.2	262	9.90	12.00	-1	1	-1	9					2010			WDS 07121-0525, WDS data as of August 2017.
108.020358	-5.434381	8.619	260.370	12.61	13.99	-1.00	-1.40	1.27	-2.20	0.60	1.41	0.96	Hg	2015.000	CCCC	6	GAI A DR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog	
108.020362	-5.434376	8.606	260.159								0.20	Eu	2000.080					UCAC5.
108.020383	-5.434375	8.631	260.463	12.77	13.90						0.70	C	2016.164					iT27 1x3s
J 1496 AB	07 33 57.830	-01 41 39.9	11.2	10	11.00	11.00	-17		-1	0					2016			WDS 07340-0142, WDS data as of August 2017.
113.490986	-1.694493	11.260	10.532	11.36	11.80	7.20	-17.20	1.70	-4.90	-1.10	1.70	0.96	Hg	2015.000	CCCB	6	GAI A DR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog	
113.490956	-1.694422	11.061	11.675								0.20	Eu	2000.114					UCAC5.
113.490988	-1.694525	11.274	11.430	11.18	11.80						0.70	C	2016.090					iT27 1x3s
J 1498 AB	07 34 44.021	-10 50 39.6	7.2	178	10.95	11.40	-2	-5	2	-15					2010			WDS 07341-1050, WDS data as of August 2017.
113.683448	-10.844551	7.343	176.627	10.84	11.36	2.30	-5.90	1.56	1.60	-13.00	1.98	0.96	Hg	2015.000	CCCB	6	GAI A DR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog	
113.683438	-10.844526	7.249	176.491								0.20	Eu	2000.034					UCAC5.
113.683454	-10.844553	7.353	176.554	10.66	11.26						0.70	C	2016.167					iT27 1x3s
J 1500 AB	07 39 15.560	-08 39 45.0	6.8	160	12.30	13.90	-1	-14							2016			WDS 07392-0838, WDS data as of August 2017.
114.814829	-8.662582	6.521	183.721	12.29	13.93	-7.20	-12.20	1.70	-3.60	-2.30	2.26	0.96	Hg	2015.000	CCCB	6	GAI A DR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog	
114.814859	-8.662531	6.671	184.096								0.20	Eu	2000.064					UCAC5.
114.814863	-8.662639	6.431	184.629	12.35	13.94						0.70	C	2016.164					iT27 1x3s
J 1504 AB	07 52 51.710	-07 58 17.1	9.1	251	9.44	11.56	-3	-1	9	-2					2016			WDS 07522-0758, WDS data as of August 2017.
118.215446	-7.971403	9.350	251.312	9.27	11.61	-6.90	-1.90	2.26	-5.10	2.00	1.70	0.96	Hg	2015.000	CCCC	6	GAI A DR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog	
118.215475	-7.971395	9.395	251.028								0.20	Eu	2000.078					UCAC5.
118.215458	-7.971428	9.320	251.805	9.46	11.45						0.70	C	2016.107					iT27 1x3s
J 1828 AB	07 04 04.990	-09 13 23.2	5.6	172	10.47	11.00	-10	11	1	-12					2011			WDS 07040-0913, WDS data as of August 2017.
106.020767	-9.223127	5.585	171.401	10.34	11.66	-3.20	0.10	1.56	-3.30	0.10	1.56	0.96	Hg	2015.000	AACC	76	GAI A DR1. M1 and M2 is visual estimate from G-J-K-H mags. PM data from UCAC5 catalog	
106.020781	-9.223128	5.581	171.387								0.20	Eu	2000.029					UCAC5.
106.020863	-9.223175	5.596	169.943	10.62	11.90						0.70	C	2016.172					iT27 1x3s
J 1923 AB	06 10 31.530	-04 22 36.6	5.2	37	9.80	9.80	-29	-19	24	26					2016			WDS 06106-0421, WDS data as of August 2017.
92.631429	-4.376785	5.315	36.513	11.73	12.05	-1.00	2.10	1.41	-1.40	-2.40	1.41	0.96	Hg	2015.000	CCCC	24	GAI A DR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog	
92.631433	-4.376776	5.323	36.536								0.20	Eu	2000.045					UCAC5.
92.631425	-4.376808	5.339	35.440	11.74	12.06						0.70	C	2016.164					iT27 1x3s

Table 1 continues on the next page.

Jonckheere Double Star Photometry – Part XII: Mon I

Table 1 (continued). Measurement Results for J objects in Monoceros

Name	RA	Dec	Sep	PA	M1	M2	pmRA1	pmRA2	e_pm1	pmDec1	pmDec2	e_pm2	Ap	Me	Date	CPM Rat	CPM %	Source/Notes
J 1944 AB	06 23 54.620	+02 00 09.1	8.1	31	11.60	12.30	-11	-21		67	120				2016		WDS 06240+0158, WDS data as of August 2017.	
95.977554	2.002462	8.224	29.365	12.16	12.96	-8.40	-19.60	1.27	-0.60	1.10	1.35	0.96	Hg	2015,000	BCCB	25	GAIA DR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog	
95.977589	2.002543	7.898	29.726								0.20	Eu	2000,103					UCAC5.
95.977550	2.002441	8.051	29.320	12.09	13.46						0.70	C	2016,090				iT27 1x3s	
J 1945 AB	06 27 12.931	+11 17 55.2	7.6	93	11.90	12.30	-9	-1		8	-3				2016		WDS 06279+1118, WDS data as of August 2017.	
96.803858	11.298661	7.641	93.246	12.58	12.54	1.50	-4.20	1.56	1.70	-7.10	1.41	0.96	Hg	2015,000	CCCC	6	GAIA DR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog	
96.803852	11.298677	7.637	92.942								0.20	Eu	2000,891				UCAC5.	
96.803875	11.298653	7.594	91.887	12.34	12.43						0.70	C	2016,022				iT27 1x3s	
J 1949 AB	06 28 22.580	-04 27 43.7	50.4	246	9.23	10.67	1	1		12	-12				2007		WDS 06284-0428, WDS data as of August 2017.	
97.094095	-4.462146	50.395	245.422	9.14	11.01	0.30	-0.30	2.69	6.70	-17.40	1.70	0.96	Hg	2015,000	CCCC	6	GAIA DR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog	
97.094094	-4.462145	50.376	245.732								0.20	Eu	2000,048				UCAC5.	
97.094146	-4.462206	50.482	245.593	9.26	10.84						0.70	C	2016,164				iT27 1x3s	
J 1949 BC	06 28 19.520	-04 28 04.4	7.4	224	10.67	11.10	12	-12		2	-12				2006		WDS 06284-0428, WDS data as of August 2017.	
97.081326	-4.467969	7.472	221.928	11.01	11.54	6.70	-17.40	1.70	6.70	-17.70	1.70	0.96	Hg	2015,000	AABB	92	GAIA DR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog	
97.081299	-4.467896	7.469	221.960								0.20	Eu	2000,049				UCAC5.	
97.081338	-4.468000	7.475	222.856	10.84	11.37						0.70	C	2016,164				iT27 1x3s	
																	Note: Very good CPM candidate with one reservation. GAIA DR1 shows a parallax of 1.49 for B (2189 L ₁), but unfortunately none for the secondary, C, which would really be helpful given the distance involved.	
J 1963 AB	06 37 21.740	-03 42 10.0	8.7	237	9.20	9.70	11	-33	5	-40				2015				WDS 06370-0336, WDS data as of August 2017.
99.340637	-3.702955	8.780	237.273	10.95	11.56	9.30	-38.50	1.70	10.10	-39.10	1.70	0.96	Hg	2015,000	AAAB	97	GAIA DR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog	
99.340599	-3.702795	8.785	237.364								0.20	Eu	2000,070				UCAC5.	
99.340604	-3.702939	8.796	237.392	10.94	11.55						0.70	C	2016,164				iT27 1x3s	
																	Note: Excellent CPM candidate. No parallax listed for either component in GAIA DR1.	
J 1966 AB	06 40 17.950	+02 16 54.0	11.4	349	11.81	13.10	0	-6	-6	3				2010				WDS 06404+0218, WDS data as of August 2017.
100.074778	2.281665	11.440	349.033	11.88	13.67	-1.50	-1.70	1.70	-3.60	0.40	1.84	0.96	Hg	2015,000	CCCC	6	GAIA DR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog	
100.074784	2.281672	11.404	349.164								0.20	Eu	2000,117				UCAC5.	
100.074792	2.281631	11.517	349.123	11.86	13.48						0.70	C	2016,090				iT27 1x3s	

Table 1 continues on the next page.

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Table 1 (continued). Measurement Results for J objects in Monoceros

Name	RA	Dec	Sep	PA	M1	M2	pmRA1	pmDec1	e_pm1	pmRA2	pmDec2	e_pm2	Ap	Me	Date	CPM Rat	CPM %	Source/Notes
J 1967 AB	06 40 35.090	+02 17 25.8	6.7	75	11.99	12.00	1	-1							2000			WDS 06405+0217, WDS data as of August 2017.
100.146175	02.290613	6.615	75.340	11.40	12.10					1.30	E2	2000.007						2MASS, M1 and M2 are visual estimates from 2MASS J- and K-pbands. Note differences in separation and PA from URAT1 data.
100.146178	2.290590	7.535	84.747	11.36	12.13	0.79	-5.79	6.53	79.00	-75.55	6.53	0.20	Eu	2014.123	CCCC	6	URAT1. M1 and M2 are URAT1 visual estimates from URAT1 J- and K-bands. PM data from comparison with 2MASS positions.	
100.146175	2.290600			12.05								0.96	Hg	2015.000				GAIA DR1. M1 is visual estimate from G-J-K-H mags. Secondary not identified in GAIA DR1. No G mag for secondary available in URAT1.
100.146185	2.290595				-2.40	1.20	1.70					0.20	Eu	2000.117				UCAC5. PM data from UCAC5 catalog. Secondary not identified in UCAC5.
100.146204	2.290575	7.737	84.661	11.86	12.58							0.70	C	2016.090				
J 1972 AB	06 44 07.640	+00 07 00.4	5.4	221	11.76	12.40	3	4	0	-2				2000				WDS 06441+0007, WDS data as of August 2017.
101.031831	0.116813	5.382	221.442	11.91	12.73	-1.50	1.70	-1.10	1.80	1.70	0.96	Hg	2015.000	CCCC	6	GAIA DR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog		
101.031838	0.116806	5.378	221.363									0.20	Eu	2000.106				UCAC5.
101.031904	0.116656	5.410	223.877	12.06	12.85							0.70	C	2016.096				iT27 1x3s
J 1977 AB	06 56 35.879	+04 12 58.6	9.9	168	10.29	14.00	-6	-1	9	-14				2010				WDS 06565+0413, WDS data as of August 2017.
104.149486	4.216306	9.834	166.189	10.43	13.14	-8.50	-3.80	1.41	0.90	-3.20	1.56	0.96	Hg	2015.000	CCCC	6	GAIA DR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog	
104.149519	4.216321	9.813	166.943									0.20	Eu	2000.492				UCAC5.
104.149450	4.216331	9.947	165.276	10.22	13.00							0.70	C	2016.022				iT27 1x3s
J 1978 AB	06 56 38.030	+03 18 08.7	5.8	268	9.40	11.00	3	-11	9	-8				2010				WDS 06565+0315, WDS data as of August 2017.
104.158500	3.302195	5.723	266.022									0.20	Eu	2000.141				
104.158504	3.302156	5.650	265.228	9.28	11.10							0.70	C	2016.022				iT27 1x3s
J 1987 AB	07 02 36.911	+02 50 16.6	6.0	265	10.20	10.70	-1	-5		-5				2015				WDS 07022+0250, WDS data as of August 2017.
105.653800	2.837955	5.990	265.364	10.49	11.56	-1.20	-3.20	1.41	-2.50	-3.90	1.56	0.56	Hg	2015.000	CCCC	6	GAIA DR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog	
105.653805	2.837969	5.971	265.445									0.20	Eu	2000.142				UCAC5.
	105.653775	2.837975	5.999	265.219	10.54	11.69						0.70	C	2016.022				iT27 1x3s

Table 1 continues on the next page.

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Table 1 (continued). Measurement Results for J objects in Monoceros

