

PHOTOMETRIC OBSERVATIONS OF LONG-PERIOD COMETS AT LARGE HELIOCENTRIC
DISTANCES IN THE YEARS 1927 TO 1955

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ABSTRACT. This paper is a continuation of the published list of photometric observations of long-period comets and contains a list of photometric observations of 22 long-period comets which passed through perihelion in the years 1927 to 1955. In selecting the objects, two basic criteria were adopted. The first condition was that the comet had been observed at a large distance from the Sun and over a sufficient range of heliocentric distances. The second was the availability of well determined orbits which would allow to distinguish between old and new comets in Oort's sense, and to classify the photometric development according to the dynamical type of orbit. The paper contains 1176 estimates and brightness measurements of comets together with time, data on the magnitude type, type, diameter of objective and light-gathering power of the instrument used, references to literature and calculated values of heliocentric and geocentric distances, as well as the phase angles for the dates of observations.

ФОТОМЕТРИЧЕСКИЕ НАБЛЮДЕНИЯ ДОЛГО-ПЕРИОДИЧЕСКИХ КОМЕТ НА БОЛЬШИХ РАССТОЯНИЯХ ОТ СОЛНЦА В 1927-1955 ГГ. Работа является продолжением напечатанного списка фотометрических наблюдений долго-периодических комет и содержит список фотометрических наблюдений 22 долго-периодических комет, проходивших через перигелий в 1927-1955 гг. Выбор объектов был сделан применением двух точек зрения. Во-первых, за кометой должно было наблюдать на больших расстояниях от Солнца в достаточном диапазоне гелиоцентрических расстояний. Вторым кри-

териум было знание хорошо известных данных об орбитах, предоставляющих возможность различить старые и новые кометы в смысле Оорта и тоже возможную классификацию фотометрического развития в зависимости от типа орбиты. Работа приводит 1176 оценок и измерений блеска комет вместе с данными о времени, с данными о типе звездной величины, о типе, диаметре объектива и светосиле употребленного телескопа, с точными ссылками на литературу и с исчисленными гелиоцентрическими и геоцентрическими расстояниями и углами фазы для моментов наблюдений.

FOTOMETRICKÉ POZOROVANIA DLHO-PERIODICKÝCH KOMÉT VO VEĽKÝCH VZDIALENOSTIACH OD SLNKA V OBDOBÍ ROKOV 1927 - 1955. Práca je pokračovaním publikovaného zoznamu fotometrických pozorovaní dlhoperiodických komét a obsahuje zoznam fotometrických pozorovaní 22 dlhoperiodických komét, ktoré prešli perihéliom v rokoch 1927 - 1955. Pri výbere objektov boli uplatnené dve základné hľadiská. Prvou podmienkou bolo, aby kométa bola pozorovaná vo veľkých vzdialenostiach od Slnka v dostatočnom rozsahu heliocentrických vzdialeností. Druhým kritériom bola znalosť dobre zaručených dráh, ktoré by umožnili rozlíšenie komét na staré a nové v zmysle Oorta a prípadnú klasifikáciu fotometrického vývoja podľa typu dráhy. Práca obsahuje 1176 odhadov a meraní jasnosti komét spolu s časovými údajmi, s údajmi o type magnitúdy, o type, priemere objektívu a svetelnosti použitého prístroja, s presnými odkazmi na literatúru a vypočítanými hodnotami heliocentrických vzdialeností, geocentrických vzdialeností a fázových uhlov pre dátumy pozorovaní.

1. MATERIAL USED

The presented paper is a continuation of the list of compiled photometric observations of comets with orbits close to a parabola at large heliocentric distances, the first part of which, i.e. the observations made in 1861 - 1925, was published in the 11th volume of these contributions (Svoreň, 1983). In that paper, reasons are given for studying comets at large distances from the Sun, as well as the criteria for selecting the studied objects and all other necessary data which need not be repeated here. The list of excerpted photometric data for heliocentric distances of over 2.5 AU is supplemented by the corresponding geocentric and heliocentric distances. The orbital elements from Marsden's catalogue (1979) were used for all comets. r , Δ and the phase angle φ , for which

$$\varphi = \arccos \frac{r^2 + \Delta^2 - 1}{2r\Delta} \quad (1)$$

were computed using an ephemeris program written by Pittich (1975).

This paper contains second part of the collected material concerning long-period comets; others parts will be published elsewhere.

2. LIST OF PHOTOMETRIC OBSERVATIONS

The list contains exclusively data from the referenced literature which have not been supplemented in any way (e.g., with the indication of the instrument or method probably used).

The data have been arranged according to individual comets in the order of their definitive designation, the individual columns of the tables containing the following:

- N - ordinal number of observation,
- t - date of observation, the first two digits representing the last two digits of the year, the next two the month and the last two the day,
- m - apparent brightness of the comet in magnitudes,
- k - type of magnitude according to the observer's data: C - total brightness, J - brightness of photometric nucleus (central condensation). If the observer has omitted to give the type, there is no symbol in this column,
- v - method: 1 - visual, 2 - photographic, 3 - photoelectric,
- d - diameter of objective of telescope used in metres,
- f - inverse value of the light-gathering power of the telescope used,
- b - type of instrument: A - refractor, B - binoculars, C - Coudé system, D - comet-seeker, H - finder, K - short-focus camera, M - Maksutov's camera, O - naked eye, R - reflector, S - Schmidt camera,
- observer,
- l - reference. Since references to individual observations rather than to individual papers are involved, the observer and the relevant page of the paper are given in case that the autor of the paper is not the same as the observer. If the observer is also the author of the paper, the reference has the usual form, i.e. the first page of the relevant paper is given. Other exceptions are given in notes,
- r - heliocentric distance in AU,
- Δ - geocentric distance in AU,
- φ - Sun-comet-Earth phase angle in degrees.

N	t	m	k	v	d	f	b	observer	l	r	Δ	φ
Comet 1927 IV Stearns - before perihelion												
1	270310	10.0		1	0.50		A	Stearns	1927	3.69	3.10	14
2	270312	7.0	C	2				Van Biesbroeck	1929	3.69	3.07	13
3	270312	8.5	C	2				Van Biesbroeck	1929	3.69	3.07	13
4	270312	11.0	J					Van Biesbroeck	1929	3.69	3.07	13
5	270312	12.5	J					Cunningham	1927	3.69	3.07	13
6	270313	7.2		2	0.61	4	R	Van Biesbroeck	1930a	3.68	3.05	13
7	270314	10.0						Vinter Hansen	1927	3.68	3.04	13
8	270315	10.7			0.65		A	Struve	1927	3.68	3.03	13
9	270315	12.5		2				Filippov	1927	3.68	3.03	13
10	270316	11.0			0.66			Burton	1927	3.68	3.01	13

notes: N = 2 - exposure time 24 minutes, N = 3 - exposure time 5 minutes.

N	t	m	k	v	d	f	b	observer	l	r	Δ	φ
Comet 1927.IV Stearns - after perihelion												
1	270324	9.5	J					Mündler	1927	3.68	2.92	11
2	270324	10.0	C	0.24		A		Dubjago	1929	3.68	2.92	11
3	270325	9.5	C	0.24		A		Dubjago	1929	3.68	2.91	11
4	270326	12.0		0.66				Burton	1927	3.68	2.90	11
5	270326	10.0		0.40		A		Pokrowsky	1927	3.68	2.90	11
6	270327	11.0	C			K		Merton	1933	3.68	2.89	11
7	270328	10.5		0.40		C		Schaumasse	1928	3.68	2.88	10
8	270328	10.0	C	0.24		A		Dubjago	1929	3.68	2.88	10
9	270328	10.0	C	0.24		A		Matinov	1929	3.68	2.88	10
10	270331	9.5	C	1.02		A		Van Biesbroeck	1930a	3.68	2.85	10
11	270331	12.8	J	0.40				Plakidis	1931	3.68	2.85	10
12	270401	13.0	J	0.40				Plakidis	1931	3.68	2.84	9
13	270401	9.7	C	0.24		A		Dubjago	1929	3.68	2.84	9
14	270403	10.5		0.38				Giacobini	1929	3.69	2.82	9
15	270403	10.0	C	0.24		A		Matinov	1929	3.69	2.82	9
16	270404	12.4		2				Filippov	1927	3.69	2.82	9
17	270404	11.5	J					Hoffmeister	1927	3.69	2.82	9
18	270404	12.8	J	0.40				Adamopoulos	1928	3.69	2.82	9
19	270405	11.0	C					Peisino	1927a	3.69	2.81	9
20	270405	10.2		0.65		A		Struve	1928a	3.69	2.81	9
21	270408	10.0		2				Jekhowsky	1928	3.69	2.79	8
22	270408	9.8	C	0.24		A		Dubjago	1929	3.69	2.79	8
23	270409	12.2	J	0.40				Plakidis	1931	3.69	2.79	8
24	270409	12.2	J	0.40				Adamopoulos	1928	3.69	2.79	8
25	270410	10.0		2				Jekhowsky	1928	3.69	2.78	8
26	270413	10.0	C	0.24		A		Dubjago	1929	3.69	2.77	7
27	270414	13.0	J	0.40				Plakidis	1931	3.69	2.77	7
28	270422	10.0	C	0.76		R		Merton	1933	3.69	2.75	6
29	270422	9.5	C	1.02		A		Van Biesbroeck	1930a	3.69	2.75	6
30	270422	12.0	J	1.02		A		Van Biesbroeck	1930a	3.69	2.75	6
31	270422	10.5		0.33		C		Chofardet	1928	3.69	2.75	6
32	270422	11.0	C	0.71		A		Krumpholz	1928	3.69	2.75	6
33	270426	11.4		2				Filippov	1928	3.70	2.76	6
34	270426	9.0	C	0.24		A		Matinov	1929	3.70	2.76	6
35	270427	10.6		0.65		A		Struve	1928a	3.70	2.76	7
36	270428	9.5	C	1.02		A		Van Biesbroeck	1930a	3.70	2.76	7
37	270429	10.8	J	0.40				Plakidis	1931	3.70	2.76	7
38	270429	9.5	C	0.24		A		Dubjago	1929	3.70	2.76	7
39	270429	10.8	J	0.24		A		Dubjago	1929	3.70	2.76	7
40	270430	9.5	C	0.24		A		Matinov	1929	3.70	2.77	7
41	270430	10.5	J	0.24		A		Matinov	1929	3.70	2.77	7
42	270501	9.9		0.65		A		Struve	1928a	3.70	2.77	7
43	270503	9.8	J	0.40				Plakidis	1931	3.70	2.78	7

