

ROYAL OBSERVATORY GREENWICH.

OBSERVATIONS

OF

DOUBLE STARS

MADE WITH

THE 28-INCH REFRACTOR.

(1919—1923)

GREENWICH DOUBLE STAR OBSERVATIONS.

When the catalogue of double stars compiled from observations made at Greenwich during the years 1893–1919 was being prepared, a new list of stars requiring observation was drawn up. The following list gives the observations for those stars which have been observed on at least three nights up to early in 1923.

Most of the measures were made with a power of 670. The stars are given in order of Right Ascension, and the number given before the name is that of Burnhams' General Catalogue. The initials given under the column headed "Obs." signify

JJ = Mr. Jackson.

B = Mr. Bryant.

HF = Mr. Furner.

W = Mr. Witchell.

RC = Mr. Cullen.

A = Dr. Aitken.

OBSERVATIONS of DOUBLE STARS, made at the ROYAL OBSERVATORY, GREENWICH.

Date.	Angle.	Dist.	Obs.	Date.	Angle.	Dist.	Obs.	Date.	Angle.	Dist.	Obs.
431. β 495 _n				1365. O Σ 43				1799. Σ 425			
1920.89	212.1	0.80	B	1922.04	33.4	0.96	HF	1921.19	81.8	2.27	HF
22.11	210.4	0.75	B	22.85	26.1	1.01	W	22.11	89.7	2.17	RC
22.96	208.3	0.69	HF	22.97	27.8	0.94	HF	22.93	88.0	2.35	JJ
				23.01	37.0	0.92	HF	22.97	89.4	2.47	RC
				23.02	35.2	1.11	HF				
456. Σ 67				1405. Σ 300				1900. O Σ 65			
1920.91	358.6	1.95	HF	1920.99	309.4	3.04	HF	1921.14	212.0	0.64	B
22.87	0.2	2.26	W	22.10	308.0	2.83	HF	23.01	208.1	0.57	HF
22.96	1.6	2.00	JJ	22.10	307.0	2.99	RC	23.02	211.1	0.42	B
22.96	1.7	1.97	HF	22.11	307.2	3.02	RC				
479. O Σ 20				1427. Σ 305				2115. Σ 520			
1920.88	304.2	0.43	HF	1920.99	314.2	3.36	HF	1921.12	121.0	0.58	HF
20.89	300.9	0.40	B	21.03	313.9	3.05	HF	22.08	121.4	0.66	HF
21.82	287.2	0.53	B	22.04	315.0	3.00	HF	23.01	121.4	0.55	HF
22.11	289.6	0.58	B	22.04	314.4	3.41	W	23.10	128.0	0.69	HF
23.02	296.0	0.40	B								
482 Σ 73				1512. Σ 333				2161. Σ 535			
1920.88	60.1	0.71	HF	1921.03	201.1	1.16	HF	1921.12	313.5	1.45	HF
20.89	53.6	0.72	HF	21.09	199.8	1.70	JJ	21.14	321.1	1.53	JJ
21.82	50.3	0.94	B	22.04	205.6	1.28	HF	21.15	321.8	1.70	JJ
22.11	54.7	0.82	B	22.08	203.9	1.41	HF				
				22.10	207.5	1.46	HF				
508. β 302				1517. Σ 334				2255. Σ 562			
1920.89	116.5	0.55	HF	1922.04	308.7	1.27	HF	1920.97	275.2	1.86	HF
22.11	107.3	0.63	B	22.10	312.2	1.07	HF	21.09	275.8	2.29	JJ
23.02	116.9	0.46	B	22.97	316.0	1.51	RC	21.14	274.6	2.11	JJ
				23.10	312.3	1.01	HF	21.15	278.5	2.07	JJ
830. Σ 138				1526. O Σ 49				2270. O Σ 86			
1922.77	43.7	1.50	RC	1921.03	59.0	1.95	HF	1921.12	49.2	0.43	HF
22.96	42.4	1.35	HF	22.10	52.2	2.11	HF	22.08	50.4	0.49	HF
22.97	45.7	1.50	RC	23.01	58.8	1.62	HF	23.01	55.0	0.55	HF
				23.10	52.5	1.75	HF	23.02	59.6	0.45	B
963. Σ 174				1559. Σ 346				2272. Σ 567			
1922.77	163.0	2.87	RC	1921.12	269.0	0.41	HF	1920.99	324.4	1.90	HF
22.96	165.9	2.47	HF	23.02	280.3	0.31	B	21.03	326.7	1.75	HF
22.96	168.6	2.58	HF	23.10	277.0	0.40	HF	21.14	329.8	2.21	JJ
22.97	166.7	2.36	HF					22.04	323.2	1.95	HF
								22.04	332.0	2.21	W
1139. Σ 226				1594. Σ 360				2443. Σ 622			
1922.85	246.2	2.15	W	1921.19	134.4	1.98	HF	1921.16	172.0	2.53	HF
22.96	247.5	2.00	HF	22.10	136.8	2.17	W	22.08	175.0	2.51	HF
22.97	246.7	1.81	HF	22.93	133.1	2.42	JJ	22.10	172.0	2.36	HF
1346. Σ 285				1683. Σ 381				2466. 46			
1922.04	169.9	2.09	W	1922.04	102.2	1.15	HF	1921.12	92.1	0.75	HF
22.10	166.2	1.81	W	22.04	105.3	0.92	W	21.16	94.2	0.78	HF
22.93	178.3	1.84	JJ	22.08	104.1	0.97	HF	22.08	95.5	0.88	HF
				22.10	101.0	1.05	HF	22.10	91.1	0.87	HF
1354. } β 1315=Hu. 1044				1774. β 533				2509. O Σ 95			
12905				1922.93	40.2	1.01	JJ	1921.16	317.8	0.77	HF
1922.04	128.4	1.69	HF	22.97	49.5	0.84	RC	22.08	319.0	0.83	HF
22.10	133.0	1.48	HF	23.02	44.9	0.81	B	22.11	316.8	0.74	B
22.97	130.7	1.42	HF								