Name	RA	Dec	Sep	PA	M1	M2	pmRA1	pmDec1	e_pm1	pmRA2	pmDec2	e_pm2	Ap	Me	Date	CPM Rat	CPM %	Source/Notes
J 1988 AB	07 02 41.320	+02 50 25.3	8.3	236	11.88	12.58	-6	1	-3	-6					2015			WDS 07028+0250, WDS data as of August 2017.
105.672015	2.840357	8.330	236.431	11.13	11.84	-5.50	-0.80	1.27	4.10	-4.00	1.27	0.96	Hg	2015.000	CACC	15	GAI A DR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog	
105.672038	2.840360	8.320	236.783							0.20	Eu				2000-142			iT27 1x3s
105.671996	2.840397	8.361	234.795	10.99	11.58					0.70	C				2016-022			WDS 06277+0035, WDS data as of August 2017.
J 1995 AB	06 27 37.730	+00 37 12.0	9.5	128	12.14	13.43	3	2	17	-24					2015			GAI A DR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog
96.907200	0.619991	9.490	128.092	12.39	13.83	1.10	-2.70	1.70	-4.10	0.80	1.84	0.96	Hg	2015.000	CCCC	6	GAI A DR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog	
96.907196	0.620002	9.583	128.055							0.20	Eu				2000-094			WDS 06408-0040, WDS data as of August 2017.
96.907267	0.620078	9.853	127.808	12.42	13.91					0.70	C				2016-096			iT27 1x3s
J 2006 AB	06 40 35.791	-00 39 35.9	6.7	125	10.80	11.60	-2	-2							2010			GAI A DR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog
100.149112	-0.659964	7.010	124.665	10.58	11.73	-3.70	0.90	1.56	-4.50	1.50	1.70	0.96	Hg	2015.000	BCCC	24	GAI A DR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog	
100.149127	-0.659968	7.025	124.669							0.20	Eu				2000-094			WDS 06423-0048, WDS data as of August 2017.
100.149129	-0.659947	6.808	124.742	10.75	11.76					0.70	C				2016-096			iT27 1x3s
J 2010 AB	07 02 47.349	-04 34 31.7	6.4	77	10.34	10.70	-3	-1	-2	-3					2010			GAI A DR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog
105.697327	-4.575483	6.344	76.526	10.18	10.97	-1.60	-1.30	1.56	-1.40	-1.60	3.25	0.96	Hg	2015.000	CACC	15	GAI A DR1. M1 and M2 are visual estimates from G-J-K-H mags. Secondary not identified in GAI A DR1.	
105.697333	-4.575477	6.343	76.496							0.20	Eu				2000-077			UCAC5.
105.697367	-4.575550	6.249	75.165	10.42	11.19					0.70	C				2016-164			iT27 1x3s
J 2024 AB	06 42 13.749	-00 47 49.2	2.3	50	11.12	12.12	-1	-3	1	-4					1991			WDS 06423-0048, WDS data as of August 2017.
100.557219	-0.797093				11.04					0.96	Hg				2015.000			GAI A DR1. M1 is visual estimates from G-J-K-H mags. Secondary not identified in GAI A DR1.
100.557254	-0.797049									0.20	Eu				2000-096			UCAC5. PM data from UCAC5 catalog. Secondary not identified in UCAC5.
100.557308	-0.797158	2.197	40.938	10.94	11.66					0.70	C				2016-096			iT27 1x3s. Touching star disks 2MASS and USAT.
BAL 709 AC	06 42 13.749	-00 47 49.2	8.6	30	11.12	12.00	-1	-3	3	-7					2015			WDS 06423-0048, WDS data as of August 2017. This is the C component of J 2024.
100.557254	-0.797049	8.590	30.676	11.04	12.08	-8.30	-10.50	1.91	1.10	-2.20	2.97	0.96	Hg	2015.000	CCCC	6	GAI A DR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog	
100.557308	-0.797158	8.411	30.282							0.20	Eu				2000-096			UCAC5.
										0.70	C							iT Vmag Data
J 2025 AB	06 44 02.749	-00 57 06.9	4.4	207	11.40	11.60	1	2	-33	-8					2010			WDS 06441-0056, WDS data as of August 2017.
101.011459	-0.951929	4.466	206.560	12.31	13.27	-2.70	0.30	1.70	-1.90	0.00	1.20	0.96	Hg	2015.000	CCCC	6	GAI A DR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog	
101.011470	-0.951930	4.468	206.706							0.20	Eu				2000-970			UCAC5.
101.011408	-0.951964	4.240	206.018	12.28	13.19					0.70	C				2018-088			iT24 5x3s
J 2027 AB	06 47 19.420	+10 06 01.3	4.7	267	12.20	12.90	4	-5	-20	-13					2007			WDS 06473+1008, WDS data as of August 2017.
101.830938	10.110424	4.703	267.196	12.17	12.95	-0.30	-1.80	1.56	0.60	-6.10	1.70	0.96	Hg	2015.000	BCCC	24	GAI A DR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog	
101.830939	10.110431	4.713	267.942							0.20	Eu				2000-882			UCAC5.
101.830996	10.110425	4.844	265.501	12.14	12.98					0.70	C				2016-022			iT27 1x3s

Table I continues on the next page.

Jonckheere Double Star Photometry – Part XII: Mon I

Table 1 (continued). Measurement Results for J objects in Monoceros

Name	RA	Dec	Sep	PA	M1	M2	pmRA1	pmRA2	e_pm1	pmDec1	pmDec2	e_pm2	Ap	Me	Date	CPM Rat	CPM %	Source/Notes	
J 2427 AB	06 24 48.320 +00 04 30.0	3.7	331	11.60	12.40	3	-26		-12	-11					2015		WDS 06248+0005, WDS data as of August 2017.		
	96.201352	0.074955	3.702	331.227	11.85	12.75	-3.30	-12.70	1.70	-5.30	-13.40	1.70	0.96	Hg	2015.000	CBCB	12	GAIA DR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog	
	96.201366	0.075007	3.698	331.716								0.20	Eu		2000.088			UCAC5.	
	96.201321	0.074992	3.329	330.586	11.91	12.78						0.70	C	2016.096			int27 1x3s		
J 2432 AB	06 41 51.250 +00 06 52.4	3.3	5	11.51	11.57	-2	-1		3	16					2015		WDS 06419+0006, WDS data as of August 2017.		
	100.463525	0.114505	3.254	4.670	11.71	11.31	-1.60	-1.70	1.70	-1.90	-1.50	1.70	0.96	Hg	2015.000	CACC	15	GAIA DR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog	
	100.463532	0.114512	3.251	4.745								0.20	Eu		2000.103			UCAC5,	
	100.463704	0.115536	2.958	7.870	11.77	11.48						0.70	C	2016.096			int27 1x3s		
J 2434 AB	06 45 32.621 +04 23 38.2	6.6	298	9.02	10.70	2	-9		-7	0					2010		WDS 06458+0424, WDS data as of August 2017.		
	101.385929	4.393954	6.593	297.637	8.88	11.36	-3.00	-3.30	2.69	-13.00	-4.10	3.82	0.96	Hg	2015.000	CCCB	6	GAIA DR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog	
	101.385941	4.393968	6.468	298.346								0.20	Eu		2000.152			UCAC5.	
	101.385929	4.393942	6.560	297.511	9.08	11.42						0.70	C	2016.022			int27 1x3s		
J 2446 AB	06 53 46.970 +10 06 56.3	2.5	109	10.00	11.00	-30	-13		12	-3					2000		WDS 06538+1007, WDS data as of August 2017.		
	103.445696	10.115671	2.564	109.265	11.44	12.10	-4.80	1.10	2.40	3.20	-2.90	4.46	0.96	Hg	2015.000	CCCB	6	GAIA DR1. M1 and M2 are GAIA DR1 Gmags – no J-H-K mags available for the secondary, which is not recognized by 2MASS and USAT. The G-J-H-K magnitude for the primary is 12.135, but didn't include here for sake of consistency. PM data from UCAC5 catalog	
	103.445715	10.115666	2.439	108.904											0.20	Eu	2000.882		UCAC5.
	103.445775	10.115728	2.500	110.117	11.79	12.18						0.70	C	2016.022			int27 1x3s		
J 2447 AB	06 53 45.171 -10 52 01.5	2.8	270	10.32	10.80	28	-17		-8	8					2015		WDS 06537+1051, WDS data as of August 2017.		
	103.438265	-10.867159	2.753	270.210	10.54	11.62	5.40	-16.10	1.56	5.70	-16.10	3.25	0.96	Hg	2015.000	AACB	78	GAIA DR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog	
	103.438242	-10.867091	2.758	270.209								0.20	Eu		1999.990			UCAC5.	
	103.438258	-10.867100	3.756	270.005	10.26	11.29						0.70	C	2016.172			int27 1x3s		
																	2MASS position for secondary doesn't match the WDS position, so can't be positive about the J-H-K values (GAIA Gmag for primary is 10.107, for secondary 10.878). Looks like a good PM candidate, although motion is somewhat minimal in relation to errors. GAIA DR1 shows a parallax of 5.72 (570.215 LY) for the primary, none listed for the secondary.		

Table 1 continues on the next page.

Jonckheere Double Star Photometry – Part XII: Mon I

Table 1 (continued). Measurement Results for J objects in Monoceros

Name	RA	Dec	Sep	PA	M1	M2	pmRA1	pmDec1	e_pm1	pmRA2	pmDec2	e_pm2	Ap	Me	Date	CPM Rat	CPM %	Source/Notes	
J 2450 AB	07 03 03.410	-00 28 21.4	3.9	111	11.03	14.20	-31	14							2000			WDS 07031-0029, WDS data as of August 2011.	
105.764250	-0.472653	3.919	111.321	10.99	12.73	-0.60	-1.40	1.41	-3.00	0.20	1.70	0.96	Hg	2015.000	CCCC	6	GAIA DR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog		
105.764233	-0.472647	3.961	111.457												0.20	Eu	2000.114		UCAC5.
105.764238	-0.472614	3.484	113.512	11.04	12.64									0.70	C	2016.096		iT27 1x3s. Touching star disks. SNR B<20	
J 2453 AB	07 07 53.629	+00 48 48.4	4.9	156	10.50	10.90	-17	21	11	-19					2010			WDS 07078+0050, WDS data as of August 2011.	
106.973455	0.813457	4.730	154.763	12.88	13.24	2.50	-1.30	1.70	-0.50	0.10	1.77	0.96	Hg	2015.000	CCCC	6	GAIA DR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog		
106.973445	0.813463	4.767	154.393											0.20	Eu	2000.118		UCAC5.	
106.973459	0.813497	4.642	153.934	12.94	13.31									0.70	C	2016.090		iT27 1x3s	
J 2454 AB	07 09 49.130	+00 28 58.1	4.8	342	11.30	11.30	-5	-5	-4	-4	-1				2016			WDS 07094+0029, WDS data as of August 2011.	
107.454299	0.484056	4.890	160.828	12.35	12.36	-4.70	-1.60	1.70	-3.80	-2.10	1.70	0.96	Hg	2015.000	CCCC	6	GAIA DR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog		
107.454319	0.484063	4.879	160.945											0.20	Eu	2000.118		UCAC5.	
107.454730	0.482556	4.914	161.861	12.39	12.36									0.70	C	2016.090		iT27 1x3s	
J 2458 AB	07 14 55.540	-01 13 07.0	4.7	202	10.20	12.20	9	7							2010			WDS 0715-0112, WDS data as of August 2011.	
108.731469	-1.2218613	4.512	204.548	11.86	12.74	4.10	-1.00	1.63	-4.20	-10.10	1.70	0.96	Hg	2015.000	CCCC	6	GAIA DR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog		
108.731452	-1.218609	4.337	203.820											0.20	Eu	2000.107		UCAC5.	
108.731513	-1.218633	4.258	203.671	11.86	12.75									0.70	C	2016.096		iT27 1x3s	
J 2459 AB	07 15 24.760	-11 05 48.5	6.0	105	10.77	10.90	-15	5	-1	-1	1				2010			WDS 0715-1106, WDS data as of August 2011.	
108.853184	-11.096795	6.015	105.641	11.60	11.64	10.20	3.60	1.56	-11.50	3.40	1.56	0.96	Hg	2015.000	BCCB	25	GAIA DR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog		
108.853228	-11.096810	6.033	105.577											0.20	Eu	2000.011		UCAC5.	
108.853129	-11.095789	6.076	105.367	11.47	11.56									0.70	C	2016.172		iT27 1x3s	
J 2461 AB	07 17 02.360	-10 34 56.5	6.0	343	10.65	12.60	-2	1	-3	3					2010			WDS 0717-1036, WDS data as of August 2011.	
109.229856	-10.582370	6.130	342.068	10.32	11.89	-2.40	1.30	1.56	-3.40	3.90	1.63	0.96	Hg	2015.000	CCCC	6	GAIA DR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog		
109.229866	-10.582376	6.087	342.092											0.20	Eu	2000.018		UCAC5.	
109.229879	-10.582381	6.146	341.248	10.51	11.98									0.70	C	2016.172		iT27 1x3s	
J 2462 AB	07 17 06.240	-10 32 23.1	8.8	4	11.87	12.85	-11	-3	-7	1					2000			WDS 0717-1034, WDS data as of August 2011.	
109.2275730	-10.539751	8.754	3.335	11.68	12.75	-7.80	-1.60	1.56	-8.90	-0.20	1.56	0.96	Hg	2015.000	CCCC	6	GAIA DR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog		
109.2275763	-10.539744	8.734	3.450											0.20	Eu	2000.018		UCAC5.	
109.2275729	-10.539786	8.645	1.857	11.68	12.81									0.70	C	2016.172		iT27 1x3s	

Table 1 continues on the next page.

Jonckheere Double Star Photometry – Part XII: Mon I

Table 1 (continued). Measurement Results for J objects in Monoceros

Name	RA	Dec	Sep	PA	M1	M2	pmRA1	pmDecl	e_pm1	pmRA2	pmDec2	e_pm2	Ap	Me	Date	CPM	CPM %	Source/Notes	
J 244 AB	07 18 11.741	-10 31 32.1	5.4	60	10.70	10.70	-2	0	6	7			2000			WDS 01185-1032, WDS data as of August 2017.			
	109.548952	-10.525599	5.371	59.648	12.55	13.07	3.20	1.00	1.56	-2.90	1.90	1.77	.96	Hg	2015.000	CACC	15	GAIA DR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog	
	109.548939	-10.525603	5.445	60.259	57.260	12.57	13.30								0.20	Bu	2000-020		
J 247 AB	07 28 04.740	-03 31 04.6	3.0	71	11.22	10.80	-68	-19						0.70	C	2016-172	2005	WDS 07281-0330, WDS data as of August 2017.	
	112.019721	-3.517950			11.11														
	112.019748	-3.517929																	
	112.019688	-3.518103	2.797	61.377	11.06	11.71													
J 2482 AB	07 34 14.121	-01 35 04.3	4.4	204	12.60	12.30	10	8	-2	-17					2016			WDS 07344-0135, WDS data as of August 2017.	
	113.558833	-1.584529	4.4229	202.466	12.79	12.65	4.10	-3.10	1.70	3.70	-3.70	1.70	.96	Hg	2015.000	CACB	16	GAIA DR1. M1 is visual estimates from G-J-K-H mags. Secondary not identified in GAIA DR1.	
	113.558816	-1.584516	4.419	202.432	12.80	12.50									0.20	Bu	2000-093	UCAC5, PM data from UCAC5 catalog, Secondary not identified in UCAC5.	
	113.558392	-1.585731	4.377	201.928	12.80	12.50									0.70	C	2016-096	int27 1x3s	Secondary also not identified in 2MASS and DRATL.
J 2485 AB	07 41 36.561	-10 43 28.3	6.3	126	11.00	13.00	-10	2	19	-19					0.70	C	2016-090	2010	WDS 07417-1043, WDS data as of August 2017.
	115.402356	-10.724531	6.544	127.460	12.66	13.70	-2.30	1.10	1.70	2.90	-12.90	1.91	.96	Hg	2015.000	CCCB	6	GAIA DR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog	
	115.402366	-10.724535	6.357	126.338											0.20	Bu	2000-113	int27 1x3s	
	115.402413	-10.724639	6.230	127.356	12.99	13.84									0.70	C	2016-164	UCAC5,	
J 2487 AB	07 46 13.950	-06 02 29.5	6.7	131	9.50	11.00	-40	3	18	-45					2010			WDS 07461-0603, WDS data as of August 2017.	
	116.558116	-6.041629	6.706	131.198	11.63	12.57	-5.80	-19.10	1.41	-6.80	-19.30	1.41	.96	Hg	2015.000	AADB	92	GAIA DR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog	
	116.558140	-6.041549	6.716	131.091											0.20	Bu	2000-084	UCAC5,	
	116.558138	-6.041594	6.820	133.797	111.47	12.61									0.70	C	2016-096	int27 1x3s	Good PM candidate. No parallax data for either component in GAIA DR1.
J 2491 AB	07 57 20.130	-03 46 09.9	4.0	10	12.00	13.00	-5	-35										WDS 07574-0345, WDS data as of August 2017.	
	119.333894	-3.769418	3.921	7.798	12.59	13.08	-3.20	1.30	1.70	-2.70	2.30	1.70	.96	Hg	2015.000	CACC	15	GAIA DR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog	
	119.333907	-3.769424	3.906	7.710											0.20	Bu	2000-107	int27 1x3s	
	119.333875	-3.769408	3.864	8.688	12.57	13.09									0.70	C	2016-022	WDS 08101-1110, WDS data as of August 2017.	
J 2493 AB	08 10 12.749	-11 09 40.6	7.3	314	9.50	12.50	-2	-2	-16	11					2000				
	122.553123	-11.161264	7.266	314.171	11.52	13.18	-2.40	2.50	1.70	-1.40	3.10	1.84	.96	Hg	2015.000	CACC	15	GAIA DR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog	
	122.553133	-11.161274	7.270	314.045											0.20	Bu	2000-041	UCAC5,	
	122.553117	-11.161269	7.339	316.230	111.43	13.37									0.70	C	2016-096	int27 1x3s	
J 2611 AB	06 48 07.840	+09 44 12.1	4.5	125	11.92	14.10	-2	2	34	-30					2000			WDS 06482+0944, WDS data as of August 2017.	
	102.032654	9.736666	4.507	124.971	111.96	12.93	2.50	-4.70	1.41	1.20	-5.40	1.56	.96	Hg	2015.000	CACB	16	GAIA DR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog	
	102.032644	9.736684	4.516	124.734											0.20	Bu	2000-878	UCAC5,	
	102.032675	9.736689	4.312	128.261	111.94	12.92									0.70	C	2016-022	int27 1x3s	