N	t	m	k	v	d	f	b	observer	l	r	Δ	ψ
44	270504	9.7	C		0.24		A	Matinov	1929	3.70	2.78	7
45	270504	10.6	J		0.24		A	Matinov	1929	3.70	2.78	7
46	270506	9.5	C		1.02		A	Van Biesbroeck	1930a	3.71	2.79	8
47	270507	10.0			0.33		C	Chofardet	1928	3.71	2.80	8
48	270507	10.0	J		0.25		A	Savitsky	1927	3.71	2.80	8
49	270520	9.0			0.33		C	Chofardet	1928	3.72	2.90	10
50	270520	10.8	C		0.32			Krumpholz	1928	3.72	2.90	10
51	270520	12.5	J		0.40			Alexandrov	1929	3.72	2.90	10
52	270523	11.6		2				Filippov	1928	3.72	2.94	11
53	270523	10.0	C		0.24		A	Matinov	1929	3.72	2.94	11
54	270523	11.0	J		0.24		A	Matinov	1929	3.72	2.94	11
55	270523	12.2	J		0.40			Alexandrov	1929	3.72	2.94	11
56	270524	10.0			0.40		C	Schaumasse	1928	3.73	2.95	11
57	270525	10.0	C		1.02		A	Van Biesbroeck	1930a	3.73	2.96	11
58	270525	11.5			0.38			Giacobini	1929	3.73	2.96	11
59	270525	12.0	J		0.40			Alexandrov	1929	3.73	2.96	11
60	270531	12.2		2				Filippov	1928	3.74	3.03	12
61	270601	11.0	J		0.40			Adamopoulos	1928	3.74	3.05	13
62	270602	10.0	C		0.32			Krumpholz	1928	3.74	3.06	13
63	270603	12.8		2				Filippov	1928	3.74	3.07	13
64	270616	10.0			0.40		C	Schaumasse	1928	3.76	3.26	15
65	270616	11.8	J		0.40			Adamopoulos	1928	3.76	3.26	15
66	270619	10.9						Peisino	1927b	3.77	3.31	15
67	270620	11.0						Peisino	1927b	3.77	3.33	15
68	270621	11.0						Peisino	1927b	3.77	3.34	15
69	270622	12.0	C		1.02		A	Van Biesbroeck	1930a	3.77	3.36	15
70	270622	13.0	J		1.02		A	Van Biesbroeck	1930a	3.77	3.36	15
71	270624	10.8			0.40		C	Schaumasse	1928	3.78	3.39	15
72	270624	12.0	J		0.40			Adamopoulos	1928	3.78	3.39	15
73	270625	11.5			0.33		C	Chofardet	1928	3.78	3.41	15
74	270626	11.0	C		0.32			Krumpholz	1928	3.78	3.43	15
75	270702	12.0	C		1.02		A	Van Biesbroeck	1930a	3.79	3.52	15
76	270702	13.0	J		1.02		A	Van Biesbroeck	1930a	3.79	3.52	15
77	270702	14.0	J		0.40			Flakidis	1931	3.79	3.52	15
78	270705	11.0			0.40		C	Schaumasse	1928	3.80	3.57	15
79	270710	12.0	C					Van Biesbroeck	1929	3.81	3.66	15
80	270710	13.0	J					Van Biesbroeck	1929	3.81	3.66	15
81	270720	11.0			0.40		C	Schaumasse	1928	3.83	3.82	15
82	270720	12.5	C		1.02		A	Van Biesbroeck	1930a	3.83	3.82	15
83	270726	12.2			0.33		C	Chofardet	1928	3.85	3.92	15
84	270802	12.5	C		1.02		A	Van Biesbroeck	1930a	3.87	4.03	15
85	270803	11.2			0.40		C	Schaumasse	1928	3.87	4.05	15
86	270817	12.0	C		0.71		A	Krumpholz	1928	3.91	4.25	13
87	270830	12.8	C		1.02		A	Van Biesbroeck	1930a	3.95	4.42	12

N	t	m	k	v	d	f	b	observer	l	r	Δ	φ	
88	270917	13.5	C		1.02	A	Van Biesbroeck	1930a	4.01	4.61	11		
89	270921	13.5	C		1.02	A	Van Biesbroeck	1930a	4.02	4.65	10		
90	270921	12.0	C		0.32		Krumpholz	1928	4.02	4.65	10		
91	271020	13.0	C		0.32		Krumpholz	1928	4.13	4.83	9		
92	271022	13.5	C		1.02	A	Van Biesbroeck	1930a	4.14	4.83	9		
93	271028	13.5	C		1.02	A	Van Biesbroeck	1930a	4.16	4.85	9		
94	271031	13.0	C		0.32		Krumpholz	1928	4.18	4.86	9		
95	271221	13.0					Van Biesbroeck	1928	4.40	4.82	11		
96	280125	12.5	C		1.02	A	Van Biesbroeck	1930a	4.57	4.72	12		
97	280130	12.7			0.65	A	Struve	1928b	4.60	4.70	12		
		12.5			0.65	A	Struve	1929					
98	280130	13.2					Baade	1928a	4.60	4.70	12		
99	280216	13.5	C		1.02	A	Van Biesbroeck	1930a	4.68	4.67	12		
100	280224	12.0			0.65	A	Struve	1929	4.72	4.67	12		
101	280225	13.0	C		1.02	A	Van Biesbroeck	1930a	4.73	4.67	12		
102	280226	13.0	C		1.02	A	Van Biesbroeck	1930a	4.73	4.67	12		
103	280227	13.0	C		1.02	A	Van Biesbroeck	1930a	4.74	4.67	12		
104	280227	13.0					Bianchi	1928	4.74	4.67	12		
105	280228	13.0					Bianchi	1928	4.74	4.67	12		
106	280315	13.0	C		1.02	A	Van Biesbroeck	1930a	4.83	4.69	12		
107	280317	11.9			0.65	A	Struve	1929	4.84	4.69	12		
108	280324	13.0	C		1.02	A	Van Biesbroeck	1930a	4.88	4.71	12		
109	280413	13.8	C		1.02	A	Van Biesbroeck	1930a	4.99	4.80	12		
110	280413	14.5	J		1.02	A	Van Biesbroeck	1930a	4.99	4.80	12		
111	280418	14.0	C		1.02	A	Van Biesbroeck	1930a	5.02	4.83	12		
112	280418	11.8			0.65	A	Struve	1929	5.02	4.83	12		
113	280422	13.8	C		1.02	A	Van Biesbroeck	1930a	5.04	4.86	11		
114	280422	14.5	J		1.02	A	Van Biesbroeck	1930a	5.04	4.86	11		
115	280514	12.5					Baade	1929b	5.16	5.01	11		
116	280518	13.0			0.65	A	Schneider	1929	5.19	5.05	11		
117	280621	12.5			0.65	A	Schneider	1929	5.38	5.34	11		
118	280718	12.5			0.65	A	Schneider	1929	5.55	5.57	10		
119	280720	13.0			0.65	A	Schneider	1929	5.56	5.59	10		
120	280908	14.5	C		1.02	A	Van Biesbroeck	1930a	5.86	5.96	10		
121	280908	15.0			1.02	A	Van Biesbroeck	1930a	5.86	5.96	10		
122	280919	14.5	C		1.02	A	Van Biesbroeck	1930a	5.93	6.03	10		
123	281005	13.0			0.65	A	Schneider	1929	6.03	6.12	9		
124	281006	15.0	C		1.02	A	Van Biesbroeck	1930a	6.03	6.12	9		
125	281104	15.5	C		1.02	A	Van Biesbroeck	1930a	6.21	6.29	9		
126	281208	15.5					Baade	1928b	6.42	6.49	9		
127	281215	15.5					Van Biesbroeck	1930d	6.47	6.54	9		
128	290101	15.5					Van Biesbroeck	1931e	6.57	6.65	8		
129	290310	15.5					Van Biesbroeck	1930d	7.00	7.20	8		
130	290414	15.5	C		0.61	4	R	Van Biesbroeck	1930a	7.22	7.47	8	

N	t	m	k	v	d	f	b	observer	l	r	Δ	φ
131	290615	16.0	J		1.02		A	Van Biesbroeck	1930a	7.62	7.80	7
132	290705	15.5	C		1.02		A	Van Biesbroeck	1930a	7.74	7.86	7
133	290728	16.0	C		1.02		A	Van Biesbroeck	1930a	7.89	7.91	7
134	290731	16.0	C		1.02		A	Van Biesbroeck	1930a	7.91	7.92	7
135	290731	17.0	J					Van Biesbroeck	1931e	7.91	7.92	7
136	290827	16.5						Baade	1929a	8.08	7.97	7
137	290903	16.0	C		1.02		A	Van Biesbroeck	1930a	8.12	7.99	7
138	290928	16.5	C		1.02		A	Van Biesbroeck	1930a	8.28	8.06	7
139	291001	16.5	C		1.02		A	Van Biesbroeck	1930a	8.30	8.07	7
140	291002	16.0	C		1.02		A	Van Biesbroeck	1930a	8.30	8.07	7
141	291002	17.0	J		1.02		A	Van Biesbroeck	1930a	8.30	8.07	7
142	291004	16.0	C		1.02		A	Van Biesbroeck	1930a	8.32	8.08	7
143	291004	17.0	J		1.02		A	Van Biesbroeck	1930a	8.32	8.08	7
144	291122	16.5			0.61	4	R	Van Biesbroeck	1930a	8.62	8.39	6
145	291201	16.0						Van Biesbroeck	1930b	8.68	8.48	6
146	300101	16.0						Van Biesbroeck	1930c	8.87	8.82	6
147	300422	16.5	C		0.61	4	R	Van Biesbroeck	1932a	9.56	10.02	5
148	300423	16.5	C		0.61	4	R	Van Biesbroeck	1932a	9.57	10.02	5
149	300701	16.5	C		0.61	4	R	Van Biesbroeck	1932a	9.99	10.21	6
150	300824	17.3						Baade	1930a	10.32	10.13	6
151	300917	16.5	C		0.61	4	R	Van Biesbroeck	1932a	10.47	10.12	5
152	300918	16.5	C		0.61	4	R	Van Biesbroeck	1932a	10.47	10.13	5
153	300925	17.5						Baade	1930b	10.51	10.13	5
154	301022	17.0	C		0.61	4	R	Van Biesbroeck	1932a	10.68	10.23	5
155	301118	17.5	C		0.61	4	R	Van Biesbroeck	1932a	10.84	10.43	5
156	301222	17.0	C		0.61	4	R	Van Biesbroeck	1932a	11.04	10.82	5
157	310117	17.0						Van Biesbroeck	1931a	11.20	11.20	5
158	310214	17.5	C		0.61	4	R	Van Biesbroeck	1932a	11.36	11.61	5
159	310312	17.5						Van Biesbroeck	1931c	11.52	11.96	4

note: N = 19, 48, 74, 86, 90-91, 94 - approximate brightness values.

