LICK OBSERVATORY BULLETIN

NUMBER 66

ONE HUNDRED NEW DOUBLE STARS

The new double stars contained in this Bulletin are of the same character as those contained in the seven lists previously published. With half a dozen exceptions the measures have all been made with the 36-inch telescope, though nearly half of the stars were discovered with the 12-inch.

The list includes fifteen stars whose components are within $0''.25$ of each other, and only twenty stars that are separated by more than $2''.00$. Special attention may be called to numbers 847 and 883, which consist of closer components to double stars previously catalogued. The former is likely to prove an interesting ternary system. Number 853 is given a place as an illustration of a class of stars of which it would be easy to collect a large list with the 36-inch telescope.

R. G. AITKEN.

December 2, 1904.

A. 801. BD. $+74^\circ 3$.R.A. $0^h 05^m 38^s$; Decl. $+74^\circ 58'$
(9.1—9.5)

1904.628	232.5	1.76	21.3	3	520
.650	231.6	1.89	21.7	3	520
1904.64	232.0	1.82			

802. A.G. Bonn 94.

R.A. $0^h 06^m 57^s$; Decl. $+46^\circ 13'$
(9.1—9.4)

1904.628	339.9	0.18	21.9	3	1500
.902	335.0	0.21	4.4	3	1500
.959	337.7	0.20	2.2	3	1500
1904.83	337.5	0.20			

803. BD. $+72^\circ 15$.R.A. $0^h 12^m 38^s$; Decl. $+72^\circ 23'$
(7.3—7.6)

1904.595	173.5	0.35	21.4	3	1000
.628	174.9	0.32	21.1	3	1000
.650	177.3	0.32	21.5	3	1000
1904.62	175.2	0.33			

A. 804. A.G. Bonn 262.

R.A. $0^h 17^m 53^s$; Decl. $+46^\circ 43'$
(8.3—10.5)

1904.620	321.0	1.46	21.0	3	520
.628	324.0	1.52	22.1	3	520
1904.62	322.5	1.49			

A and a 10th magnitude star $25''.60$ distant in $202^\circ 0$ form the pair h 1960.

805. A.G. Leipzig I. 115.

R.A. $0^h 23^m 58^s$; Decl. $+10^\circ 46'$
(8.0—14.2)

1904.666	304.0	4.22	2.0	3	520
.675	304.6	4.06	2.4	3	520
1904.67	304.3	4.14			

806. A.G. Leipzig I. 145.

R.A. $0^h 30^m 18^s$; Decl. $+11^\circ 18'$
A and B. (8.0—13.0)

1904.598	146.8	1.32	23.5	2	520
.620	145.7	1.23	23.5	3	520
1904.61	146.2	1.28			

C and D. (9.7—12.7)

1904.598	236.1	1.12	23.2	2	520
.620	235.8	1.04	23.4	3	520
1904.61	236.0	1.08			

A and C.

1904.598	10.9	60.05	23.3	2	520
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The Leipzig A.G. catalogue gives the following measure of A and C:

1892 Nov. 5	$10^\circ 2$	$58'' 43$	8—10
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807. A.G. Leipzig I. 149.

R.A. $0^h 31^m 14^s$; Decl. $+11^\circ 40'$
(8.7—10.8)

1904.620	242.3	0.81	23.2	3	520
.666	240.5	0.76	2.4	3	1000
.675	240.2	0.80	2.9	3	1000
1904.65	241.0	0.79			

A. 808. A.G. Leipzig II. 189.R.A. $0^{\text{h}} 32^{\text{m}} 12^{\text{s}}$; Decl. $+8^{\circ} 27'$
(8.7—10.0)

1904.806	147.3	0.50	22.5	3	1000
.916	148.8	0.51	2.2	2	1000
1904.86	148.0	0.50			

809. A.G. Leipzig I. 176.R.A. $0^{\text{h}} 36^{\text{m}} 53^{\text{s}}$; Decl. $+10^{\circ} 27'$
(8.9—10.6)

1904.620	321.9	0.51	23.9	3	1000
.666	321.7	0.62	2.5	3	1000
.675	321.4	0.49	3.1	2	1000
.806	320.8	0.53	22.7	3	1000
1904.69	321.4	0.54			