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Date.	Angle.	Dist.	Obs.	Date.	Angle.	Dist.	Obs.	Date.	Angle.	Dist.	Obs.
2535. OΣ 98				3460. Σ 932				4477. Σ 1196			
1921·12	138·0	0·72	HF	1921·16	320·5	1·89	HF	1921·21	273·9	0·65	HF
22·08	139·0	0·80	HF	21·18	325·1	2·24	JJ	21·22	271·1	0·74	HF
22·10	142·4	0·97	HF	22·08	325·8	1·95	HF	21·25	276·0	0·69	HF
23·02	132·6	0·96	B	22·11	324·7	2·17	RC	4502. β 1244			
2613. Σ 670				22·14	321·1	1·86	HF	1921·18	34·2	1·15	JJ
1920·99	165·8	2·36	HF	22·18	322·9	2·00	HF	21·21	31·0	0·71	HF
21·03	162·9	2·59	HF	3576. AG 119				21·24	33·3	1·12	JJ
21·14	168·3	2·47	JJ	1921·15	79·2	1·53	JJ	21·25	31·3	0·74	HF
2845. Σ 749				21·18	77·3	1·38	JJ	4602. Σ 1224			
1920·97	341·5	0·86	HF	22·18	81·5	1·46	HF	1921·24	43·8	5·78	HF
21·15	346·5	1·22	JJ	3601. OΣ 156				21·24	45·0	5·82	JJ
23·02	342·4	1·06	B	1921·16	287·1	0·52	HF	21·25	46·1	5·70	HF
23·13	346·0	0·88	HF	21·18	286·6	0·78	JJ	4795. β 1068			
2936. OΣ 115				22·08	284·9	0·54	HF	1921·21	179·6	0·45	HF
1921·16	121·2	0·63	HF	22·14	286·2	0·51	HF	21·22	167·8	0·40	HF
22·08	115·8	0·78	HF	22·18	285·7	0·57	HF	22·23	181·8	0·42	HF
23·10	119·4	0·59	HF	23·07	285·5	0·62	RC	4839. Σ 1291			
2945. Σ 787				3689. Σ 981				1922·18	320·7	1·38	RC
1921·15	69·8	1·07	HF	1923·02	142·7	2·82	W	22·31	320·5	1·50	RC
22·08	66·5	0·97	HF	23·02	139·7	2·74	HF	23·10	323·7	1·45	HF
22·10	69·4	1·17	HF	23·07	142·8	2·80	RC	23·14	320·0	1·72	JJ
2975. OΣ 119				23·13	140·7	2·88	HF	5005. Σ 3121			
1921·16	325·8	0·57	HF	3792. Ho. 342				1921·28	252·1	0·19	B
22·08	330·6	0·63	HF	1921·15	82·1	1·22	JJ	22·37	286·2	0·38	HF
23·10	332·3	0·59	HF	23·07	82·5	1·01	RC	22·39	282·7	0·28	HF
2976. Σ 795				23·10	81·0	0·93	HF	5011. Σ 1333			
1921·18	207·7	1·65	JJ	3949. OΣ 170				1922·16	47·8	1·90	W
22·08	204·8	1·50	HF	1921·15	102·5	1·51	JJ	22·37	48·7	1·75	HF
22·10	206·2	1·45	W	21·21	101·0	1·34	HF	22·39	53·2	1·69	HF
22·18	206·0	1·43	HF	22·08	102·6	1·39	HF	23·10	52·8	1·70	HF
3009. Hu. 40				22·14	104·4	1·39	HF	5014. Σ 1334			
1921·14	8·6	3·83	JJ	4193. Σ 1126				1922·37	236·4	2·82	HF
22·11	12·0	3·32	RC	1921·15	153·9	1·51	JJ	22·39	237·9	2·81	HF
22·99	7·4	3·89	W	21·21	150·3	1·11	HF	23·10	237·4	2·62	HF
3045. Ho. 337 BC				21·24	150·8	1·39	JJ	5030. Σ 1338			
1921·14	102·4	1·06	JJ	4312. OΣ 182				1922·16	185·3	1·46	W
21·15	102·5	1·41	JJ	1921·18	25·9	1·10	JJ	22·37	179·8	1·18	HF
21·18	103·4	1·15	JJ	21·21	23·1	1·00	HF	22·39	178·6	1·29	HF
3065. Σ 821				21·25	25·2	0·88	HF	5056. OΣ 201			
1920·97	7·0	2·17	HF	4402. Σ 1175				1921·24	220·2	1·23	HF
20·99	6·1	2·17	HF	1921·18	237·8	1·88	JJ	21·32	224·4	1·28	HF
23·02	9·9	2·21	HF	21·21	234·3	1·38	HF	22·18	220·9	1·12	RC
3230. Ho. 22				21·24	234·0	1·68	JJ	22·22	222·2	1·31	RC
1921·15	198·0	0·81	JJ	4414. β 581 BC							
21·16	199·9	0·70	HF	1921·21	170·3	0·40	HF				
23·10	198·0	0·70	HF	21·22	185·6	0·36	HF				
				21·25	173·0	0·35	HF				