Table 1 continues on the next page.

Jonckheere Double Star Photometry – Part XII: Mon I

Table 1 (continued). Measurement Results for J objects in Monoceros

Name	RA	Dec	Sep	PA	M1	M2	pmRA1	pmDec1	e_pm1	pmRA2	pmDec2	e_pm2	Ap	Me	Date	CPM	CPM	Source/Notes	
J 2611 AC	06 48 07.840	+09 44 12.1	17.2	349	11.92	15.60	-2	2	5	8					2000			WDS 06482+0944, WDS data as of August 2017.	
	102.032654	9.736666	17.371	348.649	11.96	14.08	2.50	-4.70	1.41	-9.60	2.80	1.70	0.96	Hg	2015.000	CCCC	6	GATA DR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog	
	102.032644	9.736684	17.234	349.136	11.94	14.06									0.20	Eu	2000-878		
	102.032675	9.736689	17.358	347.856	11.94	14.06									0.70	C	2016-022		
J 2616 AB	06 54 24.510	-00 09 09.2	5.1	3	12.80	12.60	-2	-12		-8	1				2016			WDS 05544-0008, WDS data as of August 2017.	
	103.602137	-0.152557	5.130	1.218	12.86	12.77	-0.40	-3.90	1.70	3.00	-10.10	1.70	0.96	Hg	2015.000	CCCB	6	GATA DR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog	
	103.602139	-0.152541	5.223	1.635											0.20	Eu	2000-110		
	103.602183	-0.152564	5.1121	359.161	13.09	12.88									0.70	C	2016-096		
J 2616 AC	06 54 24.510	-00 09 09.2	21.5	20	12.80	14.50	-2	-12		103	-111				2015			WDS 05544-0008, WDS data as of August 2017.	
	103.602137	-0.152557	21.455	19.549	12.86	14.50	-0.40	-3.90	1.70	-2.20	-4.70	2.19	0.96	Hg	2015.000	CCCC	6	GATA DR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog	
	103.602139	-0.152541	21.475	19.609											0.20	Eu	2000-110		
	103.602183	-0.152564	21.427	17.982	13.09	14.68									0.70	C	2016-096		
J 2623 AB	07 09 11.890	-05 16 54.5	5.5	115	10.80	11.80	-25	2	23	-12					2010			WDS 07091-0518, WDS data as of August 2017.	
	107.239555	-5.281813	5.513	115.805	12.28	12.80	-3.20	-0.30	1.27	-0.90	5.30	1.27	0.96	Hg	2015.000	CCCC	6	GATA DR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog	
	107.239568	-5.281812	5.518	116.748											0.20	Eu	2000-078		
	107.239563	-5.281833	5.451	116.005	12.15	12.69									0.70	C	2016-164		
J 2636 AB	08 02 20.021	-06 26 02.4	4.8	62	10.39	12.00	-18	-23	24	-1					2012			WDS 08026-0628, WDS data as of August 2017.	
	120.583403	-6.434084	4.596	61.730	10.33	12.50	-	11.50	-22.50	1.41	-13.90	-21.70	2.34	0.96	Hg	2015.000	BABB	74	GATA DR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog
	120.583451	-6.433991	4.623	62.076											0.20	Eu	2000-095		
	120.583425	-6.434136	4.363	59.416	10.22	12.41									0.70	C	2016-090		
																		Good CPM candidate. GAIA DR1 shows a parallax for the primary of 3.54 (921.365 LY), but none listed for the secondary.	
J 2637 AB	08 02 26.280	-06 25 53.4	7.3	240	11.53	14.00	5	-9	15	9					2000			WDS 08022-0628, WDS data as of August 2017.	
	120.609577	-6.431590	7.353	241.709	11.95	13.95	0.00	-9.60	1.41	-10.80	-1.40	1.70	0.96	Hg	2015.000	CCCB	6	GATA DR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog	
	120.609577	-6.431550	7.272	240.263											0.20	Eu	2000-098		
	120.609550	-6.431636	7.008	241.446	11.92	13.86									0.70	C	2016-090		
J 2758 AB	06 51 23.450	-03 54 46.3	3.2	126	12.30	13.50	-21	7							2000			WDS 06544-0354, WDS data as of August 2017.	
	102.847739	-3.912861	3.215	125.802	12.29	12.83	-2.50	1.70	1.41	-2.40	1.10	1.56	0.96	Hg	2015.000	CCCC	6	GATA DR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog. Secondary not recognized in 2MASX catalog, and USAT1. G-J-B-K magnitude for M1 is 12.231.	
	102.847749	-3.912868	3.209	125.683											0.20	Eu	2000-082		
	102.847846	-3.912950	3.062	125.308	12.37	12.81									0.70	C	2016-164		
																		WDS 06577-0435, WDS data as of August 2017.	
	104.434654	-4.615499	5.446	37.832	12.29	12.35	-1.90	1.30	1.70	-0.80	1.60	1.70	0.96	Hg	2015.000	CCCC	6	GATA DR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog	
	104.434662	-4.615504	5.432	37.717											0.20	Eu	2000-074		
	104.434633	-4.615478	5.376	39.973	12.50	12.56									0.70	C	2016-164		
																		WDS 06577-0435, WDS data as of August 2017.	

Table 1 continues on the next page.

Jonckheere Double Star Photometry – Part XII: Mon I

Table 1 (continued). Measurement Results for J objects in Monoceros

Name	RA	Dec	PA	M1	M2	pmRA1	pmRA2	e_pm1	pmDec1	e_pm2	Ap	Me	Date	CPM Rat	CPM %	Source/Notes	
J 2768 AB	06 58 38.911	-09 09 47.5	5.8	53	11.50	12.00	-14	-5	52	37			2015			WDS 06587-0911, WDS data as of August 2017.	
104.662158	-9.163151	5.830	52.502	12.53	12.62	3.80	17.10	1.56	2.80	16.70	1.56	0.96	Hg	2015.000	BABB	74	GAIA DR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog
104.662142	-9.163222	5.845	52.539							0.20	Eu	2000.024					UCAC5.
104.662158	-9.163150	5.868	54.351	12.67	12.76					0.70	C	2015.172					ir27 1x3s
																	Good CPM candidate. No parallax data available in GAIA DR1 for either component.
J 2769 AB	06 59 39.050	+02 19 33.2	5.1	69	12.00	12.60	-22	3	11	6			2010			WDS 06594+0219, WDS data as of August 2017.	
104.912732	2.325935	5.596	67.120	12.24	12.94	-2.50	-0.60	1.70	-3.40	2.70	1.70	0.96	Hg	2015.000	CCCC	6	GAIA DR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog
104.912742	2.325938	5.589	67.633								0.20	Eu	2000.137			UCAC5.	
104.912742	2.325947	5.548	68.317	12.60	12.35					0.70	C	2016.022			ir27 1x3s		
J 2770 AB	06 59 58.210	-05 06 26.0	8.3	176	11.44	12.40	-2	-1	4	-3			2015			WDS 05593-0507, WDS data as of August 2017.	
104.992587	-5.107276	8.307	175.645	11.46	13.38	-1.40	-3.80	1.70	-2.80	-3.40	1.84	0.96	Hg	2015.000	CBCC	12	GAIA DR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog
104.992593	-5.107260	8.315	175.508							0.20	Eu	2000.072			UCAC5.		
104.992600	-5.107306	8.357	175.386	11.37	13.30					0.70	C	2016.164			ir27 1x3s		
J 2772 AB	07 03 06.931	-04 24 29.4	6.9	132	10.50	11.40	-11	1	16	-3			2010			WDS 07030-0424, WDS data as of August 2017.	
105.778890	-4.408173	6.880	130.735	12.10	12.67	1.30	-1.80	1.77	-0.10	-0.30	1.70	0.96	Hg	2015.000	CCCC	6	GAIA DR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog
105.778885	-4.408165	6.912	130.763								0.20	Eu	2000.082			UCAC5.	
105.778871	-4.408219	6.820	130.840	12.20	12.87					0.70	C	2016.164			ir27 1x3s		
J 2774 AB	07 04 21.950	+09 15 56.4	4.1	85	12.57	12.74	3	-21	-3	1			2010			WDS 07044+0917, WDS data as of August 2017.	
106.091520	9.265563	4.061	82.973	12.29	12.84	9.10	-25.30	1.27	-2.30	-1.90	1.27	0.96	Hg	2015.000	CCCB	6	GAIA DR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog
106.091484	9.265662	4.196	87.743							0.20	Eu	2000.877			UCAC5.		
106.091517	9.265481	3.932	77.216	12.39	12.90					0.70	C	2015.022			ir27 1x3s		
																Unusual disparities in PA for this pair.	

Table 1 continues on the next page.

Jonckheere Double Star Photometry – Part XII: Mon I

Table 1 (continued). Measurement Results for J objects in Monoceros

Name	RA	Dec	Sep	PA	M1	M2	pmRA1	pmRA2	pmDec1	e_pm1	pmRA2	pmDec2	e_pm2	Ap	Me	Date	CPM Rat	CPM %	Source/Notes
J 2776 AB	07 05 05.391	+00 58 41.1	6.3	216	9.90	13.50	0	1								2010			WDS 07051+0059, WDS data as of August 2017.
	106.272449	0.978109	6.495	216.259	11.88	13.83	-2.00	-2.00	1.70	-4.70	-5.30	1.84	0.96	Hg	2015.000	BCCC	24	GAI A DR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog	
	106.272457	0.978118	6.432	216.239								0.20	Eu	2000.117					UCAC5 .
	106.272458	0.978078	6.497	216.390	12.00	13.74						0.70	C	2016.090					WDS 0708-0151, WDS data as of August 2017.
J 2781 AB	07 08 11.099	-01 51 59.4	25.1	6	10.94	11.63	-1			-3	1				2015				
	107.046266	-1.866534	25.518	9.379	11.15	11.82	-1.40	1.20	1.56	-2.20	0.90	1.70	0.96	Hg	2015.000	CCCC	6	GAI A DR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog	
	107.046271	-1.866538	25.523	9.403															UCAC5 .
	107.046204	-1.866458	25.569	9.483	10.93	12.01									0.70	C	2016.093		WDS 0708-0151
BAL 409 BC	07 08 11.099	-01 51 59.4	5.0	267	111.80	12.90	-3	1		1.00	-1.00								WDS 0708-0151, WDS data as of August 2017. This is the B component of J 2781 AB.
	107.047421	-1.859540	5.168	266.482	11.82	12.83	-2.20	0.90	1.70	-3.70	1.40	1.84	0.96	Hg	2015.000	ACCC	30	GAI A DR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog	
	107.047430	-1.859544	5.145	266.402								0.20	Eu	2000.104					UCAC5 .
	107.047375	-1.859453	4.964	268.615	12.01	13.09						0.70	C	2016.096					WDS 0708-0151
J 2782 AB	07 08 07.711	-10 36 17.2	3.5	283	10.49	11.10	5	-1											WDS 0708-1036, WDS data as of August 2017.
	107.032169	-10.604815	3.512	282.732	10.46	11.78	0.90	0.60	1.56	-0.60	0.20	3.39	0.96	Hg	2015.000	CCCC	6	GAI A DR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog	
	107.032165	-10.604817	3.492	282.885															
	107.032192	-10.604814	3.547	281.216	10.61	11.21									0.20	Eu	2000.017		UCAC5 .
	J 2784 AB	07 08 28.480	+00 57 40.2	6.4	159	12.60	-7	13	0	3					2000				WDS 0708-0059, WDS data as of August 2017.
	107.118682	0.961179	6.371	158.714	13.10	13.14	-1.30	-1.40	1.70	-2.50	-2.80	1.70	0.96	Hg	2015.000	ACCC	30	GAI A DR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog	
	107.118687	0.961185	6.358	158.503															UCAC5 .
	107.118688	0.961247	6.506	159.910	12.85	13.17									0.70	C	2016.090		WDS 0708-0059, WDS data as of August 2017.