Comet 1930 IV Beyer - before perihelion

1	291008	8.6		2				Oosterhoff	1930	3.03	3.14	19
2	291106	8.7		2				Oosterhoff	1930	2.81	2.57	21
3	291127	8.9		2				Oosterhoff	1930	2.66	2.15	20

note: N = 1-3 - brightness values very uncertain because they were determined with the aid of standard stars whose identification cannot be guaranteed.

Comet 1930 IV Beyer - after perihelion

1	300820	13.0	C					Beyer	1932	2.54	3.06	18
2	300822	13.0	C		1.02		A	Van Biesbroeck	1932a	2.55	3.07	18
3	300822	14.5	J		1.02		A	Van Biesbroeck	1932a	2.55	3.07	18
4	300912	13.5	C		1.02		A	Van Biesbroeck	1932a	2.69	3.17	17

N	t	m	k	v	d	f	b	observer	l	r	Δ	ψ
5	300917	13.0	C		1.02		A	Van Biesbroeck	1932a	2.73	3.20	17
6	300917	13.5	J		1.02		A	Van Biesbroeck	1932a	2.73	3.20	17
7	301021	14.0						Van Biesbroeck	1932b	2.98	3.42	16
8	301118	15.0						Van Biesbroeck	1932b	3.20	3.65	15
9	301217	15.0						Van Biesbroeck	1932b	3.44	3.89	14
10	301228	14.0	C		0.61	4	R	Van Biesbroeck	1932a	3.53	3.97	13
11	310101	15.0	C		0.61	4	R	Van Biesbroeck	1932a	3.56	4.00	13
12	310117	15.5	C		0.61	4	R	Van Biesbroeck	1932a	3.70	4.10	13
13	310126	15.0	C		0.61	4	R	Van Biesbroeck	1932a	3.77	4.15	13
14	310214	15.5	C		0.61	4	R	Van Biesbroeck	1932a	3.93	4.23	13
15	310320	15.5	C		0.61	4	R	Van Biesbroeck	1932a	4.22	4.29	13
16	310417	15.0						Van Biesbroeck	1931b	4.46	4.30	13
17	310424	16.0	C		0.61	4	R	Van Biesbroeck	1932a	4.52	4.30	13
18	310513	16.0	C		0.61	4	R	Van Biesbroeck	1932a	4.67	4.31	12
19	310514	16.0	C		0.61	4	R	Van Biesbroeck	1932a	4.68	4.31	12
20	310615	16.0	C		0.61	4	R	Van Biesbroeck	1932a	4.95	4.41	11
21	310615	16.0	C					Wolf	1931	4.95	4.41	11
		16.5	C					Wolf	1932			
22	310615	17.0	J					Wolf	1933	4.95	4.41	11
23	310707	17.0	C		0.61	4	R	Van Biesbroeck	1932a	5.13	4.57	10
24	310716	17.0	C		0.61	4	R	Van Biesbroeck	1932a	5.21	4.66	10
25	310717	17.5	C		0.61	4	R	Van Biesbroeck	1932a	5.22	4.67	10
26	310812	17.5	C		0.61	4	R	Van Biesbroeck	1932a	5.43	5.02	10
27	310813	17.5	C		0.61	4	R	Van Biesbroeck	1932a	5.44	5.04	10

Comet 1931 III Nagata - after perihelion

1	311113	11.0			0.30			Jeffers	1932	2.50	3.34	11
2	311116	12.0			0.61	4	R	Van Biesbroeck	1932a	2.54	3.38	10
3	311117	12.0	C					Van Biesbroeck	1931d	2.55	3.39	10
4	311118	13.0						Van Biesbroeck	1932b	2.56	3.40	10
5	311127	13.0			0.61	4	R	Van Biesbroeck	1932a	2.67	3.50	10
6	311128	13.0			0.61	4	R	Van Biesbroeck	1932c	2.68	3.51	10
7	320205	15.5			0.61	4	R	Van Biesbroeck	1932a	3.44	3.97	13
8	320212	16.0			0.61	4	R	Van Biesbroeck	1932a	3.51	3.99	13
9	320213	16.0			0.61	4	R	Van Biesbroeck	1932a	3.52	3.99	13
10	320215	15.0						Van Biesbroeck	1933e	3.54	3.99	13
11	320310	16.0			0.61	4	R	Van Biesbroeck	1932a	3.80	4.00	14
12	320409	17.5			0.91	5.8	R	Jeffers	1933b	4.10	3.96	14
		18.0			0.91	5.8	R	Jeffers	1932			
13	320414	17.5			0.61	4	R	Van Biesbroeck	1932a	4.15	3.96	14
14	320415	17.5			0.61	4	R	Van Biesbroeck	1932a	4.16	3.96	14

note: N = 1 - approximate brightness value.

N	t	m	k	v	d	f	b	observer	l	r	Δ	φ
Comet 1932 VI Geddes - before perihelion												
1	310814	13.0		2	0.26			Whipple	1933	4.78	4.24	11
2	320622	9.5						Geddes	1932	2.53	1.99	22
3	320624	9.0						Hudson	1932	2.52	1.98	22
4	320625	9.0						Dartayet	1932	2.52	1.98	22
5	320626	8.0						Hudson	1932	2.51	1.98	22
6	320626	10.5						Dawson,Dartayet	1933	2.51	1.98	22
7	320627	9.0						Wood	1932	2.51	1.97	22
8	320627	9.0						Bobone, Tretter	1932	2.51	1.97	22
Comet 1932 VI Geddes.- after perihelion												
1	321218	11.0	C		1.02		A	Van Biesbroeck	1934a	2.52	3.21	14
2	321226	10.5						Van Biesbroeck	1933c	2.55	3.14	16
3	330122	9.9	C	1				Beyer	1933a	2.69	2.80	21
		9.8	C	1				Beyer	1933b			
4	330122	10.5	J	1				Beyer	1933a	2.69	2.80	21
5	330127	10.0	J					Schorr	1933a	2.72	2.73	21
6	330128	10.5						Lause	1933a	2.72	2.71	21
7	330203	10.5	C		0.61	4	R	Van Biesbroeck	1934a	2.76	2.63	21
8	330204	10.1	C		0.32			Krumpholz	1934a	2.76	2.61	21
9	330209	10.0						Krumpholz	1934b	2.79	2.55	21
10	330301	9.7	C	1				Beyer	1933a	2.92	2.32	17
11	330301	11.2	J	1				Beyer	1933a	2.92	2.32	17
12	330301	10.0	C	1	0.32			Krumpholz	1934a	2.92	2.32	17
13	330302	9.7						Schorr	1933c	2.93	2.31	17
14	330302	11.0		2			R	Schorr	1934	2.93	2.31	17
15	330307	10.5						Lause	1933b	2.96	2.28	16
16	330316	11.0	C		1.02		A	Van Biesbroeck	1934a	3.02	2.24	14
17	330316	9.5	C		0.32			Krumpholz	1934a	3.02	2.24	14
18	330316	9.6	C					Schembor	1933	3.02	2.24	14
19	330316	9.8	J					Schembor	1933	3.02	2.24	14
20	330318	9.5			0.20			Warmbier	1933b	3.03	2.24	13
21	330320	9.8	C	1				Beyer	1933a	3.05	2.23	13
22	330320	11.3	J	1				Beyer	1933a	3.05	2.23	13
23	330321	9.7	C	1				Beyer	1933a	3.05	2.23	12
24	330321	11.3	J	1				Beyer	1933a	3.05	2.23	12
25	330321	9.5						Warmbier	1933a	3.05	2.23	12
26	330322	11.0					C	Chofardet	1934	3.06	2.23	12
27	330322	9.8	C	1				Beyer	1933a	3.06	2.23	12
28	330322	11.4	J	1				Beyer	1933a	3.06	2.23	12
29	330323	9.9	C	1				Beyer	1933a	3.07	2.24	12
30	330323	11.3	J	1				Beyer	1933a	3.07	2.24	12
31	330324	9.5	C		0.19		A	Luther	1933	3.07	2.24	12
32	330324	10.0	J		0.19		A	Luther	1933	3.07	2.24	12

N	t	m	k	v	d	f	b	observer	.	l	r	Δ	φ
33	330324	9.5	C		0.32			Krumpholz		1934a	3.07	2.24	12
34	330324	9.3			0.20			Warmbier		1933b	3.07	2.24	12
35	330324	10.0					C	Chofardet		1934	3.07	2.24	12
36	330324	9.8	C	1				Beyer		1933a	3.07	2.24	12
37	330324	11.3	J	1				Beyer		1933a	3.07	2.24	12
38	330325	9.8	C	1				Beyer		1933a	3.08	2.24	12
39	330325	11.2	J	1				Beyer		1933a	3.08	2.24	12
40	330326	9.8	C	1				Beyer		1933a	3.09	2.24	12
41	330326	11.0	J	1				Beyer		1933a	3.09	2.24	12
42	330327	10.2	C		0.19		A	Luther		1933	3.10	2.25	11
43	330327	10.7	J		0.19		A	Luther		1933	3.10	2.25	11
44	330328	9.5			0.20	6,4	K	Kubokawa		1933	3.10	2.25	11
45	330328	11.0					C	Chofardet		1934	3.10	2.25	11
46	330328	10.0	C		0.32			Krumpholz		1934a	3.10	2.25	11
47	330329	10.0	C	1				Beyer		1933a	3.11	2.25	11
48	330329	9.9						Szpunar		1933	3.11	2.25	11
49	330330	10.0	C		0.32			Krumpholz		1934a	3.12	2.26	11
50	330331	9.5	C		0.19		A	Luther		1933	3.12	2.26	11
51	330331	11.0	J		0.19		A	Luther		1933	3.12	2.26	11
52	330401	9.8			0.40		C	Schaumasse		1934	3.13	2.27	11
53	330403	11.0						Jeffers		1933a	3.14	2.28	11
54	330404	11.0						Jeffers		1933a	3.15	2.29	11
55	330404	9.5						Steavenson		1933a	3.15	2.29	11
56	330413	9.8						Kaiser		1933a	3.22	2.38	11
		9.5						Kaiser		1933c			
57	330413	10.1	C	1				Beyer		1933a	3.22	2.38	11
58	330414	10.2	C	1				Beyer		1933a	3.22	2.39	12
59	330414	11.5	J	1				Beyer		1933a	3.22	2.39	12
60	330414	10.0						Steavenson		1933b	3.22	2.39	12
61	330417	9.5						Kaiser		1933c	3.24	2.43	12
62	330417	10.2	C	1				Beyer		1933a	3.24	2.43	12
63	330417	11.4	J	1				Beyer		1933a	3.24	2.43	12
64	330422	10.3	C					Beyer		1933d	3.28	2.50	13
65	330423	10.8						Kaiser		1933a	3.29	2.52	13
66	330423	10.3	C	1				Beyer		1933a	3.29	2.52	13
67	330424	10.4	C	1				Beyer		1933a	3.30	2.54	13
68	330425	10.4	C					Beyer		1933c	3.30	2.55	13
69	330426	10.5		1				Schorr		1933b	3.31	2.57	13
70	330426	9.5	C		0.32			Krumpholz		1934a	3.31	2.57	13
71	330426	10.4	C	1				Beyer		1933a	3.31	2.57	13
72	330426	11.7	J	1				Beyer		1933a	3.31	2.57	13
73	330427	10.4	C	1				Beyer		1933a	3.32	2.59	14
74	330427	11.8	J	1				Beyer		1933a	3.32	2.59	14
75	330430	10.5			0.40		C	Schaumasse		1934	3.34	2.64	14

