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NUMBER 134

ONE HUNDRED NEW DOUBLE STARS.

TWELFTH LIST.

All of the double stars in the following list were discovered and measured with the 36-inch telescope. The results are arranged as in the two preceding lists. Attention may be called to Nos. 1745, 1746, and 1777,

which add closer companions to the pairs σ 190, Σ 1224 and Σ 1579 respectively.

R. G. AITKEN.

May 20, 1908.

A	B.D.		R.A. 1900.0 2h 14m 40s	Decl. 1900.0 +42° 11'	Date 1907.79	Angle 241° 8	Distance 1750	Mag. 9.4—12.5	n 2	Notes
1701	B.D.	+41° 446								
1702	A.G. Bonn	2621	3 00 37	+42 43	7.99	232.0	3.96	9.0—9.2	2	{ Also 13 ^m star 21" from A in 115°
1703	B.D.	+43° 663	08 23	+44 07	7.85	148.0	2.52	9.5—13.2	2	
1704	A.G. Bonn	2745	10 56	+42 18	7.86	248.4	0.64	12.2—13.5	2	B and C
					7.86	231.7	73.83	7.7—	1	A and BC
1705	B.D.	+42° 748 ¹	14 23	+43 00	7.85	7.6	3.15	9.5—9.5	2	
1706	A.G. Bonn	2793	14 38	+42 40	7.83	71.0	4.61	9.0—14.5	2	
1707	"	3097	35 05	+43 12	7.68	341.8	8.32	7.5—14.0	1	A and B
					7.68	144.9	68.40	7.5—9.5	1	A and C
					7.69	106.6	4.06	9.5—13.7	2	C and D
1708	"	3297	52 31	+43 04	7.85	332.9	0.86	8.9—9.2	2	
1709	"	3349	56 40	+41 54	7.85	221.4	0.89	7.8—9.7	2	A and B
					7.85	348.4	53.26	7.8—10.0	1	A and C
					7.85	205.6	3.48	10.0—13.7	2	C and D
1710	"	3380	3 59 29	+43 09	7.86	307.3	0.53	8.0—8.0	3	
1711	"	3472	4 07 03	+42 20	8.13	134.8	0.51	8.0—9.8	3	
1712	"	3639	22 03	+40 50	8.04	37.6	0.44	9.0—10.3	3	
1713	"	3641	22 17	+43 54	8.13	224.2	0.35	9.0—9.4	3	
1714	"	3702	27 22	+42 28	8.04	251.6	0.31	8.5—8.8	3	
1715	B.D.	+42° 1000	28 15	+42 53	8.13	238.0	4.16	9.1—13.2	2	
1716	A.G. Bonn	3707	28 22	+41 29	8.14	91.0	0.33	9.0—9.0	3	
1717	B.D.	+42° 1041	4 38 59	+42 57	8.05	187.1	0.34	9.7—9.9	3	following star of three in line
1718	A.G. Bonn	4389	5 15 30	+42 33	7.85	77.6	0.32	9.0—10.2	2	
1719	"	4416	17 12	+42 31	7.85	95.1	0.66	8.5—9.5	2	{ preceding star of a wide pair, Espin 576
1720	"	4485	23 08	+41 41	7.85	269.4	1.88	9.0—10.0	2	
1721	"	4495	23 57	+42 51	7.86	114.9	0.18	8.9—9.0	3	
1722	"	4515	25 10	+42 20	7.86	31.1	1.50	7.5—9.5	2	
1723	B.D.	+40° 1332	27 14	+40 38	7.86	291.6	0.54	9.2—9.7	2	
1724	A.G. Bonn	4842	49 26	+46 40	8.19	257.1	0.44	9.6—9.6	2	A and B
					8.15	176.4	33.30	9.3—9.5	1	AB and C
1725	"	4867	51 31	+45 09	8.19	234.8	0.36	9.3—9.4	2	

¹ 22" prec. and 2' N. of a star 5.3 mag.