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Jonckheere Double Star Photometry – Part XII: Mon I

Table 1 (continued). Measurement Results for J objects in Monoceros

Name	RA	Dec	PA	M1	M2	pmRA1	pmRA2	pmDec1	e_pm1	pmDec2	e_pm2	Ap	Me	Date	CPM Rat	CPM %	Source/Notes	
J 2788 AB	07 10 33.470	-10 11 41.8	5.3	123	12.50	13.50	-172	105	8	2				2000			WDS 07107-1012, WDS data as of August 2017.	
	107.640748	-10.195746	5.287	302.116	12.94	13.66	-0.80	-2.20	1.41	2.50	-0.20	1.41	0.96	Hg	2015.000	CBC	12	GAIA DR1. M1 and M2 are visual estimates from G-J-K -H mags. PM data from UCAC5 catalog
	107.640738	-10.195745	5.262	302.668								0.20	Eu	2000.023			UCAC5.	
	107.640788	-10.195764	5.215	302.475	12.94	13.66						0.70	C	2016.172			iT27 1x3s. Note 180 degree difference in PA from WDS data --last WDS PA measurement appears to be in error.	
J 2789 AB	07 11 34.389	-07 48 48.7	6.8	86	11.40	12.10	-14	-5	5	-7				2010			WDS 07115-0750, WDS data as of August 2017.	
	107.893289	-7.813533	6.520	84.153	11.89	12.61	-3.70	-0.10	1.70	-5.80	1.10	1.70	0.96	Hg	2015.000	CCCC	6	GAIA DR1. M1 and M2 are visual estimates from G-J-K -H mags. PM data from UCAC5 catalog
	107.893304	-7.813533	6.551	84.339								0.20	Eu	2000.061			UCAC5.	
	107.893321	-7.813547	6.498	84.170	11.80	12.51						0.70	C	2016.167			iT27 1x3s	
J 2792 AB	07 14 40.190	-02 11 43.3	3.6	182	11.81	12.10	-2	19	-7	-20				2000			WDS 07146-0212, WDS data as of August 2017.	
	108.667474	-2.195398	3.569	182.357	11.93	12.17	-1.80	-2.60	1.41	-1.60	-3.60	1.41	0.96	Hg	2015.000	CCCC	6	GAIA DR1. M1 and M2 are visual estimates from G-J-K -H mags. PM data from UCAC5 catalog
	108.667481	-2.195387	3.554	182.419								0.20	Eu	2000.100			UCAC5.	
	108.667433	-2.195444	3.201	181.342	11.76	11.89						0.70	C	2016.096			iT27 1x3s	
J 2793 AB	07 14 14.661	-10 06 19.0	3.1	106	11.77	12.68	-6	2	27	-7				2000			WDS 07144-1007, WDS data as of August 2017.	
	108.561222	-10.105362	2.913	105.110	11.02	11.90	6.50	-3.80	1.56	-6.20	0.00	3.25	0.96	Hg	2015.000	CBC	6	GAIA DR1. M1 and M2 are visual estimates from G-J-K -H mags. PM data from UCAC5 catalog
	108.561194	-10.105346	3.111	105.209								0.20	Eu	2000.025			UCAC5.	
	108.561263	-10.105372	2.455	104.390	10.92	11.24						0.70	C	2016.172			iT27 1x3s	
J 2796 AB	07 15 00.450	-06 52 51.5	5.9	346	12.00	12.00	3	-6	-17	3				2010			WDS 07151-0653, WDS data as of August 2017.	
	108.751893	-6.881012	6.023	345.902	12.89	14.04	-2.90	1.00	1.70	-1.20	-0.10	2.13	0.96	Hg	2015.000	CCCC	6	GAIA DR1. M1 and M2 are visual estimates from G-J-K -H mags. PM data from UCAC5 catalog
	108.751906	-6.881016	6.045	345.703								0.20	Eu	2000.067			UCAC5.	
	108.751842	-6.881133	6.609	349.090	13.36	14.27						0.70	C	2016.164			iT27 1x3s. SNR B<20	

Table 1 continues on the next page.

Jonckheere Double Star Photometry – Part XII: Mon I

Table 1 (continued). Measurement Results for J objects in Monoceros

Name	RA	Dec	Sep	PA	M1	M2	pmRA1	pmDec1	e_pm1	pmRA2	pmDec2	e_pm2	Ap	Me	Date	CPM Rat	CPM %	Source/Notes
J 2798 AB	07 15 43.781	-10 40 15.5	4.0	143	10.92	11.13	13	7	2	-1					2010			WDS 07157-1040, WDS data as of August 2017.
108.932399	-10.670942	3.989	141.786	10.90	11.30	-2.80	1.90	1.56	-2.00	4.50	3.25	0.96	Hg	2015.000	CCCB	6	GATA DRL. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog	
108.932411	-10.670950	4.012	142.276								0.20	Eu	2000.018					iT27 1x3s
108.932371	-10.670958	4.071	140.685	10.92	11.29						0.70	C	2015.172					WDS 07161-0138, WDS data as of August 2017.
J 2802 AB	07 16 06.419	-01 37 34.9	4.1	268	11.35	12.61	0	-3	-41	14					2010			GATA DRL. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog
109.026739	-1.626434	4.085	270.212	11.11	11.78	-1.20	1.30	1.63	-2.60	0.70	1.70	0.96	Hg	2015.000	CCCC	6	GATA DRL. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog	
109.026744	-1.626439	4.065	270.340								0.20	Eu	2000.104					UCAC5.
109.026800	-1.626428	4.184	269.452	11.17	11.84						0.70	C	2016.096					iT27 1x3s
J 2804 AB	07 16 37.310	-10 05 37.9	5.4	321	12.83	11.52	20	-32	-3	-3					2010			WDS 07167-1007, WDS data as of August 2017.
109.155359	-10.093899	5.413	321.877	11.42	11.71	-1.90	-3.00	1.56	-1.10	-3.10	1.56	0.96	Hg	2015.000	CBCC	12	GATA DRL. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog	
109.155366	-10.093886	5.421	321.800								0.20	Eu	2000.024					UCAC5.
109.155346	-10.093936	5.341	322.730	11.56	11.90						0.70	C	2016.112					iT27 1x3s
J 2809 AB	07 18 39.419	-06 56 24.5	5.2	213	13.00	13.00	14	21							2000			WDS 07187-0657, WDS data as of August 2017.
109.664283	-6.940170	5.322	213.019	13.02	14.05	-3.60	-0.30	1.41	-6.20	-6.40	1.98	0.96	Hg	2015.000	CCCB	6	GATA DRL. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog	
109.664298	-6.940169	5.222	213.202								0.20	Eu	2000.069					UCAC5.
109.664313	-6.940167	5.355	213.023	12.90	14.17						0.70	C	2016.164					iT27 1x3s
J 2810 AB	07 19 30.250	-03 03 55.9	5.6	165	11.50	12.00	-3	14	15	15	6				2016			WDS 07196-0303, WDS data as of August 2017.
109.876051	-3.065576	5.636	164.292	12.19	13.31	-0.10	0.50	1.56	-5.30	-2.70	1.84	0.96	Hg	2015.000	CCCC	6	GATA DRL. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog	
109.876052	-3.065578	5.612	163.409								0.20	Eu	2000.096					UCAC5.
109.876038	-3.065544	5.769	164.178	12.03	13.37						0.70	C	2016.096					iT27 1x3s
111.385170	-3.433755	5.679	315.973	311.810	13.27	13.98					0.20	Eu	2000.096					WDS 07255-0326, WDS data as of August 2017.
111.385138	-3.433739	5.685	311.810	13.27	13.98						0.70	C	2016.096					WDS 07267-0233, WDS data as of August 2017.
J 2817 AB	07 26 31.249	-02 33 52.4	4.7	332	10.20	10.40	22	11	-8	22				2012				iT27 1x3s, SNR <20
111.630305	-2.564577	4.874	331.799	11.90	12.11	12.10	-3.10	1.70	11.80	-3.40	1.70	0.96	Hg	2015.000	AACB	78	GATA DRL. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog	
111.630255	-2.564564	4.878	331.853								0.20	Eu	2000.099					UCAC5.
111.630317	-2.564456	4.635	327.981	11.83	12.08						0.70	C	2016.096					iT27 1x3s
																	Good CPM candidate, although motion is minimal and UCAC5 error rates are high relative to the motion of the secondary. No parallax for either of the components is listed in GATA DRL.	

Table 1 continues on the next page.

Jonckheere Double Star Photometry – Part XII: Mon I

Table 1 (continued). Measurement Results for J Objects in Monoceros

Name	RA	Dec	Sep	PA	M1	M2	pmRA1	pmDec1	e_pm1	pmRA2	pmDec2	e_pm2	Ap	Me	Date	CPM Rat	CPM %	Source/Notes	
J 2822 AB	07 27 15.869	-03 48 35.9	5.7	285	12.00	13.00	-10	-2							2010			WDS 07274-0348, WDS data as of August 2011.	
111.816153	-3.809994	5.640	285.521	12.42	13.44	-4.40	0.60	1.70	-3.50	4.10	1.84	0.96	Hg	2015,000	CCCC	6	GAIA DR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog		
111.816171	-3.809997	5.640	284.993	11.113	285.271	12.55	13.59				0.20	Eu	2000,094					WDS 07277-0701, WDS data as of August 2011.	
111.816238	-3.810067	6.1113	285.271	12.55	13.59						0.70	C	2016,096					GAIA DR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog	
J 2823 AB	07 27 35.360	-07 01 22.0	5.0	96	13.00	14.00	-5	-18	18	-7					2010			WDS 07277-0701, WDS data as of August 2011.	
111.897376	-7.022819	4.814	93.550	13.04	13.87	5.90	-12.20	1.70	-3.30	2.10	2.12	0.96	Hg	2015,000	CCCB	6	GAIA DR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog		
111.897352	-7.022768	4.967	95.903								0.20	Eu	2000,070					UCAC5.	
111.897483	-7.022744	4.565	95.910	13.27	14.16						0.70	C	2016,164					iT27 1x3s	
J 2825 AB	07 28 02.160	-07 44 18.5	6.5	27	12.70	12.80	-13	-24	17	-1					2010			WDS 0729-0745, WDS data as of August 2011.	
112.009028	-7.738526	6.545	25.845	12.66	12.50	-1.40	-1.90	1.70	-4.20	2.40	1.70	0.96	Hg	2015,000	CCCC	6	GAIA DR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog		
112.009034	-7.738519	6.506	26.428								0.20	Eu	2000,069					UCAC5.	
112.009042	-7.738561	6.529	25.772	12.80	12.84						0.70	C	2016,164					iT27 1x3s	
J 2831 AB	07 32 23.409	-04 31 02.8	4.4	139	12.68	13.10	-73	66							2000			WDS 0732-0431, WDS data as of August 2011.	
113.097593	-4.517491	4.399	139.221	12.04	13.05	-9.60	-10.60	1.70	-11.50	-11.80	1.70	0.96	Hg	2015,000	ACCB	31	GAIA DR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog		
113.097633	-4.517447	4.406	138.781								0.20	Eu	2000,069					UCAC5.	
113.097579	-4.517500	4.312	140.350	12.07	13.04						0.70	C	2016,164					iT27 1x3s	
J 2833 AB	07 33 05.229	-04 29 55.9	7.3	84	12.57	12.57	-15	-5	2	-4					2005			WDS 0733-0430, WDS data as of August 2011.	
113.271805	-4.498822	7.357	83.178	11.86	12.76	-5.36	4.97	5.28	3.21	3.79	5.28	0.96	Hg	2015,000	CCCC	6	GAIA DR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from comparison with 2MASS positions.		
113.271808	-4.498836								-0.80	3.40	1.41				0.20	Eu	2000,089		UCAC5. PM data from UCAC5 catalog. Secondary not identified in UCAC5.
113.271808	-4.498917	7.603	82.442	11.63	12.73						0.70	C	2016,096					iT27 1x3s	
J 2834 AB	07 33 48.260	-04 31 29.1	5.3	204	11.80	11.80	-10	3	-9	5					2000			WDS 0733-0431, WDS data as of August 2011.	
113.4101050	-4.524794	5.163	203.971	12.62	12.94	-7.50	-3.50	1.70	-3.50	2.80	1.70	0.96	Hg	2015,000	CCCB	6	GAIA DR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog		
113.4101082	-4.524779	5.275	204.156								0.20	Eu	2000,089					UCAC5.	
113.4101099	-4.524839	5.036	205.123	12.74	12.90						0.70	C	2016,096					iT27 1x3s	
113.502873	-9.581243	6.313	51.360	11.67	12.77	-4.40	-1.50	1.70	-4.90	4.80	1.70	0.96	Hg	2015,000	CCCC	6	GAIA DR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog		
113.502891	-9.581236	6.260	52.072								0.20	Eu	2000,058					UCAC5.	
113.502892	-9.581250	6.192	52.025	11.92	13.16						0.70	C	2016,164					iT27 1x3s	
J 2836 AB	07 34 00.750	-09 34 51.6	6.1	53	11.89	12.83	-14	-11	2	3					2010			WDS 0734-0934, WDS data as of August 2011.	
113.502873	-9.581243	6.313	51.360	11.67	12.77	-4.40	-1.50	1.70	-4.90	4.80	1.70	0.96	Hg	2015,000	CCCC	6	GAIA DR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog		
113.746776	-4.980662	8.990	185.871	12.06	13.46	-1.30	5.40	1.41	1.00	-0.40	1.41	0.96	Hg	2015,000	CCCC	6	GAIA DR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog		
113.746781	-4.980684	8.909	186.149								0.20	Eu	2000,092					UCAC5.	
113.746771	-4.980661	9.245	185.658	12.13	13.38						0.70	C	2016,107					iT27 1x3s	

Table 1 continues on the next page.