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Date.	Angle.	Dist.	Obs.	Date.	Angle.	Dist.	Obs.	Date.	Angle.	Dist.	Obs.	
5071.			Σ 1348									
1921.22	324.3	1.71	HF									
21.24	324.3	1.88	HF									
21.24	322.1	2.05	JJ									
21.32	319.3	1.56	HF									
5094.			Σ 1355									
1921.24	339.5	2.53	HF									
21.24	341.8	2.65	JJ									
21.30	335.3	2.27	HF									
21.32	336.5	2.28	HF									
5108.			Σ 1356									
1921.24	131.9	0.92	HF									
21.32	129.3	0.89	HF									
22.22	137.5	0.99	RC									
22.23	131.0	0.95	HF									
22.26	130.8	0.81	HF									
5158.			Σ 1372									
1921.28	61.0	0.75	B									
22.16	63.8	0.71	W									
22.23	62.0	0.64	HF									
5171.			Σ 1374									
1922.18	289.0	3.26	W									
22.37	289.2	3.09	HF									
22.39	290.3	3.33	HF									
22.43	287.2	2.77	HF									
5233.			Σ 1389									
1921.24	305.1	2.06	HF									
22.18	308.2	2.41	RC									
22.37	305.7	2.07	HF									
22.39	305.1	2.18	HF									
5303.			Hu. 634									
1922.18	165.0	1.45	RC									
22.37	168.7	1.68	HF									
22.39	169.5	1.74	HF									
5365.			$O\Sigma$ 215									
1921.24	197.6	1.13	HF									
22.15	200.2	1.35	W									
22.18	197.9	1.21	W									
22.23	199.8	1.34	RC									
22.31	198.7	1.37	RC									
22.34	200.6	0.94	B									
5385.			Σ 1423									
1921.32	49.3	1.53	HF									
22.23	52.5	1.57	RC									
22.37	46.6	1.44	HF									
5421.			Σ 1429									
1922.35	236.2	0.67	HF									
22.37	235.4	0.63	HF									
22.38	232.7	0.67	HF									
5431.			$O\Sigma$ 217									
1922.23	151.9	1.16	RC									
22.33	152.6	0.69	HF									
22.34	154.1	0.68	B									
22.35	152.3	0.69	HF									
5445.			$O\Sigma$ 220									
1921.32	71.6	1.10	HF									
22.33	75.8	1.00	HF									
22.34	76.8	0.99	HF									
22.35	75.3	0.94	HF									
5448.			Σ 1439									
1922.15	105.1	1.95	W									
22.16	107.6	1.80	W									
22.18	104.7	1.47	W									
22.23	108.1	1.88	RC									
5484.			Σ 1450									
1921.32	161.3	2.22	HF									
22.33	158.5	2.16	HF									
22.34	160.1	2.12	HF									
22.35	161.3	2.12	HF									
5508.			Σ 1457									
1921.32	320.6	1.18	HF									
22.16	326.1	1.88	W									
22.34	320.6	1.53	HF									
22.35	318.5	1.39	HF									
5515.			$O\Sigma$ 224									
1922.33	276.7	0.40	HF									
22.34	265.2	0.43	HF									
22.35	261.6	0.45	HF									
5527.			$O\Sigma$ 227									
1922.33	357.3	0.63	HF									
22.34	354.2	0.70	HF									
22.35	357.4	0.84	HF									
22.37	350.0	0.62	HF									
5558.			$O\Sigma$ 228									
1921.28	179.1	0.75	B									
22.33	180.7	0.43	HF									
22.34	183.2	0.48	HF									
22.35	184.5	0.48	HF									
5659.			Σ 1504									
1921.32	289.0	1.10	HF									
21.38	296.2	1.42	JJ									
22.33	286.1	1.01	HF									
22.34	286.8	1.01	HF									
22.35	287.5	1.06	HF									
5707.			Σ 1517									
1921.28	247.0	0.27	B									
21.33	262.1	0.36	B									
22.33	256.4	0.42	HF									
22.34	244.8	0.33	B									
22.34	258.2	0.39	HF									
22.35	259.7	0.40	HF									
5734.			Σ 1523									
1921.39	100.1	3.45	JJ									
22.16	97.7	2.83	W									
22.18	98.0	2.83	W									
22.38	98.2	2.62	W									
22.39	100.8	2.57	RC									
5789.			Σ 1527									
1921.32	19.0	2.95	HF									
21.35	21.2	3.10	JJ									
21.35	19.5	2.91	HF									
5765.			Σ 1536									
1921.35	29.9	1.70	HF									
21.37	30.1	1.99	JJ									
21.38	34.1	1.69	HF									
5841.			Σ 1555									
1921.28	6.9	0.24	B									
22.37	13.4	0.31	HF									
22.39	24.2	0.45	HF									
22.40	22.0	0.40	HF									
5970.			Σ 241									
1922.16	135.0	1.44	W									
22.18	132.9	1.36	W									
22.23	133.4	1.63	RC									
22.39	133.3	1.51	HF									
22.39	132.8	1.72	W									
6158.			Σ 1639									
1921.33	342.3	0.84	B									
21.46	338.6	0.70	HF									
22.18	338.7	0.84	W									
22.33	333.6	0.71	HF									
22.34	335.3	0.87	B									
6187.			Σ 1647									
1921.35	232.0	1.60	JJ									
21.37	226.8	1.64	JJ									
21.38	228.4	1.36	HF									
6216.			Σ 1661									
1921.35	241.4	2.35	JJ									
22.30	244.2	2.67	W									
22.35	240.0	2.39	HF									