			R.A. 1900.0	Decl. 1900.0	Date	Angle	Distance	Mag.	n	Notes
A 1726	A.G. Bonn	4871	5h 52m 01s	+45° 37'	1908.19	272°8	4"98	7.2—14.2	2	
1727	"	4880	52 31	+46 42	8.19	232.5	0.67	9.5— 9.5	2	
1728	"	4917	54 22	+40 40	7.86	119.6	1.58	8.8—12.2	2	
1729	"	4959	5 57 10	+45 36	8.25	8.6	0.28	7.0— 9.0	2	
1730	A.G. Harvard	2465	6 10 59	+54 12	8.12	113.2	2.75	9.0—12.5	2	
1731	A.G. Hels.-Gotha	4484	16 51	+55 43	8.12	310.0	3.14	8.9—13.0	2	
1732	A.G. Harvard	2509	20 50	+52 30	8.12	14.2	3.53	7.5—12.2	2	
1733	"	2568	32 31	+52 54	7.85	124.3	1.28	8.6—12.2	2	
1734	"	2591	35 36	+53 58	7.85	87.0	1.61	9.0—13.0	2	
1735	"	2600	37 24	+54 27	8.15	164.9	0.37	8.5—10.0	3	
1736	A.G. Bonn	5565	45 20	+47 19	8.18	231.2	1.14	8.0—12.0	2	A and B
					8.18	153.4	12.50	—13.2	2	A and C
1737	A.G. Nicolajew	1936	53 17	— 0 13	8.20	210.2	0.31	9.2— 9.8	2	
1738	"	1939	53 29	— 1 29	8.20	208.6	0.21	9.5— 9.5	2	
1739	"	1960	55 50	— 0 32	8.20	97.0	4.30	8.3—13.5	2	
1740	"	1998	6 59 55	— 1 38	8.20	22.9	0.67	9.0—11.0	2	
1741	"	2000	7 00 05	— 0 43	8.20	9.6	0.72	8.4— 8.7	2	
1742	"	2002	00 16	— 1 25	8.20	21.0	3.10	8.9—12.7	2	
1743	A.G. Bonn	5912	7 15 33	+46 31	8.16	269.4	0.94	9.0—10.5	2	
1744	"	6429	8 03 52	+44 57	7.86	300.4	3.46	8.6—10.5	2	
1745 ²	"	6525	14 01	+47 43	7.86	29.0	0.37	9.5—10.0	2	C and c
					7.86	168.0	38.63	8.0— 9.3	1	B and Cc
					7.86	316.7	4.09	8.0—12.0	1	A and D
1746 ³	<i>υ' Cancrī</i>		20 44	+24 50	8.29	140.7	0.18	8.0— 8.1	3	B and C
					8.30	43.0	5.68	6.7— 7.5	2	A and BC
1747	A.G. Bonn	6622	23 29	+46 12	7.86	49.4	0.58	8.8— 9.2	2	
1748	"	6710	33 22	+46 38	8.20	343.4	0.52	9.2—10.5	2	
1749	B.D.	+44°1776	34 21	+44 13	8.20	288.6	0.48	10.0—10.0	2	
1750	A.G. Nicolajew	2673	36 53	— 0 48	8.20	227.2	0.22	8.9— 8.9	2	
1751	"	2674	37 02	— 0 47	8.20	127.2	0.40	9.1— 9.4	2	
1752	A.G. Bonn	6748	37 07	+44 25	8.30	100.5	0.22	9.2— 9.5	3	
1753	B.D.	+45°1630	38 54	+45 27	8.29	264.4	0.63	10.0—10.0	2	
1754	A.G. Nicolajew	2734	49 08	— 2 06	8.07	113.0	0.47	9.1— 9.1	3	
1755	"	2768	8 56 20	— 2 09	8.03	117.6	1.04	8.5—12.8	2	
1756	"	2829	9 11 02	— 0 33	8.24	152.0	1.04	8.7—12.7	2	
1757	"	2839	12 59	— 0 57	8.24	102.9	1.36	9.0—10.5	2	
1758	B.D.	+46°1493	15 48	+46 42	8.27	299.6	0.48	10.0—10.0	2	
1759	A.G. Bonn	7083	17 16	+45 07	8.29	326.3	1.32	8.8—12.5	3	
1760	A.G. Nicolajew	2855	17 26	— 0 39	8.27	146.1	1.74	8.0—11.3	3	
1761	"	2857	18 24	— 0 41	8.27	213.5	1.07	8.9—10.0	3	
1762	A.G. Bonn	7122	21 13	+45 22	8.29	129.3	0.66	9.2— 9.3	3	
1763	A.G. Nicolajew	2878	23 57	— 0 49	8.29	106.0	1.60	6.7—11.0	2	
1764	A.G. Bonn	7150	24 06	+46 30	8.33	199.6	0.32	8.9—10.0	3	
1765	"	7204	31 22	+46 21	8.33	303.9	0.16	8.3— 8.3	3	
1766	A.G. Nicolajew	2976	52 01	— 0 52	8.26	144.3	0.43	9.3— 9.5	3	A and B
					8.26	13.7	14.70	—14.0	2	AB and C
1767	"	2978	9 52 39	— 1 28	8.26	12.8	1.63	7.4—11.0	3	
1768	A.G. Cambridge	5428	10 32 32	+26 00	8.24	80.9	2.10	8.7—11.7	3	
1769	"	5546	48 52	+26 39	8.24	262.6	0.59	9.5— 9.5	3	
1770	B.D.	—10°3159	52 31	—10 33	8.30	249.0	0.42	8.7— 9.0	2	A and B
					8.30	2.3	4.47	8.4— 9.0	2	AB and C
1771	B.D.	—11°2982	52 41	—11 57	8.30	351.7	0.65	9.5— 9.8	2	
1772	B.D.	—13°3266	54 33	—13 58	8.30	210.6	3.74	9.3—10.0	2	
1773	A.G. Berlin B.	4171	57 57	+23 55	8.26	47.8	1.99	8.6—10.8	2	
1774	B.D.	—10°3184	10 58 30	—10 47	8.30	269.4	3.66	6.0—10.5	2	