810. A.G. Leipzig I. 189.R.A. $0^{\text{h}} 38^{\text{m}} 13^{\text{s}}$; Decl. $+11^{\circ} 03'$
(8.9—14.2)

1904.620	314.9	2.66	24.1	3	520
.666	312.2	2.40	2.7	3	520
1904.64	313.6	2.53			

811. BD. $+73^{\circ} 36'$.R.A. $0^{\text{h}} 41^{\text{m}} 06^{\text{s}}$; Decl. $+73^{\circ} 56'$
(9.0—9.2)

1904.806	68.0	0.53	3.3	2	1000
.847	66.8	0.52	2.2	3	1000
1904.83	67.4	0.52			

812. A.G. Bonn 686.R.A. $0^{\text{h}} 46^{\text{m}} 09^{\text{s}}$; Decl. $+47^{\circ} 31'$
(7.1—11.0)

1904.620	326.8	1.74	21.5	3	520
.628	326.0	1.86	22.6	3	520
1904.62	326.4	1.80			

813. A.G. Kasan 206.R.A. $1^{\text{h}} 09^{\text{m}} 38^{\text{s}}$; Decl. $+75^{\circ} 22'$
(9.0—10.2)

1904.806	54.1	1.93	3.5	2	520
.847	53.5	1.91	2.5	3	520
1904.83	53.8	1.92			

814. BD. $+72^{\circ} 67'$.R.A. $1^{\text{h}} 11^{\text{m}} 01^{\text{s}}$; Decl. $+72^{\circ} 51'$
(8.6—8.8)

1904.806	359.2	0.25	3.7	2	1000
.847	359.4	0.23	2.8	3	1000
.902	361.0	0.24	0.1	3	1000
1904.85	359.9	0.24			

A. 815. A.G. Bonn 1277.R.A. $1^{\text{h}} 24^{\text{m}} 48^{\text{s}}$; Decl. $+47^{\circ} 03'$
(8.5—11.0)

1904.595	166.4	1.34	23.2	3	520
.609	167.0	1.47	22.5	3	520
1904.60	166.7	1.40			

816. BD. $+71^{\circ} 87'$.R.A. $1^{\text{h}} 27^{\text{m}} 45^{\text{s}}$; Decl. $+71^{\circ} 56'$
(8.0—8.1)

1904.866	310.2	0.39	4.0	2	1000
.902	315.3	0.37	0.3	3	1000
1904.88	312.8	0.38			

817. A.G. Bonn 1361.R.A. $1^{\text{h}} 31^{\text{m}} 02^{\text{s}}$; Decl. $+48^{\circ} 12'$
(8.2—8.7)

1904.595	45.1	0.39	23.5	3	1000
.609	46.8	0.38	22.7	3	1000
.650	45.6	0.34	22.9	3	1000
1904.62	45.8	0.37			

818. A.G. Bonn 1641.R.A. $1^{\text{h}} 51^{\text{m}} 03^{\text{s}}$; Decl. $+47^{\circ} 43'$
(9.0—9.4)

1904.650	202.4	0.30	23.2	3	1000
.866	210.1	0.35	6.2	2	1000
.902	203.0	0.29	4.7	3	1000
1904.81	205.2	0.31			

819. A.G. Leiden 722.R.A. $1^{\text{h}} 51^{\text{m}} 16^{\text{s}}$; Decl. $+30^{\circ} 32'$
(7.8—9.3)

1904.806	131.6	0.56	0.8	3	1000
.850	131.9	0.50	0.0	2	1000
1904.83	131.8	0.53			

820. A.G. Bonn 1722.R.A. $1^{\text{h}} 55^{\text{m}} 28^{\text{s}}$; Decl. $+47^{\circ} 09'$
(9.0—12.5)

1904.650	245.7	1.75	23.4	3	520
.866	245.5	1.66	6.5	3	520
1904.76	245.6	1.70			

821. A.G. Helsingfors-Gotha 2087.R.A. $2^{\text{h}} 12^{\text{m}} 04^{\text{s}}$; Decl. $+60^{\circ} 01'$
(8.0—12.3)

1904.617	59.2	0.42	23.7	3	1500
.806	65.0	0.57	4.2	2	1000
.850	61.4	0.50	1.1	3	1000
1904.76	61.9	0.50			

A. 822. A.G. Helsingfors-Gotha 2280.

R.A. $2^h 22^m 57^s$; Decl. $+56^\circ 14'$
(8.0—14.5)

1904.806	299.0	4.14	5.4	3	520
.850	298.3	—	1.9	3	270
.866	298.3	3.92	5.4	2	350
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1904.84	298.5	4.03			

823. A.G. Helsingfors-Gotha 2312.

R.A. $2^h 25^m 47^s$; Decl. $+59^\circ 33'$
(7.5—11.5)

1904.617	243.8	0.52	0.3	4	1000
.806	250.5	0.62	4.5	2	1000
.850	241.5	0.52	1.5	3	1000
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1904.76	245.3	0.55			