Jonckheere Double Star Photometry – Part XII: Mon I

Table 1 (continued). Measurement Results for J Objects in Monoceros

Name	RA	Dec	Sep	PA	M1	M2	pmRA1	pmRA2	e_pm1	pmDec1	e_pm2	Ap	Me	Date	CPM Rat	CPM %	Source/Notes
J 2839 AB	07 36 25.890	-03 34 42.3	8.6	271	11.80	13.00	4	2	-18	15				2010			WDS 07365-0334, WDS data as of August 2011.
114.107918	-3.578466	8.653	270.582	12.29	13.33	2.30	-0.50	1.41	-4.40	-1.30	1.41	0.96	Hg	2015.000	BCCC	24	Gaia DR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog.
114.107908	-3.578464	8.554	270.678								0.20	Eu	2000.098				it27 1x3s
114.107854	-3.578506	8.459	270.203	12.08	13.26						0.70	C	2010.096				WDS 07379-0522, WDS data as of August 2011.
J 2842 AB	07 37 52.429	-05 21 10.0	9.2	342	11.28	-6			-4	-2				2014			
114.468562	-5.352872	9.508	339.886	12.04	12.09	19.70	-17.50	1.98	-7.60	-2.80	1.84	0.96	Hg	2015.000	CCCB	6	Gaia DR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog.
114.468480	-5.352800	9.166	341.808								0.20	Eu	2000.088				it27 1x3s
114.468458	-5.352794	9.269	341.494	11.63	12.06						0.70	C	2016.107				WDS 07396-1013, WDS data as of August 2011.
J 2845 AB	07 39 33.370	-10 13 57.4	0.6	75	11.68	11.97	1	-2	1	-2				1991			
114.889058	-10.32627				11.23						0.96	Hg	2015.000				
114.889077	-10.232617						-4.40	-2.40	1.70		0.20	Eu	2000.055				
114.907938	-10.208878	4.854	45.868	12.75	12.92						0.70	C	2016.164				
J 2846 AB	07 39 50.800	-09 26 36.8	6.8	158	12.70	12.82	-23	10	-2	2				2010			WDS 07399-0926, WDS data as of August 2011.
114.961078	-9.443865	7.005	155.693	12.51	12.80	-	9.30	1.70	-2.10	2.70	1.70	0.96	Hg	2015.000	CCCB	6	Gaia DR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog.
114.961150	-9.443903	6.826	157.059								0.20	Eu	2000.061				
114.961079	-9.443889	6.949	154.658	12.48	12.92						0.70	C	2016.164				it27 1x3s
J 2850 AB	07 43 36.229	-02 28 16.3	6.7	239	11.80	12.30	14	4	-13	2				2016			WDS 07438-0227, WDS data as of August 2011.
115.900974	-2.471199	6.862	238.819	12.50	13.83	-2.60	1.10	1.70	-7.60	3.50	1.98	0.96	Hg	2015.000	ACCB	30	Gaia DR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog.
115.900985	-2.471204	6.818	238.235								0.20	Eu	2000.113				
115.900983	-2.471192	6.869	237.604	12.66	13.92						0.70	C	2016.090				it27 1x3s
J 2854 AB	07 50 29.629	-02 06 54.4	6.9	70	11.00	11.20	-13	-12	10	-10				2016			WDS 07500-0205, WDS data as of August 2011.
117.623436	-2.115156	6.908	69.590	12.65	12.88	-6.30	-8.50	1.70	-7.10	-8.80	1.70	0.96	Hg	2015.000	ABCb	62	Gaia DR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog.
117.623462	-2.115121	6.920	69.593								0.20	Eu	2000.115				
117.623438	-2.115183	6.956	68.583	12.65	12.81						0.70	C	2016.092				it27 1x3s
J 2858 AB	07 55 25.900	-07 19 10.1	7.7	18	10.00	11.70	-19	-41	-8	2				2012			Possible CPM candidate. Motion is relatively minimal in comparison to error rate. No parallax for either component in Gaia DR1.
118.857912	-7.319481	7.621	18.358	12.17	13.51	-6.30	-0.50	1.70	-7.90	-1.70	1.84	0.96	Hg	2015.000	CCCC	6	Gaia DR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog.
118.857939	-7.319479	7.645	18.488								0.20	Eu	2000.081				
118.857829	-7.319489	7.578	20.455	12.23	13.39						0.70	C	2016.096				it27 1x3s, SNR <20

Table 1 continues on the next page.

Jonckheere Double Star Photometry – Part XII: Mon I

Table 1 (continued). Measurement Results for J objects in Monoceros

Name	RA	Dec	Sep	PA	M1	M2	pmRA1	pmRA2	e_pm1	pmDec1	e_pm2	Ap	Me	Date	CPM Rat	CPM %	Source/Notes	
J 2859	07 57 51.060	-03 42 30.2	2.8	133	10.10	10.10	-23	-23	5	7				2016			WDS 07578-0342, WDS data as of August 2017.	
	119.462623	-3.708507	2.974	132.467	11.73	11.60	-32.50	-26.90	1.70	-7.20	3.70				GAIADR1. M1 and M2 are GAIADR1. Mags. 2MASS and URAT1 don't identify the primary, so there are no J-K-H mags. The G-J-I-K magnitude value for the secondary is 12.197. PM data from UCAC5 catalog	6		
	119.462758	-3.708395	3.060	143.596	130.061	11.83	11.83								0.20	Eu	2000.107	
	119.462654	-3.708578	2.797	130.061										0.70	C	2016.022		UCAC5.
J 2860	07 57 47.450	-04 56 25.0	5.6	253	13.50	14.20	-9	2		21	6			2010			WDS 07578-0455, WDS data as of August 2017.	
	119.447719	-4.940294	5.599	254.121	13.49	13.82	-4.50	3.60	1.77	-5.50	0.70	1.98	0.96	Hg	2015.000	CACB	16	GAIADR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog
	119.447738	-4.940309	5.572	254.500										0.20	Eu	2000.099		UCAC5.
	119.447675	-4.940319	5.599	252.860	13.52	13.91								0.70	C	2016.090		int27 1x3s
J 2864 AB	08 04 31.609	-09 06 55.8	4.9	56	12.30	12.40	-24	-10		14	11			2010			WDS 08048-0905, WDS data as of August 2017.	
	121.131723	-9.115503	5.014	56.206	13.33	13.09	3.80	-3.50	1.70	-0.30	2.40	1.70	0.96	Hg	2015.000	CCCC	6	GAIADR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog
	121.131707	-9.115489	5.017	57.428										0.20	Eu	2000.063		UCAC5.
	121.132663	-9.114842	4.830	61.290	13.54	13.38								0.70	C	2016.096		int27 1x3s. Image quality a bit questionable
J 2865 AB	08 04 33.031	-09 09 11.7	4.6	223	11.40	11.70	11.4	11.7						2017			WDS 08045-0909, WDS data as of August 2017.	
	121.137642	-9.1153286	4.569	223.577	11.39	12.22	-2.90	-3.80	1.70	-2.40	-0.70	1.70	0.96	Hg	2015.000	CCCC	6	GAIADR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog
	121.137654	-9.1153271	4.608	223.262										0.20	Eu	2000.064		UCAC5.
	121.137579	-9.1153350	4.607	223.715	11.41	12.13								0.70	C	2016.096		int27 1x3s
J 2866 AB	08 05 38.932	-04 21 57.6	9.5	281	11.70	11.90	2	2	-3	-3				2012			WDS 08058-0420, WDS data as of August 2017.	
	121.4147550	-04.3665058	9.367	280.201	12.45	13.26	-0.73	0.54	5.74	-1.05	-11.07	5.80	0.2	Eu	2013.597	CCCC	6	URAT1. PM data from position comparison with 2MASS. M1 and M2 are visual estimates from J and K magnitudes.
	121.414747	-4.366499			12.79									0.96	Hg	2015.000		GAIADR1. M1 is visual estimate from G-J-K-H mags. Secondary not identified in GAIA DR1.
	121.414756	-4.366501												0.20	Eu	2000.106		UCAC5. PM data from UCAC5 catalog. Secondary not identified in UCAC5.
	121.414763	-4.366514	9.296	280.037	12.83	13.21		-2.20	0.40	1.70				0.70	C	2016.022		int27 1x3s
J 2866 BC	08 05 38.932	-04 21 57.6	4.9	145	11.90	11.40	-3	-3	9	-6				2012			WDS 08058-0420, WDS data as of August 2017.	
	121.4121867	-04.3660450	4.594	143.993	13.26	13.88	-1.05	-11.07	5.80	-0.25	0.71	5.96	0.2	Eu	2013.320	CCCB	6	URAT1. PM data from position comparison with 2MASS. M1 and M2 are visual estimates from J and K magnitudes.
														0.96	Hg	2015.000		
														-3.40	1.20	3.70	0.20	UCAC5. PM data from UCAC5 catalog. Primary not identified in UCAC5.
	121.412213	-4.366064	4.765	144.722	13.21	13.99								0.70	C	2016.022		int27 1x3s

Table 1 continues on the next page.

Jonckheere Double Star Photometry – Part XII: Mon I

Table 1 (continued). Measurement Results for J objects in Monoceros

Name	RA	Dec	Sep	PA	M1	M2	pmRA1	pmDec1	e_pm1	pmRA2	pmDec2	e_pm2	Ap	Me	Date	CPM Rat	CPM %	Source/Notes
J 2887 AB	08 05 52.761	-06 14 42.4	8.7	304	12.50	12.60	9	-2	10	-5					2000			WDS 08059-0614, WDS data as of August 2017.
121.469848	-6.245145	8.714	303.344	13.42	13.55	2.70	-3.10	2.70	3.50	-9.20	1.70	0.96	Hg	2015.000	CCCC	6	GAIADR1. M1 and M2 are visual estimates from J and K magnitudes. GAIADR1 erroneously shows the primary with a mag of 19.193. The G-J-K-H magnitude for the secondary is 13.498. PM data from UCAC5 catalog	
121.469836	-6.245132	8.775	303.800								0.20	Eu	2000.096					UCAC5.
121.469817	-6.245214	9.336	307.009	13.52	13.54						0.70	C	2016.090					iT27 1x3s
J 2888 AB	08 05 56.681	-06 14 52.1	6.5	7	12.30	13.30	-9	-4	-5	15					2016			WDS 08060-0614, WDS data as of August 2017.
121.486156	-6.247811	6.535	6.983	12.35	13.38	-6.20	2.10	1.70	-2.70	4.60	1.84	0.96	Hg	2015.000	CCCC	6	GAIADR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog	
121.486182	-6.247820	6.491	6.569								0.20	Eu	2000.096					UCAC5.
121.486183	-6.247858	6.784	6.562	12.31	13.35						0.70	C	2016.090					iT27 1x3s
J 2889 AB	08 08 33.570	-09 57 44.1	7.5	210	10.19	11.00	5	-13							2011			WDS 08086-0958, WDS data as of August 2017.
122.139932	-9.962303	7.445	210.267	10.28	11.46	7.10	-14.50	2.69	5.80	-14.10	1.70	0.96	Hg	2015.000	BBCB	50	GAIADR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog	
122.139903	-9.962243	7.440	210.125								0.20	Eu	2000.062					UCAC5.
122.139917	-9.962331	7.260	211.806	9.98	11.42						0.70	C	2016.096					iT27 1x3s
																		Possible CPM candidate. Motion is somewhat minimal in comparison to error rate. GAIADR1 shows a parallax of 2.88 (1332.511 LY) for the primary, none listed for the secondary.
J 2890 AB	08 08 18.178	-09 16 30.4	6.6	132	12.60	14.10	-14	5	1	12					2010			WDS 08088-0917, WDS data as of August 2017.
122.075761	-9.275099	6.531	131.320	12.70	14.30	-4.10	3.40	1.70	-4.70	3.70	1.98	0.96	Hg	2015.000	ACCC	30	GAIADR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog	
122.075778	-9.275114	6.541	131.289								0.20	Eu	2000.063					UCAC5.
122.075725	-9.275053	6.567	130.560	12.71	14.29						0.70	C	2016.096					iT27 1x3s
J 2891 AB	08 09 28.779	-10 47 09.7	4.9	199	12.60	12.67	-7	4	-8	-11					2010			WDS 08090-1047, WDS data as of August 2017.
122.369611	-10.786007	5.100	197.729	12.01	12.66	-8.10	0.50	1.70	-10.30	0.30	1.70	0.96	Hg	2015.000	ACCB	31	GAIADR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog	
122.369646	-10.786009	5.079	197.422								0.20	Eu	2000.048					UCAC5.
122.369617	-10.786044	5.076	197.920	12.11	12.75						0.70	C	2016.096					iT27 1x3s

Table 1 concludes on the next page.

Jonckheere Double Star Photometry – Part XII: Mon I

Table 1 (conclusion). Measurement Results for J objects in Monoceros

Name	RA	Dec	Sep	PA	M1	M2	pmRA1	pmRA2	e_pmDecl	e_pmRA1	pmRA2	e_pm2	Ap	Me	Date	CPM Rat	CPM %	Source / Notes
J 3230 AB	07 03 58.839	-07 09 56.9	5.5	82	10.18	12.40	-8	-3							2000			WDS 07040-0710, WDS data as of August 2017.
105.995498	-7.165836	5.508	82.152	10.25	12.13	1.60	-1.50	1.84	0.40	-0.70	3.96	0.96	Hg	2015.000	CCCC	6	GAIA DR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog	
105.995491	-7.165830	5.525	82.293								0.20	Eu	2000.061					UCAC5.
105.995504	-7.165842	5.480	82.450	10.11	11.74						0.70	C	2016.167				iT27 1x3s	
J 3286 AB	08 05 50.100	-06 14 19.6	2.8	129	12.10	13.00	-74	76	-18	10				2000			WDS 08058-0614, WDS data as of August 2017.	
121.458678	-6.238755	2.782	131.614	13.22	13.69	0.10	-1.10	2.12	-6.00	-2.70	2.62	0.96	Hg	2015.000	CCCB	6	GAIA DR1. M1 and M2 are GAIA DR1 mags. 2MASS doesn't identify the secondary, so no G-J-H-K magnitudes are available for it. The G-J-H-K magnitude of the primary is 13.592. PM data from UCAC5 catalog	
121.458678	-6.238751	2.835	130.034								0.20	Eu	2000.095				UCAC5.	
121.458746	-6.238750	2.661	130.839	13.38	13.86						0.70	C	2016.090				iT27 1x3s. Touching star disks	
J 3309 AB	07 03 32.361	-08 40 29.6	4.0	52	12.00	13.50	-57	-45	19	12				2000			WDS 07035-0838, WDS data as of August 2017.	
105.884871	-8.674934	3.949	51.040	12.75	13.69	2.80	-2.00	1.56	-4.20	-2.10	1.98	0.96	Hg	2015.000	CCCB	6	GAIA DR1. M1 and M2 are visual estimates from G-J-K-H mags. PM data from UCAC5 catalog	
105.884860	-8.674926	4.031	51.960								0.20	Eu	2000.035				UCAC5.	
105.884904	-8.674958	3.662	50.289	12.72	13.89						0.70	C	2016.172				iT27 1x3s	

Explanations regarding the content of the Notes column:

- “Touching star disks” indicates that the rims of the star disks are touching and that the measurement results might be a bit less precise than with clearly separated star disks
- “Touching/Overlapping star disks” indicates that the star disks overlap to the degree of an elongation and that the measurement results is probably less precise than with clearly separated star disks
- “SNR <20” indicates that the measurement result might be a bit less precise than desired due to a low SNR value but this is already included in the calculation of the magnitude error range estimation
- “SNR <10” indicates that the measurement result is probably a bit less precise than desired due to a very low SNR value but this is already included in the calculation of the magnitude error range estimation
- “Image quality questionable” or similar indicates rather large average errors for the reference stars used for plate solving for different reasons (mostly atmospheric influences). But this is at least to some degree already included in the calculation of the error range estimation

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(Continued from page 610)

Knapp, Wilfried R. A.; Nanson, John, 2017, “A New Concept for Counter-Checking of Assumed CPM Pairs, *JDSO*, **13** (1), 31-51.