N	t	m	k	v	d	f	b	observer	l	r	Δ	φ
76	330502	10.5			0.40		C	Schaumasse	1934	3.35	2.68	14
77	330502	11.0						Lause	1933c	3.35	2.68	14
78	330511	10.8	C	1				Beyer	1933a	3.42	2.86	15
79	330511	12.0	J	1				Beyer	1933a	3.42	2.86	15
80	330514	11.0	C	1				Beyer	1933a	3.44	2.92	16
81	330514	12.0	C				H	Van Biesbroeck	1934a	3.44	2.92	16
82	330519	11.5						Lause	1933d	3.48	3.03	16
83	330519	11.5						Kaiser	1933b	3.48	3.03	16
84	330520	11.5	C		0.32			Krumpholz	1934a	3.49	3.05	16
85	330520	11.5						Kaiser	1933b	3.49	3.05	16
86	330520	11.3	C	1				Beyer	1933a	3.49	3.05	16
87	330521	11.0						Steavenson	1933c	3.50	3.08	16
88	330523	12.5	C		1.02		A	Van Biesbroeck	1934a	3.51	3.12	16
89	330526	11.0			0.40		C	Schaumasse	1934	3.53	3.19	16
90	330611	12.5	C		1.02		A	Van Biesbroeck	1934a	3.66	3.56	16
91	330616	13.0		2			R	Schorr	1934	3.70	3.68	16
92	330621	12.0						Steavenson	1933d	3.73	3.79	15
93	330628	13.0	C		0.32			Krumpholz	1934a	3.79	3.95	15
94	330710	13.0						Van Biesbroeck	1933d	3.88	4.21	14
95	330713	13.0						Jekhowsky	1933	3.91	4.27	13
96	330713	13.0	C		0.61	4	R	Van Biesbroeck	1934a	3.91	4.27	13
97	330727	13.5	C		0.61	4	R	Van Biesbroeck	1934a	4.02	4.54	12
98	330917	14.5						Van Biesbroeck	1933a	4.43	5.21	8
99	330921	14.5						Van Biesbroeck	1933a	4.46	5.23	8
100	331017	14.0						Van Biesbroeck	1933b	4.67	5.32	9
101	331219	14.0						Van Biesbroeck	1934c	5.17	5.12	11
102	340212	15.0						Van Biesbroeck	1934b	5.61	5.06	9
103	340311	14.5	C		1.02		A	Van Biesbroeck	1934a	5.82	5.28	9
104	340412	15.0	C		0.61	4	R	Van Biesbroeck	1934a	6.07	5.74	9
105	340413	15.0	C		0.61	4	R	Van Biesbroeck	1934a	6.08	5.75	9
106	340502	15.5	C		0.61	4	R	Van Biesbroeck	1934a	6.23	6.10	9
107	340504	16.5	C		0.91	5.8	R	Jeffers	1936b	6.24	6.13	9
108	340508	16.0	C		0.61	4	R	Van Biesbroeck	1934a	6.27	6.21	9
109	340514	16.5	C		0.61	4	R	Van Biesbroeck	1934a	6.32	6.32	9
110	340516	17.0	C		0.61	4	R	Van Biesbroeck	1934a	6.34	6.36	9
111	340719	17.5		2	0.91	5.8	R	Jeffers	1935	6.83	7.41	7

notes: N = 12, 53-54, 84, 93 - approximate brightness values, N = 53-54 - two telescopes with objective diameters of 0.10 and 0.91 m are given.

Comet 1936 I Van Biesbroeck - before perihelion

1	350703	13.0					K	Johnson	1936	4.83	3.88	5
2	350805	13.5					K	Johnson	1936	4.69	3.70	3
3	350821	14.0			0.61	4	R	Van Biesbroeck	1935	4.62	3.74	7
4	350822	15.0	J	1	1.02		A	Van Biesbroeck	1937	4.62	3.75	7

N	t	m	k	v	d	f	b	observer	l	r	Δ	ψ
5	350823	14.5		1	0.91		A	Jeffers	1936a	4.61	3.75	7
6	350824	14.0	C		1.02		A	Van Biesbroeck	1937	4.61	3.76	7
7	350827	14.0	C		1.02		A	Van Biesbroeck	1937	4.60	3.78	8
8	350829	14.0	C		1.02		A	Van Biesbroeck	1937	4.59	3.79	8
9	350829	14.5		1	0.91		A	Jeffers	1936a	4.59	3.79	8
10	350901	14.5	C		1.02		A	Van Biesbroeck	1937	4.58	3.81	9
11	350907	14.5	C		1.02		A	Van Biesbroeck	1937	4.56	3.86	10
12	350924	15.0	C		1.02		A	Van Biesbroeck	1937	4.49	4.04	12
13	351020	14.5	C		0.61	4	R	Van Biesbroeck	1937	4.40	4.36	13
14	351025	15.0	C		1.02		A	Van Biesbroeck	1937	4.39	4.43	13
15	351123	15.0	C		0.61	4	R	Van Biesbroeck	1936c	4.30	4.76	11
16	351220	15.0						Van Biesbroeck	1936e	4.23	4.97	8
17	351221	14.0	C		0.61	4	R	Van Biesbroeck	1937	4.22	4.98	8
18	360218	14.5			0.61	4	R	Van Biesbroeck	1938b	4.11	4.98	6
19	360228	14.2			0.61	4	R	Van Biesbroeck	1936a	4.09	4.92	7
20	360325	16.0	C		0.61	4	R	Van Biesbroeck	1937	4.06	4.70	10
21	360416	16.0	C		0.61	4	R	Van Biesbroeck	1936b	4.05	4.47	12
22	360418	16.5	C		0.61	4	R	Van Biesbroeck	1937	4.05	4.44	12

note: N = 5, 9 - approximate brightness values.

Comet 1936 I Van Biesbroeck - after perihelion

1	360514	17.0	C		0.61	4	R	Van Biesbroeck	1937	4.04	4.15	14
2	360517	16.5	C		0.61	4	R	Van Biesbroeck	1937	4.04	4.12	14
3	360527	16.0	C		0.61	4	R	Van Biesbroeck	1937	4.05	4.02	14
4	360528	16.0	C		0.61	4	R	Van Biesbroeck	1937	4.05	4.01	14
5	360615	16.0	C		0.61	4	R	Van Biesbroeck	1937	4.05	3.84	14
6	360624	16.0	C		0.61	4	R	Van Biesbroeck	1937	4.06	3.78	14
7	360628	16.0	C		0.61	4	R	Van Biesbroeck	1937	4.06	3.75	14
8	360724	16.0	C		0.61	4	R	Van Biesbroeck	1937	4.09	3.64	14
9	360726	16.0	C		0.61	4	R	Van Biesbroeck	1937	4.09	3.63	13
10	360731	16.0		2				Van Biesbroeck	1936f	4.10	3.63	13
11	360817	15.5	C		1.02		A	Van Biesbroeck	1937	4.13	3.63	13
12	360822	15.5	C		1.02		A	Van Biesbroeck	1937	4.14	3.64	13
13	360825	16.0	C		1.02		A	Van Biesbroeck	1937	4.14	3.65	13
14	360917	16.0			0.91	5.8	R	Jeffers	1937a	4.19	3.75	13
15	360919	16.5	C		1.02		A	Van Biesbroeck	1936d	4.19	3.76	13
16	361203	17.5						Jeffers	1937b	4.40	4.35	13
17	361214	16.5	C		0.61	4	R	Van Biesbroeck	1937	4.44	4.45	13
18	370113	17.0	C		0.61	4	R	Van Biesbroeck	1939	4.55	4.71	12
19	370317	17.0	C		0.61	4	R	Van Biesbroeck	1937	4.81	5.21	10
20	370806	16.5					R	see notes	1937a	5.51	5.80	10
		16.0					R	see notes	1938			
21	370811	16.0					R	see notes	1937b	5.54	5.79	10
22	370831	16.0					R	Sandig		5.65	5.77	10

N	t	m	k	v	d	f	b	observer	l	r	Δ	ψ	
23	371007	16.0						R Sandig			5.85	5.68	10
24	371010	16.0						R Sandig			5.87	5.68	10
25	371102	16.5						R see notes	1938		6.00	5.64	9
26	371103	17.0						R see notes	1938		6.01	5.64	9
27	371109	17.0			0.61	4		R Van Biesbroeck	1938a		6.04	5.64	9
28	371112	17.0			0.61	4		R Van Biesbroeck	1938a		6.06	5.64	9

notes: N = 20-21, 25-26 - observers: Dieckvoss and Sandig, N = 22-24 - in paper of Dieckvoss and Sandig (1938).

Comet 1941 IV De Kock-Paraskevopoulos - after perihelion

1	410704	15.5						Van Biesbroeck	1942		2.64	2.97	20
2	410723	15.0	C		0.91	5.8	R	Jeffers	1944		2.87	2.83	20
3	410917	17.0	C		0.91	5.8	R	Jeffers	1944		3.53	2.60	7

Comet 1945 I Väisälä - before perihelion

1	440418	14.5						Väisälä	1944a		3.66	2.69	5
2	440426	14.5		2				Väisälä	1944b		3.60	2.67	7
3	440522	14.0	J		0.40	4	A	Hoffmeister	1944		3.42	2.71	14
4	440527	14.0	J		0.40	4	A	Hoffmeister	1944		3.38	2.73	15
5	440615	13.5						Krumpholz	1952		3.25	2.84	18
6	440807	13.5						Van Biesbroeck	1944		2.91	3.19	18
7	440812	14.0			0.91	5.8	R	Herbig	1944		2.88	3.22	18
8	440815	14.0			0.91	5.8	R	Herbig	1944		2.86	3.23	18

note: N = 7-8 - approximate brightness values.