824. BD. $+59^\circ 508$.

R.A. $2^h 26^m 10^s$; Decl. $+60^\circ 11'$
(9.6—10.0)

1904.806	275.8	0.71	4.6	3	520
.850	277.0	0.68	1.3	3	520
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1904.83	276.4	0.70			

825. A.G. Leiden 1020.

R.A. $2^h 37^m 26^s$; Decl. $+31^\circ 22'$
(8.6—12.5)

1904.806	129.7	1.49	1.3	3	520
.850	127.6	1.37	0.4	3	520
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1904.83	128.6	1.43			

826. A.G. Leiden 1030.

R.A. $2^h 38^m 48^s$; Decl. $+31^\circ 04'$
(8.7—11.8)

1904.806	163.5	4.26	1.5	3	520
.850	162.8	4.12	0.6	3	520
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1904.83	163.2	4.19			

827. BD. $+72^\circ 154$.

R.A. $2^h 52^m 37^s$; Decl. $+72^\circ 13'$
(8.0—8.1)

1904.850	263.2	0.25	2.3	3	1500
.886	263.6	0.23	6.5	3	1000
.902	263.2	0.25	0.9	3	1000
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1904.88	263.3	0.24			

A. 828. A.G. Leipzig II. 1205.

R.A. $3^h 08^m 52^s$; Decl. $+8^\circ 49'$
(9.0—10.2)

1904.809	206.2	0.783	1.8	3	520
.847	207.7	0.72	5.2	2	520
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1904.83	207.0	0.78			

829. A.G. Leipzig I. 1008.

R.A. $3^h 20^m 40^s$; Decl. $+12^\circ 08'$
(8.2—9.7)

1904.809	44.3	0.32	2.2	3	1000
.847	38.4	0.35	5.5	2	1000
.886	38.8	0.33	2.6	3	1000
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1904.85	40.5	0.33			

830. A.G. Leipzig II. 1324.

R.A. $3^h 31^m 05^s$; Decl. $+9^\circ 51'$
(9.1—9.3)

1904.809	72.1	0.24	2.4	3	1000
.847	69.4	0.24	5.7	2	1000
.886	71.8	0.23	2.9	3	1000
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1904.85	71.1	0.24			

831. A.G. Leipzig I. 1109.

R.A. $3^h 43^m 22^s$; Decl. $+11^\circ 24'$
(8.5—9.3)

1904.809	335.9	0.50	2.7	3	1000
.847	341.5	0.48	5.9	2	1000
.886	339.6	0.50	3.0	3	1000
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1904.85	339.0	0.49			

832. A.G. Leipzig I. 1110.

R.A. $3^h 43^m 38^s$; Decl. $+11^\circ 21'$
(9.0—10.2)

1904.809	108.8	1.82	2.9	3	520
.847	109.6	1.95	6.0	2	520
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1904.83	109.2	1.88			

833. A.G. Helsingfors-Gotha 3404.

R.A. $4^h 02^m 12^s$; Decl. $+60^\circ 06'$
(8.4—11.2)

1904.886	359.3	2.51	1.4	3	520
.902	358.4	2.50	2.4	3	520
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1904.89	358.8	2.50			

834. A.G. Helsingfors-Gotha 3533.

R.A. $4^h 17^m 11^s$; Decl. $+56^\circ 09'$
(8.2—8.8)

1904.886	220.1	0.36	2.2	3	1000
.902	219.1	0.37	2.6	3	1000
.927	222.3	0.39	1.5	2	1000
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1904.90	220.5	0.37			

A. 835. BD. +72°226.R.A. 4^h 21^m 05^s ; Decl. +72° 26′

A and B. (8.7–9.3)

1904.806	327.9	0.26	6.3	2	1000
.850	322.7	0.28	2.7	3	1000
.866	328.2	0.31	1.9	2	1000

1904.84	326.3	0.28			
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AB and C. (–12.0)

1904.806	226.4	4.17	6.2	2	520
.850	225.4	4.10	2.5	3	520
.866	226.1	4.23	2.0	2	520

1904.84	226.0	4.17			
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836. BD. –1°669.R.A. 4^h 29^m 15^s ; Decl. –0° 58′

(9.0–10.0)

1904.886	200.4	2.19	3.8	3	520
.916	203.1	2.25	2.9	2	520

1904.90	201.8	2.22			
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837. A.G. Nicolajew 1025.R.A. 4^h 32^m 13^s ; Decl. +0° 05′

(8.4–11.0)

1904.886	342.9	2.18	4.1	3	520
.916	344.0	2.22	3.1	2	520

1904.90	343.4	2.20			
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838. BD. +72°235.R.A. 4^h 32^m 24^s ; Decl. +72° 37′