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Date.	Angle.	Dist.	Obs.	Date.	Angle.	Dist.	Obs.	Date.	Angle.	Dist.	Obs.
6222. Σ 1663				6578. β 612				6993. Σ 1877			
1921.46	94.2	0.72	HF	1921.28	222.2	0.31	B	1921.46	331.3	2.87	HF
22.37	100.0	0.77	HF	21.43	232.0	0.24	B	21.51	336.4	2.94	JJ
22.39	105.5	0.75	W	21.45	231.5	0.32	B	21.52	331.9	2.83	JJ
				22.34	230.2	0.23	B				
6243. Σ 1670				6586. Σ 1772				6999. Σ 1879			
1922.40	319.5	5.95	HF	1921.42	137.8	4.68	JJ	1921.43	112.0	0.69	HF
22.41	318.7	5.91	HF	21.45	138.3	4.27	HF	21.43	112.4	0.84	B
22.44	320.4	5.52	A	21.46	139.7	4.39	HF	21.45	116.5	0.81	B
								21.47	114.5	0.84	HF
6358. Σ 1711				6641. Σ 1785				7001. $O\Sigma$ 285			
1921.35	350.8	0.93	JJ	1921.35	11.1	1.48	JJ	1921.28	87.3	0.53	B
22.35	348.8	0.84	HF	21.42	13.1	1.35	JJ	21.51	95.1	0.40	B
22.37	349.9	0.90	HF	21.45	19.9	1.05	HF	22.71	89.9	0.52	HF
6369. Σ 1714				6746. Σ 1808				7013. Σ 1883			
1921.46	310.6	2.82	HF	1921.42	72.9	2.57	JJ	1921.28	206.0	0.28	B
22.38	304.6	3.41	RC	21.45	72.8	2.65	HF	21.43	217.2	0.28	B
22.39	307.4	3.04	HF	21.46	73.9	2.66	HF	21.45	212.0	0.23	B
22.43	307.6	3.14	HF					22.34	211.5	0.34	B
6415. $O\Sigma$ 261				6764. $O\Sigma$ 278				7034. Σ 1888			
1921.46	344.5	1.51	HF	1921.28	55.5	0.29	B	1921.45	64.3	2.83	JJ
22.18	341.6	2.12	W	21.45	58.9	0.26	B	21.45	58.2	2.77	HF
22.30	344.7	1.93	W	21.51	58.8	0.28	B	21.47	58.5	2.61	HF
22.43	342.7	1.71	HF								
22.44	341.3	1.76	W	6780. Σ 1819				7044. $O\Sigma$ 287			
				1921.42	344.1	1.52	JJ	1921.51	150.9	1.09	B
				21.43	342.5	1.14	HF	22.71	150.0	0.80	HF
				21.45	336.5	1.06	HF	22.72	148.5	0.81	HF
				22.39	342.9	1.60	RC				
6442. β 800				6832. Σ 1834				7049. $O\Sigma$ 288			
1921.38	108.5	3.77	HF	1921.28	93.3	0.35	B	1921.42	190.6	1.97	JJ
22.35	110.1	3.81	HF	21.45	100.0	0.40	B	21.43	187.4	1.41	HF
22.38	106.4	4.15	W	21.51	101.3	0.43	B	21.47	189.3	1.80	HF
				22.50	94.7	0.36	B				
				22.78	99.4	0.40	B	7119. Σ 1907			
6455. Σ 1734				6948. Σ 1863				1921.42			
1922.40	187.0	0.94	HF	1922.56	81.3	0.69	JJ	21.43	8.0	1.52	JJ
22.41	184.5	0.93	HF	22.71	78.9	0.64	HF	21.47	4.7	0.84	HF
22.44	186.8	0.93	HF	22.72	81.0	0.52	HF	21.47	6.6	1.22	HF
6494. $O\Sigma$ 266				6955. Σ 1865				7214. Σ 1932			
1921.35	346.5	2.07	JJ	1921.33	133.4	0.78	B	1921.33	18.9	0.72	B
21.38	347.0	1.92	HF	21.37	132.7	0.75	B	21.37	15.1	0.70	B
21.42	347.7	1.91	JJ	21.43	127.9	0.64	B	21.43	23.9	0.64	B
				21.45	131.9	0.70	B	21.45	19.2	0.65	B
6530. Σ 1757				6958. Σ 1867				7251. Σ 1937			
1921.35	87.6	2.68	JJ	1921.53	10.9	0.87	HF	1921.37	104.9	0.58	B
21.38	89.1	2.28	HF	22.52	13.8	1.38	RC	21.43	104.9	0.42	B
22.39	88.5	2.74	RC	22.71	11.1	1.09	HF	21.45	100.1	0.58	B
6566. Σ 1768								21.51	105.2	0.40	B
1921.51	126.3	1.37	B								
22.30	122.5	1.64	W								
22.50	123.1	1.37	B								
22.50	123.4	1.46	JJ								
22.52	125.5	1.41	RC								
22.56	124.2	1.51	JJ								

OBSERVATIONS of DOUBLE STARS, made at the ROYAL OBSERVATORY, GREENWICH.