Comet 1945 I Väisälä - after perihelion

1	450807	15.5			0.61	4	R	Van Biesbroeck	1946b		3.33	2.43	9
2	450808	15.5			0.61	4	R	Van Biesbroeck	1946b		3.34	2.43	9
3	450809	14.0			0.61	4	R	Van Biesbroeck	1947a		3.34	2.43	9
4	450903	15.5			0.61	4	R	Van Biesbroeck	1947a		3.52	2.56	5
5	450907	15.5			0.61	4	R	Van Biesbroeck	1947a		3.55	2.59	6
6	451010	16.0			0.61	4	R	Van Biesbroeck	1947a		3.80	3.04	11
7	451106	16.0						Van Biesbroeck	1945		4.00	3.56	14
8	451130	16.5			2.08	4	R	Van Biesbroeck	1947a		4.18	4.09	14
9	451204	16.5			2.08	4	R	Van Biesbroeck	1947a		4.22	4.18	13
10	460101	16.5			2.08	4	R	Van Biesbroeck	1947a		4.43	4.80	11
11	460102	16.5			2.08	4	R	Van Biesbroeck	1947a		4.44	4.82	11

Comet 1946 I Timmers - after perihelion

1	460904	14.0			0.38		S	Martynov	1948		2.50	2.38	24
2	460920	15.0			0.61	4	R	Van Biesbroeck	1948a		2.64	2.60	22
3	460926	14.5			0.91	5.8	R	Jeffers	1947b		2.69	2.70	21
4	461020	15.5			0.38		S	Martynov	1948		2.91	3.13	19
5	461024	16.0			0.91	5.8	R	Jeffers	1946		2.95	3.20	18

N	t	m	k	v	d	f	b	observer	l	r	Δ	ψ
		16.5			0.91	5.8	R	Jeffers	1947b			
6	461027	16.0			0.61	4	R	Van Biesbroeck	1948a	2.98	3.26	18
7	470624	19.3						Jeffers	1947a	5.16	4.37	8
8	470625	19.3						Jeffers	1947a	5.17	4.37	8
9	470713	19.4			0.91	5.8	R	Jeffers	1948b	5.32	4.39	5
10	470809	19.4			0.91	5.8	R	Jeffers	1948b	5.56	4.59	4

Comet 1946 VI Jones - after perihelion

1	470401	12.3		2				Boyer	1951b	2.54	2.69	22
2	470414	12.0						Krumpholz	1952	2.69	2.72	21
3	470419	12.0			0.33			Giclas	1949	2.74	2.73	21
4	470420	11.3	C		0.26		A	Beyer	1950	2.76	2.73	21
5	470420	13.0	J		0.26		A	Beyer	1950	2.76	2.73	21
6	470422	12.5		2				Weber	1947	2.78	2.74	21
7	470424	11.8						Krumpholz	1952	2.80	2.74	21
8	470424	11.4	C		0.26		A	Beyer	1950	2.80	2.74	21
9	470424	12.9	J		0.26		A	Beyer	1950	2.80	2.74	21
10	470426	13.0		2				Boyer	1951b	2.82	2.75	21
11	470427	11.5	C		0.26		A	Beyer	1950	2.83	2.75	21
12	470427	13.1	J		0.26		A	Beyer	1950	2.83	2.75	21
13	470428	12.9		2				Boyer	1951b	2.84	2.75	21
14	470510	11.4	C		0.26		A	Beyer	1950	2.98	2.79	20
15	470513	12.0						Krumpholz	1952	3.01	2.80	20
16	470514	14.5			0.38		S	Martynov	1948	3.02	2.80	20
17	470517	14.0			0.38		S	Martynov	1948	3.06	2.81	19
18	470518	11.7	C		0.26		A	Beyer	1950	3.07	2.81	19
19	470518	13.0	J		0.26		A	Beyer	1950	3.07	2.81	19
20	470520	11.7	C		0.26		A	Beyer	1950	3.09	2.82	19
21	470520	12.9	J		0.26		A	Beyer	1950	3.09	2.82	19
22	470520	14.0			0.38		S	Martynov	1948	3.09	2.82	19
23	470521	15.0			0.38		S	Martynov	1948	3.10	2.83	19
24	470521	11.9	C		0.26		A	Beyer	1950	3.10	2.83	19
25	470521	13.2	J		0.26		A	Beyer	1950	3.10	2.83	19
26	470522	13.0		2				Boyer	1951b	3.11	2.83	19
27	470522	11.8	C		0.26		A	Beyer	1950	3.11	2.83	19
28	470523	14.5			0.38		S	Martynov	1948	3.12	2.83	19
29	470525	12.2	C		0.26		A	Beyer	1950	3.14	2.84	19
30	470527	12.1	C		0.26		A	Beyer	1950	3.17	2.85	18
31	470528	12.2	C		0.26		A	Beyer	1950	3.18	2.86	18
32	470528	13.3	J		0.26		A	Beyer	1950	3.18	2.86	18
33	470529	12.2	C		0.26		A	Beyer	1950	3.19	2.86	18
34	470531	12.3	C		0.26		A	Beyer	1950	3.21	2.87	18
35	470613	13.5	C		0.91	5.8	R	Jeffers	1948b	3.35	2.94	17
36	470613	12.5	C					see notes	1948	3.35	2.94	17

N	t	m	k	v	d	f	b	observer	l	r	Δ	φ
37	470613	14.0	J					see notes	1948	3.35	2.94	17
38	470613	13.4		2				Boyer	1951b	3.35	2.94	17
39	470614	13.3		2				Boyer	1951b	3.36	2.95	17
40	470614	13.0						Krumpholz	1952	3.36	2.95	17
41	470615	11.4			0.33			Giclas	1949	3.37	2.95	17
42	470616	11.2			0.33			Giclas	1949	3.38	2.96	17
43	470616	12.5	C					see notes	1948	3.38	2.96	17
44	470616	14.0	J					see notes	1948	3.38	2.96	17
45	470619	13.4		2				Boyer	1951b	3.42	2.98	17
46	470625	12.5			0.61	4	R	Van Biesbroeck	1948a	3.48	3.02	16
47	470706	13.5			0.61	4	R	Van Biesbroeck	1948a	3.60	3.11	15
48	470708	13.5	C		0.91	5.8	R	Jeffers	1948b	3.62	3.13	15
49	470709	13.3		2				Boyer	1951b	3.63	3.14	15
50	470711	13.4		2				Boyer	1951b	3.65	3.16	15
51	470906	14.8			0.91	5.8	R	Jeffers	1948b	4.24	3.88	13
52	470914	14.0						Van Biesbroeck	1947c	4.32	4.00	13
53	471006	16.0			0.61	4	R	Van Biesbroeck	1948a	4.54	4.38	13
54	471103	16.0			0.61	4	R	Van Biesbroeck	1947d	4.81	4.88	12
55	471106	16.5			0.91	5.8	R	Jeffers	1948b	4.84	4.93	12
56	471209	16.0			0.61	4	R	Van Biesbroeck	1948a	5.16	5.50	10
		17.0			0.61	4	R	Van Biesbroeck	1948b			
57	480509	18.4			0.91	5.8	R	Jeffers	1948b	6.53	6.72	9
58	480710	17.8			0.91	5.8	R	Jeffers	1949a	7.06	6.74	8
59	480811	17.5	C		2.08	4	R	Van Biesbroeck	1950	7.33	6.85	7
60	480905	18.0	C		2.08	4	R	Van Biesbroeck	1950	7.54	7.04	7
61	481002	19.0	C		2.08	4	R	Van Biesbroeck	1950	7.75	7.34	7
62	481004	19.0	C		2.08	4	R	Van Biesbroeck	1950	7.77	7.36	7
63	481123	19.3			0.91	5.8	R	Jeffers	1949a	8.17	8.15	7

notes: N = 5, 19, 24, 33, 40 - approximate brightness values, N = 36-37, 43-44 - observers: Merton and Steavenson.

Comet 1947 I Bester - before perihelion

1	461101	11.0						Bester	1946	2.64	2.06	20
2	461101	10.5	C		0.26		A	Beyer	1950	2.64	2.06	20
3	461102	10.0					K	Johnson	1946a	2.64	2.05	20
4	461105	11.0			0.61	4	R	Van Biesbroeck	1946a	2.62	2.01	20
5	461105	11.0						Giclas	1946	2.62	2.01	20
6	461106	11.0						Giclas	1946	2.62	2.00	19
7	461113	9.0					K	Johnson	1946b	2.59	1.93	19
8	461128	11.0						Schmitt	1946	2.53	1.86	19
9	461201	8.5					K	Johnson	1946b	2.52	1.87	19
10	461202	11.5	C				C	Schmitt	1948	2.52	1.87	20

N	t	m	k	v	d	f	b	observer	l	r	Δ	φ
Comet 1947 I Bester - after perihelion												
1	470623	13.2		2				Boyer	1951b	2.83	3.30	17
2	470623	15.5						Jeffers	1947c	2.83	3.30	17
		15.0			0.91	5.8	R	Jeffers	1948b			
3	470720	13.6		2				Boyer	1951b	2.99	3.07	19
4	470725	15.0			0.61	4	R	Van Biesbroeck	1948a	3.01	3.02	19
5	470820	13.0					A	Hirose, Tomita	1948	3.19	2.87	18
6	470820	14.0			0.91	5.8	R	Jeffers	1948b	3.19	2.87	18
		14.5						Jeffers	1947d			
7	470910	13.2	C		0.26		A	Beyer	1950	3.33	2.85	17
8	470911	13.3	C		0.26		A	Beyer	1950	3.34	2.86	16
9	470912	13.6	C		0.26		A	Beyer	1950	3.35	2.86	16
10	470914	13.0						Van Biesbroeck	1947c	3.36	2.87	16
11	470921	12.5	C					Steavenson		3.41	2.90	16
12	470921	14.0	J					Steavenson		3.41	2.90	16
13	470921	13.2	C		0.26		A	Beyer	1950	3.41	2.90	16
14	470921	14.6	J		0.26		A	Beyer	1950	3.41	2.90	16
15	471009	14.5			0.61	4	R	Van Biesbroeck	1948a	3.54	3.05	15
16	471012	14.0			0.38		S	Martynov	1948	3.56	3.09	15
17	471017	14.4		2				Boyer	1951b	3.60	3.15	15
18	471018	14.5		2				Boyer	1951b	3.61	3.16	15
19	471018	13.2	C		0.26		A	Beyer	1950	3.61	3.16	15
20	471018	14.8	J		0.26		A	Beyer	1950	3.61	3.16	15
21	471019	13.1	C		0.26		A	Beyer	1950	3.61	3.18	15
22	471103	15.0			0.61	4	R	Van Biesbroeck	1948a	3.73	3.40	15
23	471108	15.0						Jeffers	1947e	3.76	3.48	15
		16.0			0.91	5.8	R	Jeffers	1948b			
24	471108	15.0		2				Boyer	1951b	3.76	3.48	15
25	471209	17.0			0.61	4	R	Van Biesbroeck	1948a	4.00	4.02	14
26	480102	16.0		2				Boyer	1948a	4.18	4.42	13
27	480115	17.0			0.61	4	R	Van Biesbroeck	1948a	4.29	4.61	12
28	480511	18.2			0.91	5.8	R	Jeffers	1948b	5.20	5.34	11
29	480727	18.7			0.91	5.8	R	Jeffers	1949a	5.80	5.57	10
30	481002	18.5			2.08	4	R	Van Biesbroeck	1950	6.32	6.29	9
notes: N = 9, 14, 20 - approximate brightness values, N = 11-12 - in paper of Merton and Steavenson (1948).												