² B and Cc form two components of the wide triple OΣ 190. The small star D was discovered by Professor Hussey, AD having the designation Hu 224.

³ The wide pair is Σ 1224. According to Burnham the proper motions are: A, 0"108 in 222°0; B, 0"081 in 210°2.

			R.A. 1900.0	Decl. 1900.0	Date	Angle	Distance	Mag.	n	Notes
1775	A.G. Cambridge	5631	11 ^h 01 ^m 08 ^s	+27° 25'	1908.26	43°2	0'37	8.8— 9.5	2	
1776	B.D.	+44°2140	47 39	+44 09	8.29	209.9	1.70	9.5—11.0	2	{ also a 12.5 ^m star 20'4 from A in 209°9
1777 ⁴	65 <i>Ursae Majoris</i>		49 54	+47 02	8.31	2.9	0.26	7.1— 9.0	3	
					8.28	37.0	3.97	7.1— 8.5	1	AB and C
1778	A.G. Bonn	8280	52 38	+45 51	8.32	226.9	2.68	9.0—11.2	2	
1779	“	8304	11 55 51	+44 21	8.34	41.7	0.52	8.5— 9.3	3	
1780	A.G. Leipzig I	4504	12 06 52	+13 33	8.27	344.2	0.96	8.4—11.8	2	
1781	A.G. Bonn	8419	11 20	+45 17	8.32	299.2	2.60	8.9— 9.3	2	
1782	A.G. Leipzig II	6201	36 44	+ 7 55	8.24	143.9	1.94	9.1—12.8	2	{ N. star of a wide pair
1783	A.G. Bonn	8649	40 12	+43 58	8.33	221.1	1.57	9.0— 9.0	2	
1784	A.G. Leipzig II	6313	12 59 01	+ 5 44	8.26	308.3	1.42	8.7—11.5	2	
1785	“	6318	13 00 45	+ 9 36	8.28	130.1	1.76	9.1—10.6	3	
1786	A.G. Leipzig II	6332	04 12	+ 9 20	8.27	95.0	4.15	9.3—10.3	2	
1787	A.G. Leipzig I	4824	14 39	+10 13	8.25	355.8	1.54	8.0—11.3	3	
1788	B.D.	+15°2567	19 33	+15 45	8.27	152.6	1.98	9.0—10.8	2	
1789	A.G. Leipzig II	6425	25 29	+ 8 00	8.28	123.2	0.26	9.0— 9.0	2	
1790	A.G. Berlin A.	4945	26 40	+15 14	8.30	182.8	0.95	9.0—12.2	2	
1791	A.G. Leipzig I	4871	27 52	+14 21	8.28	357.5	3.09	9.1—11.5	2	
1792	A.G. Leipzig II	6443	29 01	+ 9 18	8.25	166.0	0.15	8.8— 8.8	3	
1793	A.G. Leipzig I	4889	32 06	+10 13	8.25	41.7	3.53	8.7—14.0	3	
1794	B.D.	+12°2611	13 34 01	+12 11	8.28	27.8	0.47	9.5— 9.5	2	
1795	A.G. Leipzig II	6630	14 05 55	+ 4 53	8.28	172.8	0.84	8.6—11.0	2	
1796	“	6631	06 30	+ 5 28	8.28	164.4	3.38	8.8—12.5	2	
1797	A.G. Albany	4898	14 07 20	+ 4 20	8.28	154.1	0.30	9.1— 9.4	2	
1798	A.G. Leipzig I	5615	16 03 18	+14 41	8.30	111.4	0.27	8.5— 9.0	3	
1799	A.G. Berlin A.	5787	16 06 54	+15 23	8.30	170.9	0.31	8.9— 9.0	3	
A 1800	B.D.	+54°2647	21 51 30	+54 14	7.76	31.9	1.20	9.5—10.0	2	

⁴ The wide pair is Σ 1579, the principal component of which has a small proper motion, 0'011 in 318°3.