Date.	Angle.	Dist.	Obs.	Date.	Angle.	Dist.	Obs.	Date.	Angle.	Dist.	Obs.
7259. Σ 1938											
1921.37	52.2	1.30	B								
21.51	49.9	1.64	B								
22.71	51.2	1.44	HF								
22.72	49.9	1.34	HF								
7278. Σ 1944											
1921.47	328.0	1.10	HF								
21.51	322.1	1.10	JJ								
22.47	326.8	0.86	HF								
22.50	323.4	1.24	A								
22.50	321.4	1.29	JJ								
7318. Σ 1954											
1921.42	184.8	4.00	JJ								
21.43	182.6	3.82	HF								
21.48	186.8	3.92	HF								
7323. Σ 1957											
1921.51	153.6	1.18	JJ								
22.47	161.2	0.78	HF								
22.55	163.9	0.96	HF								
7332. $O\Sigma$ 298											
1920.82	207.3	1.04	JJ								
20.82	210.3	0.88	HF								
21.51	213.0	0.99	B								
22.71	207.7	0.70	HF								
22.72	207.8	0.75	HF								
7368. Σ 1967											
1921.33	115.4	0.39	B								
21.37	107.7	0.35	B								
21.43	108.1	0.48	B								
21.45	105.3	0.64	B								
7367. β 619											
1921.43	352.8	0.36	B								
21.45	8.1	0.48	B								
21.47	4.3	0.48	HF								
22.55	5.3	0.41	HF								
22.47	3.1	0.37	HF								
7414. β 621											
1921.51	55.2	0.70	B								
22.72	47.9	0.52	HF								
22.78	54.6	0.39	B								
7477. $O\Sigma$ 303											
1921.43	153.8	0.99	B								
21.47	157.4	1.02	HF								
21.53	155.3	0.86	HF								
22.44	146.3	0.81	A								
22.44	157.9	1.07	W								
22.47	160.0	0.71	HF								
22.55	151.6	0.94	HF								
				7505. β 812							
				1921.47	115.7	0.65	HF				
				22.54	117.1	0.99	JJ				
				22.55	119.0	0.76	HF				
				7552. Σ 2022							
				1921.51	139.3	2.52	JJ				
				21.52	136.6	2.26	JJ				
				21.53	144.4	2.15	HF				
				22.54	139.1	2.70	JJ				
				22.69	143.8	2.12	HF				
				7551. Σ 2021							
				1921.51	333.9	3.87	HF				
				21.51	341.5	3.87	JJ				
				21.52	340.9	4.04	JJ				
				7554. Σ 2023							
				1922.47	224.0	1.66	HF				
				22.54	225.1	1.72	JJ				
				22.58	222.2	1.86	HF				
				7563. Σ 2032							
				1922.64	220.1	5.46	W				
				22.71	221.7	5.15	HF				
				22.74	220.3	5.10	HF				
				7561. Σ 2026							
				1921.45	68.0	0.69	B				
				22.50	71.0	0.87	JJ				
				22.50	66.9	0.99	A				
				22.55	60.6	0.74	HF				
				22.58	62.4	0.76	HF				
				22.60	62.6	0.64	B				
				7587. $O\Sigma$ 309							
				1921.51	245.3	0.43	B				
				21.74	246.0	0.49	HF				
				21.76	244.9	0.43	HF				
				7637. Σ 2049							
				1922.41	208.3	1.21	RC				
				22.41	203.7	1.29	W				
				22.45	199.6	1.17	HF				
				22.47	200.9	1.11	HF				
				7642. Σ 2052							
				1921.43	288.8	0.29	B				
				21.45	286.6	0.39	B				
				21.47	289.8	0.36	HF				
				21.49	292.4	0.30	B				
				7649. Σ 2055							
				1921.45	84.3	0.81	B				
				21.49	88.5	0.63	B				
				22.50	87.0	0.75	A				
				22.50	94.4	0.88	JJ				
				22.55	88.0	0.59	HF				
				22.60	87.3	0.54	B				
								7673. $O\Sigma$ 313			
				1921.51	145.1	0.96	B				
				21.74	145.1	0.66	HF				
				21.76	147.3	0.72	HF				
				22.78	144.0	0.83	B				
								7717. Σ 2084			
				1921.74	80.1	1.66	HF				
				21.76	77.9	1.77	HF				
				22.54	79.7	1.66	JJ				
								7748. Δ 15			
				1921.51	225.4	0.42	B				
				21.74	225.0	0.46	HF				
				21.76	224.9	0.51	HF				
				22.78	229.3	0.46	B				
								7751. Σ 2097			
				1920.82	82.9	2.29	JJ				
				21.74	82.1	2.32	HF				
				21.76	80.2	1.98	HF				
				22.41	86.2	2.07	RC				
								7759. Σ 2101			
				1921.74	56.2	3.85	HF				
				21.76	54.9	4.33	HF				
				22.41	54.4	4.22	RC				
								7778. Σ 2106			
				1921.43	268.7	0.24	B				
				21.45	261.7	0.22	B				
				21.47	261.4	0.36	HF				
				22.55	258.0	0.36	HF				
								7783. Σ 2107			
				1921.37	33.2	0.60	B				
				21.43	40.4	0.67	B				
				21.45	31.1	0.61	B				
				22.47	42.5	0.76	HF				
								7817. Σ 3107			
				1922.44	92.8	1.65	W				
				22.47	90.6	1.38	HF				
				22.54	91.0	1.48	RC				
				22.54	95.3	1.66	JJ				
				22.58	92.8	1.27	HF				
								7825. $O\Sigma$ 321			
				1921.47	6.4	0.42	HF				
				21.53	4.0	0.64	HF				
				22.55	9.0	0.63	HF				
				22.57	9.6	0.74	HF				
				22.58	8.3	0.75	HF				
				22.69	13.4	0.57	HF				

OBSERVATIONS of DOUBLE STARS, made at the ROYAL OBSERVATORY, GREENWICH.