(8.7–9.1)

1904.850	11.6	0.97	2.9	3	1000
.866	11.2	0.97	2.1	3	520

1904.86	11.4	0.97			
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839. A.G. Nicolajew 1039.R.A. 4^h 33^m 49^s ; Decl. –0° 01′

(8.8–12.0)

1904.886	302.4	1.88	4.2	3	520
.916	301.9	1.84	3.3	2	520

1904.90	302.2	1.86			
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840. BD. +74°232.R.A. 4^h 53^m 09^s ; Decl. +74° 17′

(9.0–10.0)

1904.850	347.9	1.10	3.2	3	520
.866	350.2	1.11	2.3	3	520

1904.86	349.0	1.10			
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841. A.G. Kasan 828.R.A. 4^h 56^m 29^s ; Decl. +75° 33′

B and C. (9.0–9.8)

1904.866	217.1	0.45	2.5	3	1000
.886	216.9	0.48	7.2	3	1000
.902	213.7	0.50	2.8	3	1000

1904.88	215.9	0.48			
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A and BC. (7.3–9.0)

1904.866	340.1	48.82	2.4	3	520
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A. 842. A.G. Kasan 840.R.A. 5^h 00^m 23^s ; Decl. +75° 20′

B and C. (8.7–11.0)

1904.866	216.5	1.34	2.8	3	520
.886	219.7	1.44	6.9	3	520
.902	217.3	1.26	3.0	3	520

1904.88	217.8	1.35			
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A and B. (8.5–8.7)

1904.866	283.9	49.37	2.6	3	520
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843. BD. +73°283.R.A. 5^h 11^m 02^s ; Decl. +73° 41′

(8.5–10.8)

1904.886	26.8	0.76	7.5	3	1000
.902	30.8	0.62	3.1	3	1000

.927	32.3	0.66	2.7	2	1000
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1904.90	30.0	0.68			
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844. A.G. Nicolajew 1254.R.A. 5^h 11^m 21^s ; Decl. –1° 45′

(8.8–9.1)

1904.809	352.2	0.21	4.5	3	1000
.850	349.6	0.25	4.1	4	1000

.916	350.2	0.20	3.5	3	1000
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1904.86	350.7	0.22			
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845. BD. +73°286.R.A. 5^h 13^m 19^s ; Decl. +74° 00′

(9.0–9.8)

1904.886	125.2	1.36	7.6	3	520
.902	126.7	1.49	3.2	3	520

1904.89	126.0	1.42			
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846. BD. +74°241.R.A. 5^h 14^m 37^s ; Decl. +74° 28′

(7.0–10.5)

1904.886	340.5	0.94	7.7	3	1000
.902	343.9	1.00	3.3	3	1000

.927	342.2	1.00	2.9	2	1000
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1904.90	342.2	0.98			
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847. A.G. Nicolajew 1297.R.A. 5^h 18^m 46^s ; Decl. –0° 58′

B and C. (8.0–8.1)

1904.809	141.4	0.25	5.0	3	1000
.850	140.2	0.26	4.3	4	1500

.883	143.0	0.25	4.0	2	1000
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1904.85	141.5	0.25			
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A and BC = Peters –. (7.8–7.8)

1904.809	160.2	1.85	4.9	3	520
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.850	159.3	1.98	4.2	4	520
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.883	162.1	1.78	4.2	2	520
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1904.85	160.5	1.87			
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The wide pair is also known as Winnecke 3.
There is some evidence of motion.

A. 848. A.G. Nicolajew 1302.R.A. $5^h 20^m 25^s$; Decl. $-0^\circ 38'$
(7.5—8.1)

1904.850	35.4	0.20	4.4	4	1500
.883	36.8	0.23	4.6	2	1000
.916	34.7	0.23	3.7	2	1000
1904.88	35.6	0.22			

849. A.G. Nicolajew 1336.R.A. $5^h 23^m 52^s$; Decl. $-1^\circ 51'$
(9.0—10.2)

1904.809	93.9	0.66	5.8	3	1000
.850	94.3	0.70	4.5	4	1000
1904.83	94.1	0.68			

850. A.G. Nicolajew 1346.R.A. $5^h 24^m 36^s$; Decl. $-0^\circ 53'$
(8.1—12.5)

1904.809	155.4	2.32	5.9	3	520
.850	154.6	1.97	4.6	4	520
1904.83	155.0	2.14			

851. A.G. Nicolajew 1347.R.A. $5^h 24^m 38^s$; Decl. $+0^\circ 06'$
(9.0—13.5)

1904.809	307.6	1.72	5.5	3	520
.850	307.5	1.71	4.8	3	520
1904.83	307.6	1.72			

852. A.G. Nicolajew 1355.R.A. $5^h 25^m 39^s$; Decl. $-0^\circ 27'$
(8.8—9.3)

1904.809	166.4	0.24	6.0	2	1000
.850	162.9	0.25	5.0	3	1000
.883	163.1	0.25	4.8	3	1000
1904.85	164.1	0.25			