Comet 1947 VI Wirtanen - after perihelion												
1	470718	12.0						Wirtanen	1947a	2.83	1.89	9
		13.0						Wirtanen	1947c			
2	470723	13.0						see notes	1947	2.83	1.86	8
3	470723	12.0						Wirtanen	1947b	2.83	1.86	8
4	470724	14.5	C		0.51		A	Jeffers	1948b	2.83	1.86	8
5	470725	14.5	C		0.51		A	Jeffers	1948b	2.83	1.86	8

N	t	m	k	v	d	f	b	observer	l	r	Δ	ψ
6	470725	12.0						Reuning	1947a	2.83	1.86	8
7	470725	13.5			0.33			Giclas	1949	2.83	1.86	8
8	470726	13.2			0.33			Giclas	1949	2.83	1.86	7
9	470726	13.0						Reuning	1947b	2.83	1.86	7
10	470726	12.0						Arend	1947	2.83	1.86	7
11	470728	13.0	C					Van Biesbroeck	1947b	2.83	1.86	7
12	470728	17.5	J		0.61	4	R	Van Biesbroeck	1948a	2.83	1.86	7
13	470729	14.5	C		0.51		A	Jeffers	1948b	2.83	1.86	7
14	470806	13.0	C		0.31			Steavenson		2.83	1.87	8
15	470807	14.5	C		0.51		A	Jeffers	1948b	2.84	1.88	8
16	470820	15.0			0.51		A	Jeffers	1948b	2.85	1.98	13
17	470914	15.0	C					Van Biesbroeck	1947c	2.89	2.35	19
18	470914	17.0	J		0.61	4	R	Van Biesbroeck	1948a	2.89	2.35	19
19	471107	17.5			0.51		A	Jeffers	1948b	3.05	3.31	17
20	480514	18.5			0.51		A	Jeffers	1948b	4.10	4.05	14
21	480612	18.1			0.91	5.8	R	Jeffers	1949a	4.29	4.21	14
22	480730	19.0			0.91	5.8	R	Jeffers	1949a	4.63	4.67	13
23	480905	19.0			2.08	4	R	Van Biesbroeck	1950	4.89	5.06	11
24	480906	19.0			2.08	4	R	Van Biesbroeck	1950	4.90	5.07	11
25	480908	18.0			0.61	4	R	Van Biesbroeck	1948a	4.91	5.09	11
26	481001	20.0			2.08	4	R	Van Biesbroeck	1950	5.08	5.30	11
27	481002	20.0		2	2.08	4	R	Van Biesbroeck	1950	5.08	5.31	11

notes: N = 2 - observers: Jeffers and Wirtanen, N = 14 - in paper of Merton and Steavenson (1948).

Comet 1947 VIII Wirtanen - after perihelion

1	481007	14.0			0.51		A	Wirtanen	1948b	4.89	4.19	9
		15.0			0.51		A	Wirtanen	1948c			
2	481007	14.0			0.51		A	Shane	1948	4.89	4.19	9
3	481010	14.0			0.51		A	Shane	1948	4.91	4.25	9
4	481011	14.0			0.51		A	Shane	1948	4.91	4.27	10
5	481021	15.0			0.51		A	Wirtanen	1949a	4.98	4.49	10
6	481028	15.0		2				Boyer	1948d	5.02	4.65	11
7	481104	15.0		2				Boyer	1951b	5.07	4.82	11
8	481127	15.0			0.61	4	R	Van Biesbroeck	1950	5.22	5.39	11
9	481202	15.0		2				Boyer	1949a	5.25	5.51	10
10	490625	17.5			0.91	5.8	R	Jeffers	1950a	6.62	5.92	7
11	490802	16.0	C		0.61	4	R	Van Biesbroeck	1953	6.88	5.87	1
12	490808	18.5			0.91	5.8	R	Jeffers	1949b	6.92	5.91	1
13	490924	18.0			0.91	5.8	R	Jeffers	1950b	7.24	6.63	7
14	500911	18.0	J					Cunningham	1951a	9.55	8.91	5

note: N = 12 - approximate brightness value.

N	t	m	k	v	d	f	b	observer	l	r	Δ	φ
Comet 1948 I Bester - after perihelion												
1	481111	17.7			0.91	5.8	R	Jeffers	1949a	3.97	4.18	14
2	490206	17.5			0.91	5.8	R	Jeffers	1949a	4.89	4.08	7
Comet 1948 II Mrkos - after perihelion												
1	480902	14.8		2				Boyer	1951b	2.97	2.32	17
2	480905	12.0			2.08	4	R	Van Biesbroeck	1950	3.00	2.31	16
3	480906	12.0			2.08	4	R	Van Biesbroeck	1950	3.01	2.31	16
4	480906	14.8		2				Boyer	1948b	3.01	2.31	16
5	480926	15.0			0.91	5.8	R	Jeffers	1949a	3.21	2.35	11
6	481001	14.6		2				Boyer	1948c	3.26	2.38	10
7	481003	13.0			2.08	4	R	Van Biesbroeck	1950	3.28	2.39	9
8	481004	14.5		2				Boyer	1951b	3.29	2.40	9
9	481027	16.0			0.91	5.8	R	Mayall, Sill	1949	3.52	2.67	10
10	481127	15.0			0.61	4	R	Van Biesbroeck	1950	3.82	3.29	14
11	481130	15.0			0.61	4	R	Van Biesbroeck	1950	3.85	3.36	14
12	481205	16.0			0.60	5.5	R	Mrkos	1949	3.90	3.49	14
13	490128	17.5			0.60	5.5	R	Mrkos	1950	4.41	4.85	11
Comet 1948 V Pajdušáková-Mrkos - after perihelion												
1	480909	11.0	C		0.26		A	Beyer	1950	2.50	2.68	22
2	480909	13.2	J		0.26		A	Beyer	1950	2.50	2.68	22
3	480910	11.0	C		0.26		A	Beyer	1950	2.51	2.68	22
4	480910	13.0	J		0.26		A	Beyer	1950	2.51	2.68	22
5	480910	12.0						Krumpholz	1952	2.51	2.68	22
6	480911	11.0	C		0.26		A	Beyer	1950	2.51	2.67	22
7	480911	13.0	J		0.26		A	Beyer	1950	2.51	2.67	22
8	480913	11.2	C		0.26		A	Beyer	1950	2.53	2.67	22
9	480921	11.4	C		0.26		A	Beyer	1950	2.58	2.65	22
10	480921	13.0	J		0.26		A	Beyer	1950	2.58	2.65	22
11	480922	11.6	C		0.26		A	Beyer	1950	2.58	2.64	22
12	480922	13.0	J		0.26		A	Beyer	1950	2.58	2.64	22
13	480923	11.4	C		0.26		A	Beyer	1950	2.59	2.64	22
14	480923	13.2	J		0.26		A	Beyer	1950	2.59	2.64	22
15	480927	11.2	C		0.26		A	Beyer	1950	2.62	2.63	22
16	480927	13.5	J		0.26		A	Beyer	1950	2.62	2.63	22
17	480930	11.3	C		0.26		A	Beyer	1950	2.64	2.61	22
18	480930	13.2	J		0.26		A	Beyer	1950	2.64	2.61	22
19	481001	11.2	C		0.26		A	Beyer	1950	2.64	2.61	22
20	481001	13.2	J		0.26		A	Beyer	1950	2.64	2.61	22
21	481004	11.0	C		0.26		A	Beyer	1950	2.66	2.60	22
22	481004	13.5	J		0.26		A	Beyer	1950	2.66	2.60	22
23	481004	12.5	C		2.08	4	R	Van Biesbroeck	1950	2.66	2.60	22
24	481005	12.5	C		2.08	4	R	Van Biesbroeck	1950	2.67	2.59	22

N	t	m	k	v	d	f	b	observer	l	r	Δ	ψ
25	481005	12.5						Merton	1950a	2.67	2.59	22
26	481008	11.2	C		0.26		A	Beyer	1950	2.69	2.58	22
27	481008	13.5	J		0.26		A	Beyer	1950	2.69	2.58	22
28	481013	11.3	C		0.26		A	Beyer	1950	2.72	2.56	21
29	481013	13.0	J		0.26		A	Beyer	1950	2.72	2.56	21
30	481014	11.3	C		0.26		A	Beyer	1950	2.73	2.55	21
31	481014	13.0	J		0.26		A	Beyer	1950	2.73	2.55	21
32	481019	11.5	C		0.26		A	Beyer	1950	2.77	2.53	21
33	481019	13.5	J		0.26		A	Beyer	1950	2.77	2.53	21
34	481105	11.7	C		0.26		A	Beyer	1950	2.89	2.47	19
35	481105	13.4	J		0.26		A	Beyer	1950	2.89	2.47	19
36	481106	11.5	C		0.26		A	Beyer	1950	2.90	2.47	19
37	481106	13.5	J		0.26		A	Beyer	1950	2.90	2.47	19
38	481108	11.4	C		0.26		A	Beyer	1950	2.91	2.46	19
39	481108	13.7	J		0.26		A	Beyer	1950	2.91	2.46	19
40	481121	12.1	C		0.26		A	Beyer	1950	3.01	2.46	17
41	481121	13.5	J		0.26		A	Beyer	1950	3.01	2.46	17
42	481122	11.5	C		0.26		A	Beyer	1950	3.02	2.46	17
43	481122	14.0	J		0.26		A	Beyer	1950	3.02	2.46	17
44	481124	11.6	C		0.26		A	Beyer	1950	3.04	2.46	17
45	481124	14.0	J		0.26		A	Beyer	1950	3.04	2.46	17
46	481125	11.7	C		0.26		A	Beyer	1950	3.04	2.46	17
47	481125	14.5	J		0.26		A	Beyer	1950	3.04	2.46	17
48	481126	11.8	C		0.26		A	Beyer	1950	3.05	2.47	17
49	481126	14.5	J		0.26		A	Beyer	1950	3.05	2.47	17
50	481127	12.0	C		2.08	4	R	Van Biesbroeck	1950	3.06	2.47	17
51	481201	11.7	C		0.26		A	Beyer	1950	3.09	2.48	16
52	481201	14.5	J		0.26		A	Beyer	1950	3.09	2.48	16
53	481202	11.4	C		0.26		A	Beyer	1950	3.10	2.49	16
54	481202	13.9	J		0.26		A	Beyer	1950	3.10	2.49	16
55	481203	11.9	C		0.26		A	Beyer	1950	3.11	2.49	16
56	481203	14.0	J		0.26		A	Beyer	1950	3.11	2.49	16
57	481205	11.9	C		0.26		A	Beyer	1950	3.12	2.50	16
58	481205	14.0	J		0.26		A	Beyer	1950	3.12	2.50	16
59	481207	12.1	C		0.26		A	Beyer	1950	3.14	2.51	16
60	481207	14.0	J		0.26		A	Beyer	1950	3.14	2.51	16
61	481218	12.1	C		0.26		A	Beyer	1950	3.22	2.60	15
62	481218	14.5	J		0.26		A	Beyer	1950	3.22	2.60	15
63	481221	12.0	C		0.26		A	Beyer	1950	3.25	2.63	15
64	481221	14.4	J		0.26		A	Beyer	1950	3.25	2.63	15
65	481223	12.1	C		0.26		A	Beyer	1950	3.26	2.66	15
66	481223	14.0	J		0.26		A	Beyer	1950	3.26	2.66	15
67	481224	12.2	C		0.26		A	Beyer	1950	3.27	2.67	15
68	481224	14.0	J		0.26		A	Beyer	1950	3.27	2.67	15