Date.	Angle.	Dist.	Obs.	Date.	Angle.	Dist.	Obs.	Date.	Angle.	Dist.	Obs.
7837. Σ 2114				8158. Ho. 70				8421. Σ 2292			
1921.53	167.6	0.98	HF	1921.74	278.2	0.42	HF	1921.74	262.1	0.95	HF
22.44	170.1	1.41	W	21.76	280.1	0.49	HF	22.65	266.5	1.11	JJ
22.51	174.7	1.30	RC	22.60	286.7	0.48	B	22.68	266.1	0.99	HF
22.53	171.4	1.38	JJ	8163. Σ 2215				8433. Σ 2294			
22.53	169.6	1.36	JJ	1921.68	285.3	0.60	HF	1921.49	90.8	0.41	B
22.54	171.6	1.12	RC	22.50	283.2	0.94	JJ	21.66	97.8	0.42	B
7900. $O\Sigma$ 325				22.58	284.8	0.64	HF	21.68	92.2	0.48	B
1922.55	205.2	0.90	HF	22.62	284.2	0.61	HF	8548. Σ 2315			
22.58	206.7	0.77	HF	8186. $O\Sigma$ 337				1921.49	167.0	0.28	B
22.58	204.9	0.86	HF	1921.43	255.1	0.22	B	21.66	181.3	0.40	B
22.69	201.7	0.75	HF	21.45	249.5	0.19	B	21.68	175.0	0.33	B
7995. Ho. 415				21.49	258.1	0.22	B	22.68	166.8	0.44	HF
1921.74	333.4	1.10	HF	22.62	255.3	0.42	HF	8584. Σ 2320			
22.44	340.9	1.24	W	8210. $O\Sigma$ 338				1921.81	1.1	1.71	HF
22.54	336.0	1.27	JJ	1921.43	7.8	0.87	B	22.69	9.6	1.35	HF
8008. β 1250				21.45	10.9	0.77	B	22.74	5.1	1.59	HF
1921.74	73.6	2.12	HF	21.49	12.0	0.84	B	22.78	11.0	1.35	HF
22.54	80.4	1.48	JJ	21.68	11.5	0.69	HF	8622. $O\Sigma$ 354			
22.55	81.3	1.99	HF	8228. A. Clark 8				1921.68	175.6	0.68	HF
8028. Σ 2170				1921.74	248.2	0.34	HF	21.70	176.4	0.66	HF
1922.58	67.8	3.81	HF	22.50	248.2	0.41	A	22.62	176.2	0.66	HF
22.58	70.5	3.41	HF	22.50	246.0	0.64	JJ	8659. $O\Sigma$ 357			
22.69	68.7	3.67	HF	22.60	244.0	0.28	B	1921.49	214.8	0.24	B
8038. Σ 2173				8242. $O\Sigma$ 339				21.68	219.0	0.29	B
1921.43	147.5	0.84	B	1921.74	179.7	3.33	HF	21.70	224.6	0.40	HF
21.45	149.0	0.72	B	22.58	181.9	3.04	HF	22.62	223.4	0.39	HF
21.49	148.6	0.60	B	22.62	180.2	3.61	HF	22.68	220.5	0.31	HF
21.66	142.8	0.65	B	22.69	180.6	3.39	HF	8663. $O\Sigma$ 358			
22.55	150.4	0.54	HF	8353. $O\Sigma$ 341				1921.63	186.0	1.72	HF
22.60	145.6	0.64	B	1921.49	86.5	0.25	B	21.68	187.6	1.83	HF
8100. β 631				21.66	87.3	0.25	B	21.68	184.9	1.88	HF
1921.43	54.1	0.27	B	21.68	88.0	0.34	B	21.70	186.4	1.85	HF
21.45	48.7	0.27	B	8380. Σ 2281				8698. Ho. 87			
21.49	52.8	0.29	B	1921.49	79.3	0.54	B	1921.68	300.9	0.31	B
21.66	57.3	0.25	B	21.66	77.8	0.37	B	21.68	299.0	0.35	HF
22.55	48.4	0.32	HF	21.68	74.3	0.45	B	22.68	300.0	0.34	HF
22.60	50.6	0.36	B	8384. Σ 2283				8751. Σ 2369			
8127. Σ 2203				1921.68	81.0	0.66	HF	1921.68	89.0	0.84	HF
1921.76	311.3	0.62	HF	21.68	78.5	0.87	HF	21.68	90.4	0.82	HF
21.78	312.6	0.62	B	22.58	77.7	0.75	HF	21.70	88.6	0.76	HF
22.78	314.2	0.63	B	22.62	79.9	0.77	HF	22.58	91.6	0.80	HF
22.83	314.9	0.58	B	8398. Σ 2289				22.62	88.0	0.65	HF
8153. Σ 2205				1921.63	222.9	1.05	HF	8776. Σ 2375			
1922.44	314.1	2.41	W	21.68	224.2	1.06	HF	1921.63	112.9	2.13	HF
22.50	315.9	2.20	JJ	21.68	225.4	1.06	HF	21.68	115.1	2.17	HF
22.54	315.5	1.95	JJ	8421. Σ 2292				21.70	113.3	2.10	HF
22.58	312.5	1.77	HF	1921.74	278.2	0.42	HF	22.58	113.4	2.15	HF
				21.76	280.1	0.49	HF	22.64	114.1	2.97	W
				22.60	286.7	0.48	B				
				8163. Σ 2215				8433. Σ 2294			
				1921.68	285.3	0.60	HF	1921.49	90.8	0.41	B
				22.50	283.2	0.94	JJ	21.66	97.8	0.42	B
				22.58	284.8	0.64	HF	21.68	92.2	0.48	B
				22.62	284.2	0.61	HF	8548. Σ 2315			
				8186. $O\Sigma$ 337				1921.49	167.0	0.28	B
				1921.43	255.1	0.22	B	21.66	181.3	0.40	B
				21.45	249.5	0.19	B	21.68	175.0	0.33	B
				21.49	258.1	0.22	B	22.68	166.8	0.44	HF
				22.62	255.3	0.42	HF	8584. Σ 2320			
				8210. $O\Sigma$ 338				1921.81	1.1	1.71	HF
				1921.43	7.8	0.87	B	22.69	9.6	1.35	HF
				21.45	10.9	0.77	B	22.74	5.1	1.59	HF
				21.49	12.0	0.84	B	22.78	11.0	1.35	HF
				21.68	11.5	0.69	HF	8622. $O\Sigma$ 354			
				8228. A. Clark 8				1921.68	175.6	0.68	HF
				1921.74	248.2	0.34	HF	21.70	176.4	0.66	HF
				22.50	248.2	0.41	A	22.62	176.2	0.66	HF
				22.50	246.0	0.64	JJ	8659. $O\Sigma$ 357			
				22.60	244.0	0.28	B	1921.49	214.8	0.24	B
				8242. $O\Sigma$ 339				21.68	219.0	0.29	B
				1921.74	179.7	3.33	HF	21.70	224.6	0.40	HF
				22.58	181.9	3.04	HF	22.62	223.4	0.39	HF
				22.62	180.2	3.61	HF	22.68	220.5	0.31	HF
				22.69	180.6	3.39	HF	8663. $O\Sigma$ 358			
				8353. $O\Sigma$ 341				1921.63	186.0	1.72	HF
				1921.49	86.5	0.25	B	21.68	187.6	1.83	HF
				21.66	87.3	0.25	B	21.68	184.9	1.88	HF
				21.68	88.0	0.34	B	21.70	186.4	1.85	HF
				8380. Σ 2281				8698. Ho. 87			
				1921.49	79.3	0.54	B	1921.68	300.9	0.31	B
				21.66	77.8	0.37	B	21.68	299.0	0.35	HF
				21.68	74.3	0.45	B	22.68	300.0	0.34	HF
				8384. Σ 2283				8751. Σ 2369			
				1921.68	81.0	0.66	HF	1921.68	89.0	0.84	HF
				21.68	78.5	0.87	HF	21.68	90.4	0.82	HF
				22.58	77.7	0.75	HF	21.70	88.6	0.76	HF
				22.62	79.9	0.77	HF	22.58	91.6	0.80	HF
				8398. Σ 2289				22.62	88.0	0.65	HF
				1921.63	222.9	1.05	HF	8776. Σ 2375			
				21.68	224.2	1.06	HF	1921.63	112.9	2.13	HF
				21.68	225.4	1.06	HF	21.68	115.1	2.17	HF
				8421. Σ 2292				21.70	113.3	2.10	HF
				1921.74	278.2	0.42	HF	22.58	113.4	2.15	HF
				21.76	280.1	0.49	HF	22.64	114.1	2.97	W
				22.60	286.7	0.48	B				