853. A.G. Nicolajew 1380.R.A. $5^h 28^m 45^s$; Decl. $-0^\circ 09'$
B and C. (13.7—14.7)

1904.850	61.2	0.85	5.2	3	520
.883	64.3	0.91	5.0	3	520
1904.87	62.8	0.88			

A and B. (8.8—13.7)

1904.850	215.9	21.51	5.3	3	520
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854. A.G. Nicolajew 1703.R.A. $6^h 24^m 39^s$; Decl. $-0^\circ 02'$
(8.5—12.0)

1904.886	162.8	2.00	5.9	2	520
.916	159.2	2.00	4.4	2	520
1904.90	161.0	2.00			

A. 855. A.G. Nicolajew 1709.R.A. $6^h 25^m 28^s$; Decl. $-0^\circ 19'$
(9.0—12.2)

1904.886	29.1	2.57	6.1	2	520
.916	28.3	2.60	4.6	2	520
1904.90	28.7	2.58			

856. BD. $+81^\circ 530$.R.A. $15^h 50^m 43^s$; Decl. $+81^\circ 53'$
(8.3—13.0)

1904.593	349.2	5.17	19.0	3	400
.894	348.1	4.84	24.2	2	400
1904.74	348.6	5.00			

The bright star is Carrington 2392. Both measures made with 12-inch telescope.

857. BD. $+84^\circ 389$.R.A. $17^h 54^m 23^s$; Decl. $+84^\circ 46'$
(8.7—12.8)

1904.387	50.3	1.95	15.5	2	520
.894	52.0	1.90	24.6	2	400
1904.64	51.2	1.92			

The second night's measure made with the 12-inch. The star is Carrington 2679.

858. A.G. Nicolajew 4662.R.A. $18^h 38^m 35^s$; Decl. $-0^\circ 20'$
(9.0—14.0)

1904.666	323.3	1.06	19.7	3	520
.683	321.9	1.13	20.8	3	520
1904.67	322.6	1.10			

859. A.G. Nicolajew 4664.R.A. $18^h 38^m 46^s$; Decl. $-0^\circ 19'$
(8.4—8.8)

1904.666	14.4	0.26	20.1	3	1000
.672	17.7	0.25	20.7	2	1000
.683	15.4	0.25	21.0	3	1000
1904.67	15.8	0.25			

860. A.G. Nicolajew 4700.R.A. $18^h 46^m 05^s$; Decl. $-0^\circ 44'$
(9.1—9.2)

1904.666	255.4	0.22	20.5	3	1000
.806	251.5	0.18	20.7	3	1000
1904.74	253.4	0.20			

861. A.G. Nicolajew 4717.R.A. $18^h 49^m 16^s$; Decl. $-1^\circ 10'$
(8.9—10.0)

1904.666	343.7	1.44	20.9	3	520
.683	343.8	1.35	21.3	3	520
1904.67	343.8	1.40			

A. 862. A.G. Nicolajew 4718.R.A. $18^{\text{h}} 49^{\text{m}} 25^{\text{s}}$; Decl. $-1^{\circ} 25'$
(8.9—12.5)

1904.666	160.8	4.47	21.0	3	520
.683	160.2	4.43	21.5	2	520
1904.67	160.5	4.45			

863. A.G. Nicolajew 4796.R.A. $19^{\text{h}} 04^{\text{m}} 42^{\text{s}}$; Decl. $-0^{\circ} 27'$
(8.8—10.2)

1904.666	124.7	0.40	21.3	3	1000
.806	121.0	0.41	20.8	3	1000
1904.74	122.8	0.40			

864. BD. $+72^{\circ} 904$.R.A. $19^{\text{h}} 37^{\text{m}} 11^{\text{s}}$; Decl. $+72^{\circ} 54'$
(8.8—9.0)

1904.576	43.3	0.83	23.2	3	520
.675	43.8	0.80	22.4	3	1000
1904.63	43.6	0.82			

865. A.G. Christiania 3130.R.A. $20^{\text{h}} 01^{\text{m}} 49^{\text{s}}$; Decl. $+70^{\circ} 10'$
(8.0—10.4)

1904.568	85.7	2.47	17.2	3	625
.576	86.1	2.27	23.5	3	520
1904.57	85.9	2.37			

First measure with 12-inch.