N	t	m	k	v	d	f	b	observer	l	r	Δ	φ
69	481227	12.0	C		0.26		A	Beyer	1950	3.30	2.70	15
70	481227	14.0	J		0.26		A	Beyer	1950	3.30	2.70	15
71	481228	12.1	C		0.26		A	Beyer	1950	3.30	2.72	15
72	481228	14.0	J		0.26		A	Beyer	1950	3.30	2.72	15
73	481229	12.4	C		0.26		A	Beyer	1950	3.31	2.73	15
74	481229	14.5	J		0.26		A	Beyer	1950	3.31	2.73	15
75	481230	12.3	C		0.26		A	Beyer	1950	3.32	2.74	15
76	481230	14.2	J		0.26		A	Beyer	1950	3.32	2.74	15
77	490102	12.4	C		0.26		A	Beyer	1950	3.35	2.79	15
78	490102	14.5	J		0.26		A	Beyer	1950	3.35	2.79	15
79	490118	14.0	C		2.08	4	R	Van Biesbroeck	1950	3.48	3.06	16
80	490119	14.0		2				Boyer	1949b	3.48	3.08	16
81	490121	12.6	C		0.26		A	Beyer	1950	3.50	3.12	16
82	490121	14.0	J		0.26		A	Beyer	1950	3.50	3.12	16
83	490122	12.8	C		0.26		A	Beyer	1950	3.51	3.14	16
84	490122	15.0	J		0.26		A	Beyer	1950	3.51	3.14	16
85	490126	12.8	C		0.26		A	Beyer	1950	3.54	3.22	16
86	490126	15.5	J		0.26		A	Beyer	1950	3.54	3.22	16
87	490128	13.1	C		0.26		A	Beyer	1950	3.56	3.26	16
88	490128	15.3	J		0.26		A	Beyer	1950	3.56	3.26	16
89	490128	16.0			0.91	5.8	R	Sill		3.56	3.26	16
90	490129	13.0	C		0.26		A	Beyer	1950	3.57	3.28	16
91	490129	15.3	J		0.26		A	Beyer	1950	3.57	3.28	16
92	490130	13.1	C		0.26		A	Beyer	1950	3.57	3.30	16
93	490130	15.2	J		0.26		A	Beyer	1950	3.57	3.30	16
94	490131	13.6	C		0.26		A	Beyer	1950	3.58	3.32	16
95	490131	15.5	J		0.26		A	Beyer	1950	3.58	3.32	16
96	490201	13.5	C		0.26		A	Beyer	1950	3.59	3.34	16
97	490201	15.5	J		0.26		A	Beyer	1950	3.59	3.34	16
98	490216	14.5	C		2.08	4	R	Van Biesbroeck	1950	3.71	3.67	15
99	490219	13.7	C		0.26		A	Beyer	1950	3.74	3.74	15
100	490219	16.5	J		0.26		A	Beyer	1950	3.74	3.74	15
101	490220	13.3	C		0.26		A	Beyer	1950	3.75	3.77	15
102	490220	16.0	J		0.26		A	Beyer	1950	3.75	3.77	15
103	490301	13.7	C		0.26		A	Beyer	1950	3.82	3.97	14
104	490301	16.0	J		0.26		A	Beyer	1950	3.82	3.97	14
105	490402	16.0	C		2.08	4	R	Van Biesbroeck	1950	4.09	4.67	11
106	490403	16.0	C		2.08	4	R	Van Biesbroeck	1950	4.10	4.69	11
107	490423	16.5	C		2.08	4	R	Van Biesbroeck	1950	4.27	5.07	8
108	491025	17.0			0.60	5.5	R	Mrkos	1950	5.79	5.03	7
109	491118	18.0			0.91	5.8	R	Jeffers	1950a	5.99	5.03	3
110	500209	19.2			0.91	5.8	R	Jeffers	1951	6.64	6.42	8

notes: N = 4, 7, 10, 12, 16, 18, 20, 22, 27-33, 35, 37, 40-41, 43, 45, 47,
49, 52, 56, 58, 60-62, 71-72, 74, 76, 78, 82, 84, 86, 88, 91, 93, 95,

N t m k v d f b observer l r Δ ψ

97, 100, 102, 104 - approximate brightness values, N = 89 - in paper of Mayall and Sill (1949).

Comet 1949 I Wirtanen - before perihelion

1	480715	15.5		0.50		K	Wirtanen	1949b	3.92	3.06	9
2	480715	15.0					Jeffers	1948a	3.92	3.06	9
3	480717	15.0					Wirtanen	1948a	3.90	3.03	9
4	480730	16.2		0.91	5.8	R	Jeffers	1949a	3.81	2.85	6
5	480809	13.0		2.08	4	R	Van Biesbroeck	1950	3.73	2.77	6
6	480711	13.0		2.08	4	R	Van Biesbroeck	1950	3.72	2.76	6
7	480728	14.4	2				Boyer	1948b	3.60	2.73	10
8	480902	12.0		2.08	4	R	Van Biesbroeck	1950	3.56	2.75	11
9	480903	12.0		2.08	4	R	Van Biesbroeck	1950	3.56	2.76	11
10	480904	14.2	2				Boyer	1948b	3.55	2.76	12
11	481006	14.5	2				Boyer	1948c	3.33	3.08	17
12	481123	16.5		0.91	5.8	R	Jeffers	1949a	3.03	3.65	13
13	490301	13.0					Johnson	1949b	2.60	3.19	16
		13.5				K	Johnson	1950b			
14	490407	12.0					Johnson	1949c	2.53	2.48	23
15	490429	13.3					Jones	1950	2.52	2.10	23

Comet 1949 I Wirtanen - after perihelion

1	490602	12.5					Bester	1949	2.54	1.91	21
2	490721	13.5				K	Johnson	1950b	2.66	2.61	22
3	500124	13.7					Johnson	1950a	3.75	3.33	14
4	500126	13.7					Johnson	1950a	3.77	3.32	14
5	500320	14.5				K	Johnson	1951c	4.16	3.47	11
6	500415	14.0	C	2.08	4	R	Van Biesbroeck	1953	4.35	3.90	12
7	500417	14.0	C	2.08	4	R	Van Biesbroeck	1953	4.37	3.94	13
8	500420	17.5		0.91	5.8	R	Jeffers	1950a	4.39	4.00	13
9	500514	16.5	C	2.08	4	R	Van Biesbroeck	1953	4.57	4.53	13
10	500515	16.5	C	2.08	4	R	Van Biesbroeck	1953	4.58	4.55	13
11	501216	19.0	J	1.52		R	Cunningham	1951a	6.22	5.77	8
12	510214	19.0	J	1.52		R	Cunningham	1952a	6.67	5.76	3
13	510304	19.0	J	1.52		R	Cunningham	1952a	6.80	5.98	5

note: N = 12 - uncertain date.

Comet 1949 IV Bappu-Bok-Newkirk - after perihelion

1	500306	12.3	C	0.26		A	Beyer	1955	2.57	1.95	20
2	500307	13.0	C	0.26		A	Beyer	1955	2.57	1.96	20
3	500307	14.0	J	0.26		A	Beyer	1955	2.57	1.96	20
4	500309	14.0	2				Boyer	1950c	2.59	1.99	20
5	500309	16.4	J	0.91	5.8	R	Jeffers	1950a	2.59	1.99	20
6	500310	12.8	C	0.26		A	Beyer	1955	2.59	2.00	20

N	+	m	k	v	d	f	b	observer	l	r	Δ	φ
7	500310	14.2	J		0.26		A	Beyer	1955	2.59	2.00	20
8	500312	12.8	C		0.26		A	Beyer	1955	2.61	2.03	20
9	500312	14.4	J		0.26		A	Beyer	1955	2.61	2.03	20
10	500318	13.1	C		0.26		A	Beyer	1955	2.65	2.12	20
11	500319	13.2	C		0.26		A	Beyer	1955	2.66	2.13	21
12	500319	14.4	J		0.26		A	Beyer	1955	2.66	2.13	21
13	500406	13.4	C		0.26		A	Beyer	1955	2.79	2.48	21
14	500407	13.6	C		0.26		A	Beyer	1955	2.79	2.50	21
15	500407	14.5	J		0.26		A	Beyer	1955	2.79	2.50	21
16	500415	15.0	C		2.08	4	R	Van Biesbroeck	1953	2.85	2.68	21
17	500417	15.0						Boyer	1950d	2.87	2.73	20
18	500420	16.7	J		0.91	5.8	R	Jeffers	1950a	2.89	2.80	20
19	500510	17.0	J		0.91	5.8	R	Jeffers	1950a	3.05	3.27	18
20	500515	15.5	C		2.08	4	R	Van Biesbroeck	1953	3.09	3.39	17
21	501216	18.0	J					Cunningham	1951a	4.89	4.23	9
22	510304	19.0			1.52		R	Cunningham	1952a	5.53	4.81	8

Comet 1950 I Johnson - before perihelion

1	490520	12.5		2			K	Johnson	1949d	3.60	2.66	7
2	490522	13.0						Johnson	1949a	3.59	2.65	7
3	490616	13.0						Schmitt	1949	3.42	2.62	12
4	490617	13.0						Schmitt	1949	3.41	2.62	12
5	490618	14.0			0.61	4	R	Van Biesbroeck	1953	3.41	2.63	13
6	490622	14.0			0.61	4	R	Van Biesbroeck	1953	3.38	2.65	14
7	490720	13.0			0.61	4	R	Van Biesbroeck	1953	3.20	2.95	18
8	490824	12.5					K	Johnson	1949e	3.00	3.41	17
9	491218	12.5		2			K	Merton	1950b	2.58	3.11	17
10	500115	12.5					A	Hirose, Tomita	1952a	2.55	2.58	22
11	500116	12.5		2				Boyer	1950a	2.55	2.57	22
12	500116	12.2		1				Merton	1950b	2.55	2.57	22