OBSERVATIONS of DOUBLE STARS, made at the ROYAL OBSERVATORY, GREENWICH.

Date.	Angle.	Dist.	Obs.	Date.	Angle.	Dist.	Obs.	Date.	Angle.	Dist.	Obs.	
8844.			Σ 2402									
1921.63	205.1	1.03	HF									
21.68	205.8	0.90	HF									
21.68	204.6	1.16	HF									
8852.			β 265									
1921.68	223.5	1.35	HF									
21.68	227.9	1.53	HF									
21.70	223.3	1.48	HF									
22.62	227.1	1.24	HF									
8930.			Σ 2422									
1921.79	86.8	0.66	HF									
21.81	85.9	0.70	HF									
22.68	90.0	0.74	B									
22.69	90.1	0.68	HF									
22.70	88.8	0.75	B									
8988.			Σ 2437									
1921.68	47.2	0.75	HF									
21.68	48.1	0.71	HF									
21.70	50.7	0.69	HF									
22.62	49.8	0.71	HF									
9043.			Σ 2455									
1921.63	57.6	4.04	HF									
21.68	60.2	4.41	HF									
21.72	61.3	4.21	HF									
9059.			Ho. 98									
1921.68	134.3	0.27	B									
22.68	121.0	0.23	B									
22.70	121.0	0.29	B									
22.78	124.1	0.19	B									
9095.			β 1204									
1921.68	3.8	0.36	HF									
21.70	2.1	0.39	HF									
22.68	9.2	0.31	HF									
9124.			Σ 2482									
1921.68	344.6	2.04	HF									
21.70	348.3	2.04	HF									
21.72	347.3	1.83	HF									
9136.			Σ 2484									
1922.62	229.3	2.24	HF									
22.68	229.3	2.22	HF									
22.74	225.2	2.62	HF									
22.78	229.7	2.61	HF									
9155.			Σ 2488									
1921.68	336.0	1.57	HF									
21.70	332.8	1.68	HF									
21.72	333.7	1.51	HF									
9180.			Hu. 336									
1921.72	198.1	1.54	HF									
21.79	198.5	1.38	HF									
22.62	196.9	1.58	HF									
9219.			Howe 47									
1921.68	143.9	0.52	HF									
21.70	144.9	0.42	HF									
22.68	146.8	0.31	HF									
9319.			Σ 2525									
1921.78	304.4	0.87	HF									
21.81	303.8	0.95	HF									
22.68	301.2	1.15	B									
22.70	306.7	0.96	B									
9381.			Σ 2536									
1921.68	81.1	1.88	HF									
21.72	80.0	1.87	HF									
21.79	80.4	1.68	HF									
9415.			O Σ 375									
1921.68	158.2	0.77	HF									
21.68	156.8	0.66	HF									
21.72	157.3	0.58	HF									
21.79	154.6	0.55	HF									
9450.			Σ 2544									
1922.62	202.0	0.84	HF									
22.67	199.9	0.92	HF									
22.68	195.5	0.92	HF									
22.69	194.3	0.94	HF									
9500.			Σ 2556									
1921.49	125.8	0.30	B									
21.68	128.9	0.27	B									
21.78	123.1	0.29	HF									
22.68	116.5	0.29	B									
22.70	129.3	0.31	B									
9574.			A. G. Clark 10									
1921.68	146.8	0.28	B									
21.72	132.9	0.43	HF									
21.79	127.1	0.29	HF									
22.70	153.2	0.29	B									
22.78	138.5	0.24	B									
9634.			Σ 2583									
1921.63	110.1	1.21	HF									
21.72	115.6	1.29	HF									
21.74	113.0	1.42	JJ									
21.74	111.0	1.76	W									
21.79	111.8	1.24	HF									
9643.			A. G. Clark 11									
1921.68	167.0	0.24	B									
21.82	149.8	0.22	B									
22.70	159.4	0.24	B									
22.78	156.6	0.28	B									
9695.			Ho. 580									
1922.65	273.8	0.74	JJ									
22.68	265.9	0.61	B									
22.70	270.8	0.72	B									
9712.			Σ 2596									
1921.72	321.6	1.93	HF									
21.74	323.0	2.00	JJ									
21.74	321.0	1.87	W									
21.79	320.0	1.74	HF									
9833.			O Σ 395									
1920.89	103.5	0.51	B									
21.68	109.9	0.81	B									
21.78	108.4	0.84	B									
21.79	104.7	0.72	HF									
9908.			β 428									
1921.72	0.8	0.72	HF									
22.62	2.5	0.74	HF									
22.67	359.0	0.70	HF									
22.69	357.7	0.69	HF									
22.74	356.4	0.58	HF									
22.84	357.4	0.65	HF									
9926.			Σ 2628									
1921.81	346.2	3.92	HF									
22.64	345.4	4.12	W									
22.65	348.2	3.96	JJ									
22.66	343.5	4.68	JJ									
10072.			β 984									
1921.78	217.6	0.63	HF									
22.68	216.2	0.78	B									
22.70	215.7	0.75	B									
10147.			Σ 2672									
1922.62	305.8	0.75	W									
22.66	304.5	1.05	JJ									
22.69	299.8	0.63	HF									
10160.			Σ 2673									
1921.76	333.5	2.47	W									
21.81	328.2	2.36	HF									
22.66	333.8	2.63	JJ									
22.67	332.9	2.41	HF									
10281			{ Dawes I BC=O Σ 407									
1921.68	213.2	0.34	B									
21.78	217.3	0.42	B									
22.67	221.3	0.45	HF									
22.69	228.8	0.42	HF									
22.70	222.9	0.34	B									