866. A.G. Helsingfors-Gotha 11083.R.A. $20^{\text{h}} 03^{\text{m}} 17^{\text{s}}$; Decl. $+58^{\circ} 06'$
B and C. (10.2—10.5)

1904.576	189.4	0.55	22.4	3	1000
.617	189.0	0.50	22.5	4	1000
1904.60	189.2	0.52			

A and BC. (9.0—9.7)

1904.576	179.8	31.05	22.5	3	520
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867. BD. $+72^{\circ} 933$.R.A. $20^{\text{h}} 05^{\text{m}} 45^{\text{s}}$; Decl. $+72^{\circ} 42'$
(8.0—13.3)

1904.576	150.6	1.95	23.8	3	520
.675	142.4	2.10	22.8	3	520
.847	147.1	1.96	1.2	3	520
1904.70	146.7	2.00			

868. A.G. Nicolajew 5114.R.A. $20^{\text{h}} 11^{\text{m}} 47^{\text{s}}$; Decl. $-1^{\circ} 48'$
(9.1—9.6)

1904.560	329.4	0.20	19.8	3	1000
.636	333.3	0.27	20.0	2	1000
.656	330.8	0.23	21.3	3	1000
1904.62	331.2	0.23			

A. 869. A.G. Kasan 3509.R.A. $20^{\text{h}} 22^{\text{m}} 13^{\text{s}}$; Decl. $+75^{\circ} 46'$
(9.1—9.5)

1904.576	269.7	1.88	24.2	3	520
.675	267.9	1.89	22.9	3	520
1904.65	268.8	1.88			

870. BD. $+73^{\circ} 905$.R.A. $20^{\text{h}} 22^{\text{m}} 46^{\text{s}}$; Decl. $+73^{\circ} 26'$
(9.3—10.2)

1904.675	240.7	0.55	23.2	3	1000
.847	238.8	0.47	1.4	3	1000
1904.76	239.8	0.51			

871. BD. $+72^{\circ} 955$.R.A. $20^{\text{h}} 27^{\text{m}} 58^{\text{s}}$; Decl. $+72^{\circ} 25'$
(8.7—9.1)

1904.576	96.3	0.31	23.9	3	1000
.675	93.8	0.36	23.4	3	1000
.847	95.6	0.28	1.7	3	1000
1904.70	95.2	0.32			

872. A.G. Helsingfors-Gotha 11437.R.A. $20^{\text{h}} 28^{\text{m}} 46^{\text{s}}$; Decl. $+56^{\circ} 53'$
(9.2—9.6)

1904.500	190.2	0.29	18.2	3	1000
.617	190.1	0.29	22.8	4	1000
.672	191.2	0.29	24.1	3	1000
1904.60	190.5	0.29			

873. A.G. Christiania 3205.R.A. $20^{\text{h}} 35^{\text{m}} 01^{\text{s}}$; Decl. $+70^{\circ} 09'$
(9.2—9.7)

1904.576	27.4	0.42	24.4	3	1000
.650	28.6	0.36	18.5	3	1000
.672	31.2	0.42	24.4	3	1000
1904.63	29.1	0.40			

874. A.G. Nicolajew 5241.R.A. $20^{\text{h}} 35^{\text{m}} 46^{\text{s}}$; Decl. $-0^{\circ} 57'$
(8.8—12.5)

1904.560	342.6	1.55	20.7	3	520
.656	339.7	1.66	21.6	3	520
1904.61	341.2	1.60			

875. BD. $+11^{\circ} 4364$.R.A. $20^{\text{h}} 39^{\text{m}} 37^{\text{s}}$; Decl. $+11^{\circ} 43'$
(9.1—10.8)

1904.532	208.5	2.25	19.8	3	520
.598	208.7	2.35	20.0	3	520
1904.56	208.6	2.30			

A. 876. A.G. Nicolajew 5264.R.A. $20^{\text{h}} 40^{\text{m}} 20^{\text{s}}$; Decl. $+0^{\circ} 01'$
(8.9—9.5)

1904.656	68.2	0.56	21.7	3	1000
.666	68.0	0.54	22.2	3	1000
.672	68.5	0.57	21.6	3	1000
1904.66	68.2	0.56			

877. A.G. Nicolajew 5303.R.A. $20^{\text{h}} 49^{\text{m}} 28^{\text{s}}$; Decl. $-1^{\circ} 05'$
(9.0—9.5)

1904.656	41.4	0.43	22.5	2	1000
.666	41.4	0.46	22.4	3	1000
.672	42.5	0.46	21.8	3	1000
1904.66	41.8	0.45			