Knapp, Wilfried R. A., 2018, “A New Concept for Counter-Checking of Assumed Binaries”, *JDSO*, **14** (3), 487-491.

Knapp, Wilfried R. A.; Nanson, John, 2018, Estimating Visual Magnitudes for Wide Double Stars, *JDSO*, **14** (3), 496-502.

Appendix A

CPM rating scheme according to Knapp/Nanson 2017 with extensions

Four rating factors are used: Proper motion vector direction, proper motion vector length, size of position error in relation to proper motion vector length and relationship of proper motion speed to angular separation:

- Proper motion vector direction ratings: “A” for within the error range of identical direction, “B” for similar direction within the double error range, “C” for direction within the triple error range and “D” for outside.
- Proper motion vector length ratings: “A” for within the error range of identical length, “B” for similar length within the double error range, “C” for length within the triple error range and “D” for outside.
- Error size ratings: “A” for error size of less than 5% of the proper motion vector length, “B” for less than 10%, “C” for less than 15% and “D” for a larger error size.
- Relationship PM speed to angular separation: “A” for less than 100 years, “B” for less than 1,000 years, “C” for less than 10,000 and “D” for above.

To compensate for excessively large position errors resulting in an “A” rating despite rather high deviations an absolute upper limit is applied regardless of calculated error size:

- Proper motion vector direction: Max. 2.86° difference for an “A”.
- Proper motion vector length: Max. 5% difference for an “A”.

The letter based rating result is then transformed into an estimated probability for being physical given in the column CPM % (Knapp 2018).

Jonckheere Double Star Photometry – Part XII: Mon I**Appendix B**

Table 2 with positions for both components, astrometry measurement errors, signal to noise ratio and photometry measurement errors

Table 2.

Obj	C	RA	Dec	dRA	dDec	Err Sep	Err PA	Err Mag	SNR	Date	Notes
21	A	07 02 18.785	10 30 48.05	0.06	0.05	0.078	1.382	0.101	75.600	2016.022	iT27 1x3s
	B	07 02 18.567	10 30 48.43					0.102	57.870		
40	A	06 41 49.398	-00 15 59.06	0.08	0.08	0.113	2.227	0.082	55.980	2016.096	iT27 1x3s. Touching star disks
	B	06 41 49.582	-00 15 59.98					0.088	28.320		
55	A	06 49 36.564	01 59 56.45	0.07	0.08	0.106	2.448	0.081	90.540	2016.090	iT27 1x3s. Touching star disks
	B	06 49 36.599	01 59 54.02					0.081	106.160		
56	A	06 52 37.623	03 14 18.22	0.07	0.07	0.099	-	0.070	299.910	2016.022	iT27 1x3s. Overlapping star disks. A and B too bright for resolution
	B							-			
60	A	07 13 14.050	-02 38 36.54	0.08	0.09	0.120	-	0.070	176.960	2016.107	iT27 1x3s. Heavily overlapping star disks. Both components too bright for resolution
	B							-			
65	A	07 44 12.590	-01 15 12.71	0.06	0.05	0.078	-	0.070	283.480	2016.022	iT27 1x3s. Heavily overlapping star disks. Both components too bright for clear resolution
	B							-			
66	A	07 47 40.881	-00 54 23.46	0.07	0.08	0.106	1.579	0.060	192.680	2016.022	iT27 1x3s
	B	07 47 40.811	-00 54 27.17					0.061	101.430		
187	A	06 06 38.711	-04 11 37.44	0.10	0.10	0.141	0.271	-		2016.164	iT27 1x3s. Primary star disc saturated
	B	06 06 39.848	-04 12 02.04					0.081	106.670		
189	A	07 45 34.342	-05 58 30.00	0.09	0.12	0.150	-	0.081	86.400	2016.096	iT27 1x3s. No resolution of B
	B							-			
265	A	06 35 46.322	05 07 23.08	0.07	0.07	0.099	1.387	0.070	138.600	2016.022	iT27 1x3s
	B	06 35 46.074	05 07 21.35					0.071	86.630		
266	A	06 36 41.070	03 18 56.73	0.07	0.07	0.099	1.278	0.070	191.440	2016.022	iT27 1x3s
	B	06 36 41.097	03 18 52.31					0.072	63.690		
314	A	06 47 07.320	-03 51 30.57	0.09	0.09	0.127	2.034	0.071	103.490	2016.164	iT27 1x3s
	B	06 47 07.496	-03 51 28.14					0.079	28.830		
348	A	06 29 49.140	11 07 51.12	0.11	0.10	0.149	2.354	0.083	52.150	2016.022	iT27 1x3s
	B	06 29 49.293	11 07 48.29					0.084	42.130		
349	A	06 32 59.378	04 56 22.54	0.10	0.10	0.141	1.483	0.080	207.150	2016.022	iT27 1x3s
	B	06 32 59.737	04 56 21.51					0.082	67.980		
350	A	06 35 41.739	00 29 31.93	0.06	0.05	0.078	1.318	0.096	32.960	2016.096	iT27 1x3s
	B	06 35 41.954	00 29 30.87					0.100	24.720		
351	A	06 37 58.395	11 33 19.20	0.06	0.06	0.085	1.320	0.081	90.180	2016.022	iT27 1x3s
	B	06 37 58.270	11 33 16.01					0.090	25.960		
352	A	06 38 40.002	-08 15 37.92	0.08	0.08	0.113	1.454	0.070	165.090	2016.172	iT27 1x3s
	B	06 38 40.302	-08 15 38.14					0.073	54.810		
354	A	06 53 51.789	01 43 28.06	0.08	0.07	0.106	1.025	0.071	106.070	2016.090	iT27 1x3s
	B	06 53 51.395	01 43 27.40					0.073	53.740		
360	A	07 05 11.295	00 54 00.69	0.07	0.09	0.114	1.779	0.072	62.870	2016.090	iT27 1x3s
	B	07 05 11.416	00 54 03.88					0.073	49.590		
363	A	07 16 02.840	-06 36 52.15	0.08	0.09	0.120	-	0.090	142.170	2016.164	iT27 1x3s. Hint of elongation but no resolution of B
	B							-			
364	A	07 16 09.530	-06 34 38.80	0.08	0.09	0.120	1.338	0.090	148.520	2016.164	iT27 1x3s
	B	07 16 09.409	-06 34 33.97					0.095	36.040		
365	A	07 17 17.126	-06 35 27.31	0.10	0.11	0.149	4.105	0.083	53.040	2016.164	iT27 1x3s. Touching star disks. B barely resolved. SNR B<10
	B	07 17 16.987	-06 35 27.27					0.152	7.880		
417	A	07 40 11.870	-08 56 18.82	0.11	0.12	0.163	-	0.110	110.850	2016.164	iT27 1x3s. Slightest hint of elongation but no resolution of B
	B							-			
595	A	06 26 24.319	11 27 47.67	0.10	0.11	0.149	1.745	0.130	101.610	2016.022	iT27 1x3s
	B	06 26 24.540	11 27 51.31					0.131	88.080		
595	A	06 26 24.319	11 27 47.67	0.10	0.11	0.149	0.195	0.130	101.610	2016.022	iT27 1x3s
	C	06 26 21.627	11 27 28.94					0.130	111.280		

Table 2 continues on the next page.

Jonckheere Double Star Photometry – Part XII: Mon I

Table 2 (continued).

Obj	C	RA	Dec	dRA	dDec	Err Sep	Err PA	Err Mag	SNR	Date	Notes
596	A	06 41 03.809	02 14 21.38	0.08	0.08	0.113	1.349	0.071	107.520	2016.090	iT27 1x3s
	B	06 41 04.040	02 14 24.71					0.071	104.830		
597	A	06 41 21.634	02 06 05.72	0.08	0.10	0.128	1.449	0.080	159.900	2016.090	iT27 1x3s
	B	06 41 21.904	02 06 08.76					0.081	119.730		
659	A	06 28 40.543	04 52 47.38	0.08	0.07	0.106	3.233	0.061	101.810	2016.022	iT27 1x3s. Touching/overlapping star disks
	B	06 28 40.430	04 52 46.55					0.063	61.070		
660	A	06 28 40.728	04 50 12.05	0.08	0.07	0.106	2.352	0.061	103.810	2016.022	iT27 1x3s. Touching star disks
	B	06 28 40.899	04 50 11.64					0.061	90.120		
690	A	06 30 47.068	10 03 46.52	0.12	0.10	0.156	-	0.090	137.100	2016.022	iT27 1x3s. Hint of elongation but no resolution of B
	B							-			
691	A	06 30 52.422	04 38 59.80	0.08	0.09	0.120	-	0.070	190.660	2016.022	iT27 1x3s. Hint of elongation but no resolution of B
	B							-			
697	A	06 43 33.798	11 09 04.89	0.14	0.11	0.178	5.085	0.132	45.420	2016.022	iT27 1x3s. Touching star disks
	B	06 43 33.794	11 09 02.89					0.140	20.360		
700	A	06 54 44.423	10 14 47.61	0.08	0.08	0.113	2.281	0.062	68.680	2016.022	iT27 1x3s. Touching star disks
	B	06 54 44.609	10 14 46.88					0.063	59.790		
723	A	06 45 03.407	09 58 31.06	0.07	0.05	0.086	2.247	0.082	57.540	2016.022	iT27 1x3s. Touching star disks
	B	06 45 03.551	09 58 31.59					0.084	43.960		
726	A	06 46 51.792	10 10 01.49	0.09	0.07	0.114	2.472	0.073	50.860	2016.022	iT27 1x3s. Touching star disks
	B	06 46 51.926	10 09 59.74					0.072	65.120		
730	A	07 18 20.297	-02 35 29.75	0.08	0.10	0.128	2.666	0.073	52.000	2016.096	iT27 1x3s. Touching star disks
	B	07 18 20.375	-02 35 32.24					0.078	30.610		
733	A	08 05 33.439	-03 46 10.70	0.08	0.07	0.106	2.877	0.105	34.520	2016.022	iT27 1x3s. Touching/overlapping star disks. SNR B <20
	B	08 05 33.511	-03 46 12.52					0.120	16.010		
741	A	06 22 52.531	-08 12 34.21	0.08	0.08	0.113	1.931	0.061	133.170	2016.172	iT27 1x3s. Touching star disks
	B	06 22 52.757	-08 12 34.24					0.065	44.270		
802	A	06 46 43.580	-04 13 36.25	0.08	0.08	0.113	1.498	0.081	115.930	2016.164	iT27 1x3s
	B	06 46 43.781	-04 13 39.36					0.081	71.810		
979	A	06 30 34.186	11 40 00.60	0.08	0.06	0.100	2.170	0.101	84.130	2016.022	iT27 1x3s. Touching star disks
	B	06 30 34.007	11 40 00.38					0.103	41.860		
982	A	06 32 22.477	03 29 07.96	0.07	0.07	0.099	1.695	0.061	97.930	2016.022	iT27 1x3s. Touching star disks
	B	06 32 22.347	03 29 05.24					0.061	86.390		
984	A	06 36 31.298	05 19 52.79	0.08	0.08	0.113	1.276	0.061	93.620	2016.022	iT27 1x3s
	B	06 36 31.028	05 19 55.88					0.061	94.420		
993	A	06 48 18.805	11 37 31.78	0.07	0.07	0.099	-	0.095	36.310	2016.022	iT27 1x3s. No resolution of B. Has to be fainter than 14.5mag. Estimation from G/J/H/K-mags: 15.25Vmag
	B							-			
996	A	07 00 05.465	09 18 26.80	0.08	0.08	0.113	1.281	0.071	118.870	2016.022	iT27 1x3s
	B	07 00 05.692	09 18 23.02					0.074	47.600		
1005	A	06 34 00.456	-04 44 10.00	0.08	0.09	0.120	2.400	0.100	24.530	2016.164	iT27 1x3s. Touching star disks
	B	06 34 00.272	-04 44 09.17					0.120	13.160		
1006	A	06 34 18.280	-04 43 40.50	0.09	0.07	0.114	2.268	0.073	53.800	2016.164	iT27 1x3s. Touching star disks
	B	06 34 18.096	-04 43 39.65					0.079	29.470		
1057	A	06 53 11.854	-00 12 35.62	0.08	0.08	0.113	2.868	0.095	36.830	2016.096	iT27 1x3s. Touching star disks
	B	06 53 11.944	-00 12 33.81					0.097	30.010		
1057	A	06 53 11.854	-00 12 35.62	0.08	0.08	0.113	0.573	0.095	36.830	2016.096	iT27 1x3s
	C	06 53 12.607	-00 12 34.90					0.092	57.570		
BAL 732	A	06 53 11.854	-00 12 35.62	0.08	0.08	0.113	0.285	0.095	36.830	2016.096	iT27 1x3s. SNR D<20
	D	06 53 13.063	-00 12 21.86					0.111	16.050		
BAL 732	C	06 53 12.607	-00 12 34.90	0.08	0.08	0.113	0.236	0.092	57.570	2016.096	iT27 1x3s
	E	06 53 13.853	-00 12 14.75					0.096	31.360		
1065	A	07 31 08.140	-03 43 06.31	0.07	0.08	0.106	2.232	0.075	40.600	2016.096	iT27 1x3s. Touching star disks
	B	07 31 08.056	-03 43 03.89					0.073	53.970		
1065	A	07 31 08.099	-03 43 05.82	0.07	0.08	0.106	-	0.074	44.360	2016.096	iT27 1x3s. No resolution of C. Has to be fainter than 14.5mag
	C							-			

Table 2 continues on the next page.