OBSERVATIONS of DOUBLE STARS, made at the ROYAL OBSERVATORY, GREENWICH.

Date.	Angle.	Dist.	Obs.	Date.	Angle.	Dist.	Obs.	Date.	Angle.	Dist.	Obs.
10310. β 670 _#				10519. β 364 _#				11222. β 989 _#			
1922.67	32.0	0.59	HF	1921.76	223.3	1.23	W	1920.87	102.9	0.17	B
22.69	32.5	0.55	HF	22.62	228.6	1.07	W	20.89	103.8	0.23	B
22.70	35.1	0.49	B	22.66	232.8	1.18	JJ	21.82	127.6	0.15	B
10314. Σ 2696				10533. $O\Sigma$ 413				22.70 279.3 0.24 B			
1922.67	299.1	0.59	HF	1921.78	52.9	0.75	B	22.78	285.4	0.16	B
22.69	298.8	0.55	HF	21.82	50.8	0.64	B	11346. β 75			
22.70	296.4	0.54	B	22.78	48.6	0.64	B	1921.76	47.6	0.82	W
10363. β 151				10685. Σ 2744				22.74 49.3 0.82 HF			
1920.87	345.7	0.35	B	1920.82	157.9	1.93	JJ	22.84	53.9	0.80	HF
20.89	346.7	0.42	B	22.67	158.4	1.10	HF	11599. Σ 2881			
21.68	354.1	0.58	B	22.69	154.8	1.22	HF	1922.76	95.9	1.57	HF
21.78	355.8	0.51	B	22.84	156.4	1.29	HF	22.76	97.1	1.83	JJ
21.82	361.2	0.60	B	10788. Ho. 151				22.77	95.5	1.45	JJ
22.67	356.0	0.64	HF	1922.65	192.2	1.71	JJ	12065. Σ 2958			
22.68	348.4	0.51	B	22.69	190.7	1.66	HF	1921.85	14.2	3.56	HF
22.70	353.1	0.46	B	22.84	186.7	1.25	HF	22.77	11.2	3.84	JJ
10423. $O\Sigma$ 410				10829. $O\Sigma$ 535				22.84 8.2 3.68 HF			
1921.78	15.5	0.63	B	1920.87	33.3	0.22	B	22.85	12.7	3.70	HF
21.82	13.5	0.63	B	20.89	30.0	0.29	B	22.87	11.0	3.86	W
22.78	14.0	0.70	B	21.68	22.6	0.35	B	12094. $O\Sigma$ 483			
10483. Σ 2723				21.78	20.8	0.33	B	1920.88	232.9	0.74	HF
1922.66	102.6	1.23	JJ	21.82	.25.2	0.45	B	20.90	229.2	0.78	HF
22.67	105.8	1.03	HF	22.68	21.0	0.22	B	22.84	237.4	0.90	HF
22.69	102.9	1.04	HF	22.69	18.9	0.27	HF	22.85	241.7	0.81	HF
22.74	103.0	1.04	HF	22.70	15.6	0.28	B	12228. Σ 2990			
22.75	102.1	1.03	HF	22.78	25.7	0.27	B	1920.82	60.7	2.65	JJ
10487. β 64				11001. Σ 2799				20.82 56.8 2.05 HF			
1922.67	206.3	0.32	HF	1921.76	289.5	1.72	W	20.82	61.0	1.81	JJ
22.69	205.2	0.37	HF	21.81	290.7	1.29	HF	20.82	56.9	2.10	HF
22.70	201.3	0.36	B	22.74	287.2	1.33	HF	20.83	59.5	2.29	JJ
10504. Σ 2725				22.84	285.6	1.19	HF	20.88	65.5	2.06	JJ
1922.74	2.7	5.57	HF	11051. Σ 2804				12409. Σ 3020			
22.75	4.3	5.44	HF	1921.85	338.3	2.55	HF	1920.82	107.6	2.03	HF
22.78	3.6	4.98	HF	21.89	340.8	2.68	HF	20.82	106.3	2.10	JJ
22.84	4.9	5.48	HF	22.76	336.6	2.92	HF	20.88	105.8	1.97	HF
				22.78	341.2	2.95	HF	22.77	102.8	2.23	JJ
				22.84	340.2	2.95	HF	12531. Σ 3033			
								1920.82	9.5	3.54	JJ
								20.82	8.1	3.17	HF
								20.91	3.7	3.44	HF
								21.91	8.2	3.47	HF