878. BD. $+74^{\circ} 898$.R.A. $21^{\text{h}} 00^{\text{m}} 00^{\text{s}}$; Decl. $+74^{\circ} 31'$
(8.6—12.0)

1904.587	45.3	2.62	19.0	3	625
.650	44.8	2.70	19.3	3	520
.672	47.4	2.55	24.9	3	520
1904.64	45.8	2.62			

879. BD. $+73^{\circ} 922$.R.A. $21^{\text{h}} 00^{\text{m}} 04^{\text{s}}$; Decl. $+73^{\circ} 53'$
(7.5—12.8)

1904.587	142.0	3.99	18.9	3	400
.650	138.0	4.12	19.2	3	520
.672	140.8	4.06	1.0	3	520
1904.63	140.3	4.06			

880. BD. $+72^{\circ} 974$.R.A. $21^{\text{h}} 01^{\text{m}} 08^{\text{s}}$; Decl. $+72^{\circ} 35'$
(9.1—9.2)

1904.650	47.1	0.36	18.9	3	1000
.672	45.3	0.46	1.2	3	1000
.675	45.4	0.41	23.9	3	1000
1904.67	45.9	0.41			

881. A.G. Bonn 15091.R.A. $21^{\text{h}} 03^{\text{m}} 38^{\text{s}}$; Decl. $+44^{\circ} 16'$
(7.5—12.0)

1904.549	217.4	4.02	18.5	3	625
.579	220.3	4.25	24.0	3	520
1904.56	218.8	4.14			

The first measure made with 12-inch.

882. A.G. Bonn 15163.R.A. $21^{\text{h}} 07^{\text{m}} 08^{\text{s}}$; Decl. $+43^{\circ} 53'$
(7.8—14.0)

1904.576	233.4	2.27	20.2	3	520
.620	229.8	2.23	19.4	3	520
1904.60	231.6	2.25			

A. 883. A.G. Nicolajew 5402.R.A. $21^{\text{h}} 09^{\text{m}} 32^{\text{s}}$; Decl. $-1^{\circ} 15'$
A and B. (7.6—7.8)

1904.666	46.0	0.14	23.0	3	1900
.672	40.1	0.15	22.2	3	1900
.806	45.2	0.13	21.5	3	1900
1904.71	43.8	0.14			

AB and C = $\Sigma 2775$. (7.2—10.5)

1904.666	177.7	21.27	23.1	3	520
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884. A.G. Bonn 15220.R.A. $21^{\text{h}} 09^{\text{m}} 48^{\text{s}}$; Decl. $+46^{\circ} 30'$
(8.6—8.7)

1904.576	187.1	0.35	19.7	3	1000
.620	186.3	0.34	19.7	4	1000
.675	185.8	0.41	24.7	3	1000
1904.62	186.4	0.37			

885. A.G. Bonn 15298.R.A. $21^{\text{h}} 13^{\text{m}} 14^{\text{s}}$; Decl. $+44^{\circ} 31'$
(8.7—13.5)

1904.579	165.7	4.11	24.5	3	520
.620	163.3	4.17	19.5	3	520
1904.60	164.5	4.14			

886. A.G. Nicolajew 5442.R.A. $21^{\text{h}} 18^{\text{m}} 37^{\text{s}}$; Decl. $+0^{\circ} 08'$
(8.9—13.0)

1904.672	342.3	2.54	22.3	3	520
.683	340.6	2.43	23.1	2	520
1904.68	341.4	2.48			

887. A.G. Leipzig I. 8489.R.A. $21^{\text{h}} 20^{\text{m}} 36^{\text{s}}$; Decl. $+10^{\circ} 55'$
(8.5—9.1)

1904.598	108.0	0.24	20.7	3	1500
.672	116.4	0.25	23.8	3	1000
.850	108.0	0.26	23.2	3	1000
1904.71	110.8	0.25			

There are several faint stars near, the nearest one being a 14.5 magnitude star $10''.5$ distant in $312^{\circ}.4$.**888. A.G. Nicolajew 5462.**R.A. $21^{\text{h}} 25^{\text{m}} 35^{\text{s}}$; Decl. $-0^{\circ} 21'$
(9.3—9.5)

1904.672	78.2	0.68	22.6	3	1000
.683	76.9	0.61	23.3	2	520
.806	76.0	0.70	21.6	3	1000
1904.72	77.0	0.66			