Jonckheere Double Star Photometry – Part XII: Mon I*Table 2 (continued).*

Obj	C	RA	Dec	dRA	dDec	Err Sep	Err PA	Err Mag	SNR	Date	Notes
1065	A	07 31 08.140	-03 43 06.31	0.07	0.08	0.106	2.232	0.075	40.600	2016.096	iT27 1x3s. Touching star disks
	B	07 31 08.056	-03 43 03.89					0.073	53.970		
1065	A	07 31 08.099	-03 43 05.82	0.07	0.08	0.106	-	0.074	44.360	2016.096	iT27 1x3s. No resolution of C. Has to be fainter than 14.5mag
	C							-			
1106	A	06 44 28.552	10 05 36.80	0.08	0.07	0.106	-	0.071	95.840	2016.022	iT27 1x3s. No resolution of B. Not even a hint of an elongation
	B							-			
1467	A	07 38 32.089	-10 03 01.95	0.08	0.07	0.106	0.051	0.071	123.190	2016.164	iT27 1x3s
	B	07 38 40.001	-10 03 24.47					0.072	71.760		
1467	A	07 38 40.001	-10 03 24.47	0.08	0.07	0.106	0.818	0.072	71.760	2016.164	iT27 1x3s
	C	07 38 40.303	-10 03 18.51					0.073	48.700		
1472	A	06 24 15.918	-07 34 30.37	0.11	0.11	0.156	1.048	0.091	84.500	2018.088	iT24 5x3s
	B	06 24 15.610	-07 34 23.20					0.100	24.680		
1474	A	06 33 35.687	-08 10 28.86	0.08	0.09	0.120	1.015	0.070	255.000	2016.172	iT27 1x3s
	B	06 33 35.460	-08 10 22.96					0.071	126.060		
1475	A	06 42 55.827	-08 50 18.55	0.08	0.08	0.113	0.683	0.071	111.940	2016.172	iT27 1x3s
	B	06 42 55.389	-08 50 25.47					0.072	64.200		
1479	A	06 49 16.657	-04 55 41.34	0.08	0.08	0.113	0.925	0.091	82.370	2016.164	iT27 1x3s
	B	06 49 16.337	-04 55 36.22					0.092	52.560		
1481	A	06 53 44.864	-05 34 29.51	0.08	0.08	0.113	1.252	0.071	123.700	2016.164	iT27 1x3s
	B	06 53 45.164	-05 34 26.91					0.074	47.760		
HJ 2353	A	06 53 44.864	-05 34 29.51	0.08	0.08	0.113	0.404	0.071	123.700	2016.164	iT27 1x3s
	C	06 53 45.403	-05 34 43.37					0.071	90.570		
1482	A	06 53 31.971	-09 58 49.01	0.08	0.09	0.120	0.826	0.070	144.280	2016.172	iT27 1x3s
	B	06 53 31.885	-09 58 40.76					0.070	132.120		
1483	A	06 59 46.664	-08 42 39.47	0.10	0.11	0.149	-	0.071	121.230	2018.088	iT24 5x10s. No resolution. B would have to be fainter than 15.5mag to get not resolved - bogus assumed
	B							-			
1484	A	07 01 25.021	-10 35 44.88	0.07	0.07	0.099	1.435	0.071	78.770	2016.172	iT27 1x3s
	B	07 01 25.253	-10 35 42.90					0.074	42.140		
DAM 1197	A	07 01 25.021	-10 35 44.88	0.07	0.07	0.099	0.629	0.071	78.770	2016.172	iT27 1x3s
	C	07 01 25.398	-10 35 37.78					0.088	19.650		
DAM 1197	A	07 01 25.021	-10 35 44.88	0.07	0.07	0.099	0.531	0.071	78.770	2016.172	iT27 1x3s. SNR D<20
	D	07 01 25.746	-10 35 44.76					0.092	17.600		
1485	A	07 03 22.312	-08 44 28.47	0.08	0.08	0.113	0.972	0.081	113.930	2016.172	iT27 1x3s
	B	07 03 22.380	-08 44 21.88					0.081	106.280		
1487	A	07 12 03.764	-05 26 43.37	0.07	0.07	0.099	1.621	0.071	111.630	2016.164	iT27 1x3s
	B	07 12 03.840	-05 26 46.68					0.074	44.570		
1488	A	07 12 04.892	-05 26 03.75	0.07	0.08	0.106	0.706	0.072	62.510	2016.164	iT27 1x3s
	B	07 12 04.322	-05 26 05.18					0.076	35.670		
1496	A	07 33 57.837	-01 41 40.29	0.08	0.09	0.120	0.612	0.080	135.840	2016.090	iT27 1x3s
	B	07 33 57.986	-01 41 29.24					0.081	97.260		
1498	A	07 34 44.029	-10 50 40.39	0.06	0.07	0.092	0.718	0.070	173.160	2016.167	iT27 1x3s
	B	07 34 44.059	-10 50 47.73					0.070	131.790		
1500	A	07 39 15.567	-08 39 45.50	0.08	0.08	0.113	1.008	0.062	76.570	2016.164	iT27 1x3s
	B	07 39 15.532	-08 39 51.91					0.069	30.930		
1504	A	07 52 51.710	-07 58 17.14	0.07	0.09	0.114	0.701	0.070	213.840	2016.107	iT27 1x3s
	B	07 52 51.114	-07 58 20.05					0.071	125.040		
1828	A	07 04 05.007	-09 13 23.43	0.08	0.08	0.113	1.158	0.081	105.370	2016.172	iT27 1x3s
	B	07 04 05.073	-09 13 28.94					0.083	48.700		
1923	A	06 10 31.542	-04 22 36.51	0.08	0.07	0.106	1.141	0.071	89.880	2016.164	iT27 1x3s
	B	06 10 31.749	-04 22 32.16					0.072	72.790		
1944	A	06 23 54.612	02 00 08.86	0.08	0.08	0.113	0.805	0.071	90.950	2016.090	iT27 1x3s
	B	06 23 54.875	02 00 15.88					0.074	45.140		
1945	A	06 27 12.930	11 17 55.15	0.07	0.07	0.099	0.747	0.092	53.080	2016.022	iT27 1x3s
	B	06 27 13.446	11 17 54.90					0.093	50.320		
1949	A	06 28 22.595	-04 27 43.94	0.07	0.08	0.106	0.121	0.080	130.010	2016.164	iT27 1x3s
	B	06 28 19.521	-04 28 04.80					0.081	114.810		
1949	B	06 28 19.521	-04 28 04.80	0.07	0.08	0.106	0.815	0.081	114.810	2016.164	iT27 1x3s
	C	06 28 19.181	-04 28 10.28					0.081	103.780		
1963	A	06 37 21.745	-03 42 10.58	0.07	0.08	0.106	0.692	0.060	145.940	2016.164	iT27 1x3s
	B	06 37 21.250	-03 42 15.32					0.061	113.130		

Table 2 continues on the next page.

Jonckheere Double Star Photometry – Part XII: Mon I*Table 2 (continued).*

Obj	C	RA	Dec	dRA	dDec	Err Sep	Err PA	Err Mag	SNR	Date	Notes
1966	A	06 40 17.950	02 16 53.87	0.09	0.07	0.114	0.567	0.071	88.930	2016.090	iT27 1x3s
	B	06 40 17.805	02 17 05.18					0.076	37.610		
1967	A	06 40 35.089	02 17 26.07	0.07	0.08	0.106	0.787	0.061	90.950	2016.090	iT27 1x3s
	B	06 40 35.603	02 17 26.79					0.062	71.730		
1972	A	06 44 07.657	00 07 00.68	0.09	0.08	0.120	1.275	0.075	38.780	2016.096	iT27 1x3s
	B	06 44 07.407	00 06 56.78					0.080	27.400		
1977	A	06 56 35.868	04 12 58.79	0.07	0.08	0.106	0.612	0.070	178.500	2016.022	iT27 1x3s
	B	06 56 36.037	04 12 49.17					0.073	55.770		
1978	A	06 56 38.041	03 18 07.76	0.07	0.07	0.099	1.004	0.070	218.250	2016.022	iT27 1x3s
	B	06 56 37.665	03 18 07.29					0.071	88.930		
1987	A	07 02 36.906	02 50 16.71	0.08	0.09	0.120	1.150	0.070	138.600	2016.022	iT27 1x3s
	B	07 02 36.507	02 50 16.21					0.071	77.360		
1988	A	07 02 41.279	02 50 25.43	0.08	0.09	0.120	0.825	0.071	120.860	2016.022	iT27 1x3s
	B	07 02 40.823	02 50 20.61					0.071	89.360		
1995	A	06 27 37.744	00 37 12.28	0.06	0.06	0.085	0.493	0.074	46.900	2016.096	iT27 1x3s
	B	06 27 38.263	00 37 06.24					0.085	22.150		
2006	A	06 40 35.791	-00 39 35.81	0.08	0.09	0.120	1.013	0.071	106.150	2016.096	iT27 1x3s
	B	06 40 36.164	-00 39 39.69					0.071	75.050		
2010	A	07 02 47.368	-04 34 31.98	0.08	0.09	0.120	1.104	0.070	163.440	2016.164	iT27 1x3s
	B	07 02 47.772	-04 34 30.38					0.071	116.670		
2024	A	06 42 13.754	-00 47 49.77	0.08	0.08	0.113	2.947	0.082	57.940	2016.096	iT27 1x3s. Touching star disks
	B	06 42 13.850	-00 47 48.11					0.082	54.660		
2025	A	06 44 02.738	-00 57 07.07	0.13	0.12	0.177	2.390	0.113	42.860	2018.088	iT24 5x3s
	B	06 44 02.614	-00 57 10.88					0.119	24.120		
2027	A	06 47 19.439	10 06 01.53	0.08	0.08	0.113	1.338	0.081	75.460	2016.022	iT27 1x3s
	B	06 47 19.112	10 06 01.15					0.085	37.170		
2427	A	06 24 48.317	00 04 29.97	0.07	0.07	0.099	1.703	0.064	45.480	2016.096	iT27 1x3s
	B	06 24 48.208	00 04 32.87					0.070	28.900		
2432	A	06 41 51.289	00 06 55.21	0.07	0.07	0.099	1.917	0.083	48.880	2016.096	iT27 1x3s
	B	06 41 51.262	00 06 52.28					0.086	34.350		
2434	A	06 45 32.623	04 23 38.19	0.08	0.06	0.100	0.873	0.060	236.390	2016.022	iT27 1x3s
	B	06 45 32.234	04 23 41.22					0.061	96.870		
2446	A	06 53 46.986	10 06 56.62	0.08	0.08	0.113	2.591	0.072	62.280	2016.022	iT27 1x3s
	B	06 53 47.145	10 06 55.76					0.074	45.370		
2447	A	06 53 45.182	-10 52 01.56	0.08	0.07	0.106	1.621	0.061	112.770	2016.172	iT27 1x3s
	B	06 53 44.927	-10 52 01.56					0.062	68.850		
2450	A	07 03 03.417	-00 28 21.41	0.09	0.08	0.120	1.979	0.072	65.100	2016.096	iT27 1x3s. Touching star disks. SNR B<20
	B	07 03 03.630	-00 28 22.80					0.092	17.530		
2453	A	07 07 53.635	00 48 48.23	0.08	0.08	0.113	1.396	0.073	49.430	2016.090	iT27 1x3s
	B	07 07 53.771	00 48 44.06					0.074	43.000		
2454	A	07 09 49.140	00 28 57.92	0.07	0.08	0.106	1.239	0.071	77.650	2016.090	iT27 1x3s
	B	07 09 49.038	00 29 02.59					0.072	73.100		
2458	A	07 14 55.563	-01 13 07.08	0.08	0.08	0.113	1.522	0.083	50.320	2016.096	iT27 2x3s
	B	07 14 55.449	-01 13 10.98					0.088	29.980		
2459	A	07 15 24.751	-11 05 48.44	0.08	0.09	0.120	1.135	0.071	124.990	2016.172	iT27 1x3s
	B	07 15 25.149	-11 05 50.05					0.071	116.570		
2461	A	07 17 02.371	-10 34 56.57	0.08	0.08	0.113	1.055	0.091	98.590	2016.172	iT27 1x3s
	B	07 17 02.237	-10 34 50.75					0.092	60.100		
2462	A	07 17 06.175	-10 32 23.23	0.08	0.08	0.113	0.750	0.081	85.230	2016.172	iT27 1x3s
	B	07 17 06.194	-10 32 14.59					0.083	52.960		
2464	A	07 18 11.762	-10 31 32.49	0.08	0.08	0.113	1.196	0.092	52.630	2016.172	iT27 1x3s
	B	07 18 12.071	-10 31 29.56					0.093	42.970		
2477	A	07 28 04.725	-03 31 05.17	0.07	0.08	0.106	2.176	0.082	55.360	2016.096	iT27 1x3s
	B	07 28 04.889	-03 31 03.83					0.087	32.280		
2482	A	07 34 14.014	-01 35 08.63	0.07	0.09	0.114	1.492	0.070	7094.00	2016.090	iT27 1x3s
	B	07 34 14.123	-01 35 04.57					0.073	50.700		
2485	A	07 41 36.579	-10 43 28.70	0.09	0.09	0.127	1.170	0.074	43.810	2016.164	iT27 1x3s
	B	07 41 36.915	-10 43 32.48					0.081	26.370		
2487	A	07 46 13.953	-06 02 29.74	0.07	0.08	0.106	0.893	0.081	69.820	2016.096	iT27 1x3s
	B	07 46 14.283	-06 02 34.46					0.085	37.140		

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Jonckheere Double Star Photometry – Part XII: Mon I

Table 2 (continued).