A. 889. A.G. Cambridge 12951.R.A. $21^{\text{h}} 46^{\text{m}} 33^{\text{s}}$; Decl. $+28^{\circ} 42'$
(9.0—10.0)

1904.502	57.2	0.23	20.1	3	1500
.620	60.0	0.25	18.8	3	1000
.675	55.3	0.24	1.4	3	1000
1904.60	57.5	0.24			

890. BD. $+46^{\circ} 3485$.R.A. $21^{\text{h}} 50^{\text{m}} 46^{\text{s}}$; Decl. $+47^{\circ} 01'$
(9.3—13.5)

1904.609	234.5	1.12	20.1	3	520
.620	232.6	1.08	19.9	4	520
1904.61	233.6	1.10			

891. A.G. Nicolajew 5537.R.A. $21^{\text{h}} 52^{\text{m}} 33^{\text{s}}$; Decl. $-1^{\circ} 06'$
(8.7—8.9)

1904.683	52.8	0.36	23.7	2	1000
.806	59.3	0.46	21.8	3	1000
.850	58.6	0.35	22.1	3	1000
1904.78	56.9	0.39			

892. A.G. Kasan 3821.R.A. $21^{\text{h}} 56^{\text{m}} 40^{\text{s}}$; Decl. $+75^{\circ} 37'$
(9.0—13.3)

1904.595	225.3	1.08	19.6	3	520
.650	228.9	1.12	19.7	3	520
.675	231.9	1.23	24.4	3	520
1904.64	228.7	1.14			

893. A.G. Cambridge 13169.R.A. $22^{\text{h}} 00^{\text{m}} 33^{\text{s}}$; Decl. $+29^{\circ} 23'$
(8.5—9.5)

1904.675	243.1	0.21	1.4	3	1900
.850	242.2	0.18	23.6	3	1500
.916	243.8	0.21	0.9	3	1000
1904.81	243.0	0.20			

894. BD. $+72^{\circ} 1015$.R.A. $22^{\text{h}} 02^{\text{m}} 41^{\text{s}}$; Decl. $+72^{\circ} 42'$
(9.1—9.4)

1904.595	136.2	0.38	19.3	3	1000
.650	137.8	0.36	19.6	3	1000
.675	136.2	0.31	24.2	3	1000
1904.64	136.7	0.35			

A. 895. BD. $+71^{\circ} 1116$.R.A. $22^{\text{h}} 11^{\text{m}} 52^{\text{s}}$; Decl. $+71^{\circ} 58'$
(8.0—11.2)

1904.576	180.9	1.12	0.8	3	1000
.579	179.7	1.20	19.8	3	1000
.595	178.5	1.08	19.9	3	1000
1904.58	179.7	1.13			

896. A.G. Nicolajew 5831.R.A. $23^{\text{h}} 23^{\text{m}} 39^{\text{s}}$; Decl. $-1^{\circ} 23'$
(7.5—10.0)

1904.666	70.8	0.60	0.6	3	1000
.847	71.5	0.57	0.8	3	1000
.916	69.8	0.48	1.2	2	1000
1904.81	70.7	0.55			

897. BD. $+72^{\circ} 1107$.R.A. $23^{\text{h}} 27^{\text{m}} 41^{\text{s}}$; Decl. $+72^{\circ} 44'$
(8.9—9.6)

1904.595	114.8	—	20.7	3	1000
.628	114.5	0.45	20.5	3	1000
.650	115.4	0.41	20.3	3	1000
1904.62	114.9	0.43			

898. BD. $+72^{\circ} 1111$.R.A. $23^{\text{h}} 34^{\text{m}} 11^{\text{s}}$; Decl. $+73^{\circ} 05'$
(8.8—11.0)

1904.595	138.4	1.53	20.8	3	520
.628	137.4	1.66	20.7	3	520
.650	138.3	1.79	20.9	2	520
1904.62	138.0	1.66			

A very faint $2''$ pair is in the field, preceding this double.

899. A.G. Nicolajew 5894.R.A. $23^{\text{h}} 42^{\text{m}} 35^{\text{s}}$; Decl. $-1^{\circ} 19'$
(7.5—14.5)

1904.666	38.9	3.62	1.3	3	520
.847	36.8	3.62	1.0	2	520
1904.76	37.8	3.62			

900. BD. $+72^{\circ} 1127$.R.A. $23^{\text{h}} 52^{\text{m}} 22^{\text{s}}$; Decl. $+72^{\circ} 18'$
(7.8—8.3)

1904.595	107.0	0.28	21.1	3	1000
.628	105.2	0.29	20.8	3	1000
.650	98.8	0.37	21.3	3	1000
1904.62	103.7	0.31			