Obj	C	RA	Dec	dRA	dDec	Err Sep	Err PA	Err Mag	SNR	Date	Notes
2491	A	07 57 20.130	-03 46 09.87	0.04	0.05	0.064	0.949	0.114	36.740	2016.022	iT27 1x3s
	B	07 57 20.169	-03 46 06.05					0.118	25.370		
2493	A	08 10 12.748	-11 09 40.57	0.09	0.08	0.120	0.940	0.071	81.360	2016.096	iT27 1x3s
	B	08 10 12.403	-11 09 35.27					0.076	37.310		
2611	A	06 48 07.842	09 44 12.08	0.08	0.06	0.100	1.329	0.092	52.220	2016.022	iT27 1x3s
	B	06 48 08.071	09 44 09.41					0.098	27.520		
2611	A	06 48 07.842	09 44 12.08	0.08	0.06	0.100	0.330	0.092	52.220	2016.022	iT27 1x3s
	C	06 48 07.595	09 44 29.05					0.102	22.070		
2616	A	06 54 24.524	-00 09 09.23	0.08	0.08	0.113	1.266	0.075	37.990	2016.096	iT27 1x3s
	B	06 54 24.519	-00 09 04.11					0.075	38.190		
2616	A	06 54 24.524	-00 09 09.23	0.08	0.08	0.113	0.303	0.075	37.990	2016.096	iT27 1x3s. SNR B<20
	C	06 54 24.965	-00 08 48.85					0.101	14.490		
2623	A	07 09 11.895	-05 16 54.60	0.07	0.07	0.099	1.040	0.071	86.730	2016.164	iT27 1x3s
	B	07 09 12.223	-05 16 56.99					0.072	67.480		
2636	A	08 02 20.022	-06 26 02.89	0.08	0.08	0.113	1.485	0.071	88.870	2016.090	iT27 1x3s
	B	08 02 20.274	-06 26 00.67					0.081	26.380		
2637	A	08 02 26.292	-06 25 53.89	0.08	0.08	0.113	0.925	0.071	78.360	2016.090	iT27 1x3s
	B	08 02 25.879	-06 25 57.24					0.079	28.980		
2758	A	06 51 23.483	-03 54 46.62	0.08	0.08	0.113	2.116	0.074	46.660	2016.164	iT27 1x3s
	B	06 51 23.650	-03 54 48.39					0.076	37.850		
2766	A	06 57 44.312	-04 36 55.72	0.07	0.07	0.099	1.055	0.072	65.150	2016.164	iT27 1x3s
	B	06 57 44.543	-04 36 51.60					0.072	59.330		
2768	A	06 58 38.918	-09 09 47.34	0.08	0.08	0.113	1.105	0.082	62.490	2016.172	iT27 1x3s
	B	06 58 39.240	-09 09 43.92					0.082	56.750		
2769	A	06 59 39.058	02 19 33.41	0.07	0.06	0.092	0.952	0.073	56.800	2016.022	iT27 1x3s
	B	06 59 39.402	02 19 35.46					0.072	59.800		
2770	A	06 59 58.224	-05 06 26.30	0.07	0.07	0.099	0.679	0.071	127.040	2016.164	iT27 1x3s
	B	06 59 58.269	-05 06 34.63					0.073	51.020		
2772	A	07 03 06.929	-04 24 29.59	0.08	0.08	0.113	0.950	0.062	68.520	2016.164	iT27 1x3s
	B	07 03 07.274	-04 24 34.05					0.064	49.630		
2774	A	07 04 21.964	09 15 55.73	0.08	0.08	0.113	1.648	0.073	54.600	2016.022	iT27 1x3s
	B	07 04 22.223	09 15 56.60					0.076	37.290		
2776	A	07 05 05.390	00 58 41.08	0.07	0.08	0.106	0.937	0.081	94.790	2016.090	iT27 1x3s
	B	07 05 05.133	00 58 35.85					0.084	40.010		
2781	A	07 08 11.370	-01 51 34.03	0.09	0.08	0.120	1.390	0.082	61.760	2016.096	iT27 1x3s
	B	07 08 11.039	-01 51 34.15					0.088	29.070		
BAL 409	A	07 08 11.089	-01 51 59.25	0.09	0.08	0.120	0.270	0.081	81.030	2016.096	iT27 1x3s
	B	07 08 11.370	-01 51 34.03					0.082	61.760		
2782	A	07 08 07.726	-10 36 17.33	0.07	0.08	0.106	1.716	0.071	110.910	2016.172	iT27 1x3s
	B	07 08 07.490	-10 36 16.64					0.071	77.510		
2784	A	07 08 28.485	00 57 40.49	0.08	0.08	0.113	0.996	0.083	50.080	2016.090	iT27 1x3s
	B	07 08 28.634	00 57 34.38					0.083	45.960		
2788	A	07 10 33.789	-10 11 44.75	0.09	0.09	0.127	1.398	0.073	48.270	2016.172	iT27 1x3s. PA in last WDS measurement in error
	B	07 10 33.491	-10 11 41.95					0.076	35.550		
2789	A	07 11 34.397	-07 48 48.77	0.08	0.07	0.106	0.937	0.071	94.690	2016.167	iT27 1x3s
	B	07 11 34.832	-07 48 48.11					0.072	68.070		
2792	A	07 14 40.184	-02 11 43.60	0.08	0.07	0.106	1.902	0.076	34.740	2016.096	iT27 1x3s
	B	07 14 40.179	-02 11 46.80					0.077	34.440		
2793	A	07 14 14.703	-10 06 19.34	0.07	0.08	0.106	2.480	0.072	62.290	2016.172	iT27 1x3s
	B	07 14 14.864	-10 06 19.95					0.073	48.640		
2796	A	07 15 00.442	-06 52 52.08	0.08	0.10	0.128	1.110	0.088	29.100	2016.164	iT27 1x3s. SNR B<20
	B	07 15 00.358	-06 52 45.59					0.126	10.610		

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Jonckheere Double Star Photometry – Part XII: Mon I

Table 2 (continued).

Obj	C	RA	Dec	dRA	dDec	Err Sep	Err PA	Err Mag	SNR	Date	Notes
2798	A	07 15 43.769	-10 40 15.45	0.08	0.09	0.120	1.694	0.081	72.120	2016.172	iT27 1x3s
	B	07 15 43.944	-10 40 18.60					0.083	53.160		
2802	A	07 16 06.432	-01 37 35.14	0.09	0.07	0.114	1.561	0.082	57.580	2016.096	iT27 1x3s
	B	07 16 06.153	-01 37 35.18					0.084	40.160		
2804	A	07 16 37.283	-10 05 38.17	0.08	0.08	0.113	1.214	0.081	86.820	2016.172	iT27 1x3s
	B	07 16 37.064	-10 05 33.92					0.081	72.250		
2809	A	07 18 39.435	-06 56 24.60	0.07	0.07	0.099	1.059	0.083	51.850	2016.164	iT27 1x3s
	B	07 18 39.239	-06 56 29.09					0.091	24.030		
2810	A	07 19 30.249	-03 03 55.96	0.08	0.08	0.113	1.124	0.072	61.710	2016.096	iT27 1x3s
	B	07 19 30.354	-03 04 01.51					0.085	21.950		
2816	A	07 25 32.433	-03 26 01.46	0.07	0.07	0.099	0.998	0.098	27.640	2016.096	iT27 1x3s. SNR B<20
	B	07 25 32.150	-03 25 57.67					0.118	13.760		
2817	A	07 26 31.276	-02 33 52.04	0.08	0.08	0.113	1.398	0.072	61.610	2016.096	iT27 1x3s
	B	07 26 31.112	-02 33 48.11					0.073	48.750		
2822	A	07 27 15.897	-03 48 36.24	0.07	0.10	0.122	1.144	0.093	43.290	2016.096	iT27 1x3s
	B	07 27 15.503	-03 48 34.63					0.100	24.430		
2823	A	07 27 35.396	-07 01 21.88	0.07	0.09	0.114	1.431	0.075	39.900	2016.164	iT27 1x3s
	B	07 27 35.701	-07 01 22.35					0.084	23.040		
2825	A	07 28 02.170	-07 44 18.82	0.06	0.07	0.092	0.809	0.072	66.170	2016.164	iT27 1x3s
	B	07 28 02.361	-07 44 12.94					0.072	66.140		
2831	A	07 32 23.419	-04 31 03.00	0.08	0.08	0.113	1.503	0.062	73.010	2016.096	iT27 1x3s
	B	07 32 23.603	-04 31 06.32					0.064	49.630		
2833	A	07 33 05.234	-04 29 56.10	0.07	0.08	0.106	0.801	0.072	69.800	2016.096	iT27 1x3s
	B	07 33 05.738	-04 29 55.10					0.074	47.320		
2834	A	07 33 48.247	-04 31 29.42	0.07	0.08	0.106	1.209	0.073	49.530	2016.096	iT27 1x3s
	B	07 33 48.104	-04 31 33.98					0.074	44.110		
2836	A	07 34 00.694	-09 34 52.50	0.08	0.08	0.113	1.047	0.082	66.850	2016.164	iT27 1x3s
	B	07 34 01.024	-09 34 48.69					0.086	33.280		
2837	A	07 34 59.225	-04 58 50.38	0.08	0.08	0.113	0.701	0.061	86.480	2016.107	iT27 1x3s
	B	07 34 59.164	-04 58 59.58					0.064	47.290		
2839	A	07 36 25.885	-03 34 42.62	0.07	0.09	0.114	0.772	0.072	59.270	2016.096	iT27 1x3s
	B	07 36 25.320	-03 34 42.59					0.076	36.140		
2842	A	07 37 52.430	-05 21 10.06	0.08	0.09	0.120	0.744	0.061	100.900	2016.107	iT27 1x3s
	B	07 37 52.233	-05 21 01.27					0.061	96.910		
2845	A	07 39 37.905	-10 12 31.96	0.08	0.22	0.234	2.761	0.109	24.790	2016.164	iT27 1x3s. Image quality a bit questionable - yet it seems clear that the last "precise" measurement was for a wrong object nearby
	B	07 39 38.141	-10 12 28.58					0.108	25.510		
2846	A	07 39 50.659	-09 26 38.00	0.07	0.08	0.106	0.876	0.071	81.640	2016.164	iT27 1x3s
	B	07 39 50.860	-09 26 44.28					0.072	62.240		
2850	A	07 43 36.236	-02 28 16.29	0.07	0.08	0.106	0.887	0.082	57.720	2016.090	iT27 1x3s
	B	07 43 35.849	-02 28 19.97					0.089	26.670		
2854	A	07 50 29.625	-02 06 54.66	0.07	0.08	0.106	0.876	0.072	65.980	2016.022	iT27 1x3s
	B	07 50 30.057	-02 06 52.12					0.072	59.310		
2858	A	07 55 25.879	-07 19 10.16	0.08	0.06	0.100	0.756	0.074	45.290	2016.096	iT27 1x3s. SNR B<20
	B	07 55 26.057	-07 19 03.06					0.092	17.490		
2859	A	07 57 51.037	-03 42 30.88	0.06	0.07	0.092	1.888	0.083	52.720	2016.022	iT27 1x3s
	B	07 57 51.180	-03 42 32.68					0.083	48.260		
2860	A	07 57 47.442	-04 56 25.15	0.07	0.08	0.106	1.088	0.085	38.730	2016.090	iT27 1x3s
	B	07 57 47.084	-04 56 26.80					0.088	29.490		
2864	A	08 04 31.839	-09 06 53.43	0.07	0.08	0.106	1.261	0.077	21.970	2016.096	iT27 1x3s. Image quality a bit questionable
	B	08 04 31.553	-09 06 55.75					0.081	19.280		
2865	A	08 04 33.019	-09 09 12.06	0.06	0.07	0.092	1.146	0.072	70.420	2016.096	iT27 1x3s
	B	08 04 32.804	-09 09 15.39					0.073	51.960		
2866	A	08 05 39.543	-04 21 59.45	0.08	0.07	0.106	0.655	0.072	69.640	2016.022	iT27 1x3s
	B	08 05 38.931	-04 21 57.83					0.073	49.980		
2866	B	08 05 38.931	-04 21 57.83	0.08	0.07	0.106	1.278	0.073	49.980	2016.022	iT27 1x3s
	C	08 05 39.115	-04 22 01.72					0.077	33.370		

Table 2 concludes on the next page.

Jonckheere Double Star Photometry – Part XII: Mon I*Table 2 (conclusion).*

Obj	C	RA	Dec	dRA	dDec	Err Sep	Err PA	Err Mag	SNR	Date	Notes
2867	A	08 05 52.756	-06 14 42.77	0.08	0.09	0.120	0.739	0.095	33.940	2016.090	iT27 1x3s
	B	08 05 52.256	-06 14 37.15					0.094	40.290		
2868	A	08 05 56.684	-06 14 52.29	0.07	0.08	0.106	0.898	0.091	68.890	2016.090	iT27 1x3s
	B	08 05 56.736	-06 14 45.55					0.094	40.670		
2869	A	08 08 33.580	-09 57 44.39	0.07	0.06	0.092	0.728	0.081	94.860	2016.096	iT27 1x3s
	B	08 08 33.321	-09 57 50.56					0.083	52.340		
2870	A	08 08 18.174	-09 16 30.19	0.07	0.08	0.106	0.927	0.072	58.890	2016.096	iT27 1x3s
	B	08 08 18.511	-09 16 34.46					0.084	23.020		
2871	A	08 09 28.708	-10 47 09.76	0.08	0.08	0.113	1.277	0.073	52.200	2016.096	iT27 1x3s
	B	08 09 28.602	-10 47 14.59					0.074	44.750		
3230	A	07 03 58.921	-07 09 57.03	0.06	0.07	0.092	0.964	0.060	234.160	2016.167	iT27 1x3s
	B	07 03 59.286	-07 09 56.31					0.061	103.190		
3286	A	08 05 50.099	-06 14 19.50	0.07	0.08	0.106	2.288	0.094	42.340	2016.090	iT27 1x3s. Touching star disks
	B	08 05 50.234	-06 14 21.24					0.097	30.210		
3309	A	07 03 32.377	-08 40 29.85	0.08	0.08	0.113	1.769	0.073	56.170	2016.172	iT27 1x3s
	B	07 03 32.567	-08 40 27.51					0.086	21.230		

- Obj = either J number or discoverer code if no J object
- C = components
- dRA and dDec = average RA and Dec plate solving errors in arcseconds
- Err_Sep = separation error estimation in arcseconds calculated as

$$\text{Err}_\text{Sep} = \sqrt{dRA^2 + dDec^2}$$

- Err_PA = position angle error estimation in degrees calculated as

$$\text{Err}_\text{PA} = \arctan\left(\frac{\text{Err}_\text{Sep}}{\text{Sep}}\right)$$

- assuming the worst case that Err_Sep points perpendicular to the separation vector
- dmag = average mag plate solving error (Vmag for images with made V-filter and Imag for images made with I-filter)
- Err_Mag = magnitude error estimation calculated as

$$\text{Err}_\text{Mag} = \sqrt{dV_{mag}^2 + \left[2.5 \log\left(1 + \frac{1}{\text{SNR}}\right)\right]^2}$$

- SNR = signal to noise ratio for the given object
- Date = Julian observation epoch