Comet 1950 I Johnson - after perihelion

1	500120	12.5					A	Hirose, Tomita	1952a	2.55	2.49	22
2	500123	12.1	C	1	0.26		A	Beyer	1955	2.55	2.43	23
3	500123	13.0	J	1	0.26		A	Beyer	1955	2.55	2.43	23
4	500125	12.1	C	1	0.26		A	Beyer	1955	2.55	2.40	23
5	500125	14.0	J	1	0.26		A	Beyer	1955	2.55	2.40	23
6	500125	12.5					A	Hirose, Tomita	1952a	2.55	2.49	23
7	500125	12.5		2				Boyer	1951b	2.55	2.49	23
8	500208	12.1	C	1	0.26		A	Beyer	1955	2.56	2.17	22
9	500208	14.0	J	1	0.26		A	Beyer	1955	2.56	2.17	22
10	500214	12.0	C	1	0.26		A	Beyer	1955	2.57	2.09	21
11	500214	14.0	J	1	0.26		A	Beyer	1955	2.57	2.09	21
12	500217	12.0	C	1	0.26		A	Beyer	1955	2.57	2.05	21

N	t	m	k	v	d	f	b	observer	l	r	Δ	φ
13	500217	14.0	J	1	0.26		A	Beyer	1955	2.57	2.05	21
14	500217	14.5	J		0.91	5.8	R	Jeffers	1950a	2.57	2.05	21
15	500217	13.0					A	Hirose, Tomita	1952a	2.57	2.05	21
16	500218	11.8	C	1	0.26		A	Beyer	1955	2.57	2.04	21
17	500218	14.0	J	1	0.26		A	Beyer	1955	2.57	2.04	21
18	500219	12.0	C	1	0.26		A	Beyer	1955	2.57	2.03	21
19	500219	14.0	J	1	0.26		A	Beyer	1955	2.57	2.03	21
20	500219	13.0					A	Hirose, Tomita	1952a	2.57	2.03	21
21	500222	12.0		2				Boyer	1950b	2.58	2.01	20
22	500223	11.8	C	1	0.26		A	Beyer	1955	2.58	2.00	20
23	500223	14.2	J	1	0.26		A	Beyer	1955	2.58	2.00	20
24	500306	11.6	C	1	0.26		A	Beyer	1955	2.60	1.95	19
25	500306	13.8	J	1	0.26		A	Beyer	1955	2.60	1.95	19
26	500307	11.9	C	1	0.26		A	Beyer	1955	2.60	1.95	19
27	500307	14.2	J	1	0.26		A	Beyer	1955	2.60	1.95	19
28	500310	12.2	C	1	0.26		A	Beyer	1955	2.61	1.95	19
29	500310	13.7	J	1	0.26		A	Beyer	1955	2.61	1.95	19
30	500311	14.0					A	Hirose, Tomita	1952a	2.61	1.95	19
31	500312	12.2	C	1	0.26		A	Beyer	1955	2.61	1.95	19
32	500312	13.5	J	1	0.26		A	Beyer	1955	2.61	1.95	19
33	500314	12.0		2				Boyer	1950c	2.62	1.96	19
34	500314	11.5			0.61	4	R	Van Biesbroeck	1953	2.62	1.96	19
35	500317	13.5					A	Hirose, Tomita	1952a	2.62	1.97	19
36	500318	12.2	C	1	0.26		A	Beyer	1955	2.63	1.98	19
37	500318	13.8	J	1	0.26		A	Beyer	1955	2.63	1.98	19
38	500319	12.3	C	1	0.26		A	Beyer	1955	2.63	1.98	19
39	500319	14.0	J	1	0.26		A	Beyer	1955	2.63	1.98	19
40	500322	13.0					A	Hirose, Tomita	1952a	2.64	2.01	19
41	500326	12.0	C	1	0.26		A	Beyer	1955	2.65	2.04	20
42	500326	14.0	J	1	0.26		A	Beyer	1955	2.65	2.04	20
43	500327	12.2	C	1	0.26		A	Beyer	1955	2.65	2.05	20
44	500327	13.8	J	1	0.26		A	Beyer	1955	2.65	2.05	20
45	500402	12.3	C	1	0.26		A	Beyer	1955	2.67	2.13	20
46	500402	13.8	J	1	0.26		A	Beyer	1955	2.67	2.13	20
47	500404	12.4	C	1	0.26		A	Beyer	1955	2.68	2.16	20
48	500404	14.0	J	1	0.26		A	Beyer	1955	2.68	2.16	20
49	500407	12.5	C	1	0.26		A	Beyer	1955	2.69	2.20	21
50	500407	14.2	J	1	0.26		A	Beyer	1955	2.69	2.20	21
51	500408	12.5	C	1	0.26		A	Beyer	1955	2.69	2.22	21
52	500413	14.0					A	Hirose, Tomita	1952a	2.71	2.30	21
53	500414	14.5					A	Hirose, Tomita	1952a	2.71	2.32	21
54	500414	12.5	C		2.08	4	R	Van Biesbroeck	1953	2.71	2.32	21
55	500414	13.3	C	1	0.26		A	Beyer	1955	2.71	2.32	21
56	500414	13.8	J	1	0.26		A	Beyer	1955	2.71	2.32	21

N	t	m	k	v	d	f	b	observer	l	r	Δ	ψ
57	500418	13.1	C	1	0.26		A	Beyer	1955	2.72	2.39	21
58	500419	12.8	C	1	0.26		A	Beyer	1955	2.73	2.41	21
59	500419	14.6	J	1	0.26		A	Beyer	1955	2.73	2.41	21
60	500420	12.6	C	1	0.26		A	Beyer	1955	2.73	2.43	21
61	500420	14.4	J	1	0.26		A	Beyer	1955	2.73	2.43	21
62	500420	16.5			0.91	5.8	R	Jeffers	1950a	2.73	2.43	21
63	500512	13.1	C	1	0.26		A	Beyer	1955	2.82	2.86	20
64	500512	14.0	J	1	0.26		A	Beyer	1955	2.82	2.86	20
65	500513	13.1	C	1	0.26		A	Beyer	1955	2.83	2.89	20
66	500513	14.2	J	1	0.26		A	Beyer	1955	2.83	2.89	20
67	500513	13.5	C		2.08	4	R	Van Biesbroeck	1953	2.83	2.89	20
68	500514	13.1	C	1	0.26		A	Beyer	1955	2.83	2.91	20
69	500514	14.8	J	1	0.26		A	Beyer	1955	2.83	2.91	20
70	500515	13.5	C		2.08	4	R	Van Biesbroeck	1953	2.84	2.93	20
71	501213	17.0	J					Cunningham	1951a	4.20	3.55	11
72	501217	17.0			0.61	4	R	Van Biesbroeck	1953	4.23	3.56	11
73	510105	16.5	C		2.08	4	R	Van Biesbroeck	1953	4.38	3.71	10
74	510108	16.5	C		2.08	4	R	Van Biesbroeck	1953	4.40	3.74	10
75	510111	17.0			2.08	4	R	Van Biesbroeck	1951	4.42	3.78	10
76	510205	17.5			2.08	4	R	Van Biesbroeck	1953	4.61	4.19	12
77	510207	18.7	J		1.52		R	Cunningham	1951b	4.62	4.23	12
78	510209	17.5			2.08	4	R	Van Biesbroeck	1953	4.64	4.27	12
79	511103	20.0			2.08	4	R	Van Biesbroeck	1952	6.66	5.90	6

notes: N = 62 - approximate brightness value, N = 77 - uncertain date.

Comet 1951 I Minkowski - before perihelion												
1	500519	11.0	C		1.20		S	Minkowski	1950	3.59	2.85	12
2	500606	11.0			0.51		A	Vasilevskis	1950	3.47	2.60	10
3	500610	11.0		2				Leclaire	1950	3.44	2.56	10
4	500611	8.0						Arend	1950a	3.43	2.56	10
5	500612	11.1	C	1	0.26		A	Beyer	1955	3.43	2.55	10
6	500614	11.1	C	1	0.26		A	Beyer	1955	3.41	2.54	10
7	500614	13.0	J	1	0.26		A	Beyer	1955	3.41	2.54	10
8	500615	11.1	C	1	0.26		A	Beyer	1955	3.41	2.53	10
9	500615	13.0	J	1	0.26		A	Beyer	1955	3.41	2.53	10
10	500615	9.5						Arend	1950a	3.41	2.53	10
11	500616	11.0	C		0.61	4	R	Van Biesbroeck	1953	3.40	2.52	10
12	500616	11.1	C	1	0.26		A	Beyer	1955	3.40	2.52	10
13	500616	13.3	J	1	0.26		A	Beyer	1955	3.40	2.52	10
14	500618	11.4	C	1	0.26		A	Beyer	1955	3.39	2.52	10
15	500621	11.4	C	1	0.26		A	Beyer	1955	3.37	2.51	11
16	500621	11.0						Boyer	1950d	3.37	2.51	11
17	500622	11.0						Arend	1950b	3.36	2.50	11
18	500622	11.0						Krumholz	1952	3.36	2.50	11

N	t	m	k	v	d	f	b	observer	l	r	Δ	φ
19	500622	11.3	C	1	0.26		A	Beyer	1955	3.36	2.50	11
20	500622	12.8	J	1	0.26		A	Beyer	1955	3.36	2.50	11
21	500624	11.3	C	1	0.26		A	Beyer	1955	3.35	2.50	11
22	500624	12.9	J	1	0.26		A	Beyer	1955	3.35	2.50	11
23	500702	11.4	C	1	0.26		A	Beyer	1955	3.30	2.51	13
24	500702	12.8	J	1	0.26		A	Beyer	1955	3.30	2.51	13
25	500707	10.9						Arend	1950c	3.27	2.53	14
26	500707	10.5	C		0.61	4	R	Van Biesbroeck	1953	3.27	2.53	14
27	500708	11.1	C	1	0.26		A	Beyer	1955	3.26	2.54	14
28	500708	13.0	J	1	0.26		A	Beyer	1955	3.26	2.54	14
29	500709	11.2	C	1	0.26		A	Beyer	1955	3.25	2.54	14
30	500709	13.0	J	1	0.26		A	Beyer	1955	3.25	2.54	14
31	500710	11.1	C	1	0.26		A	Beyer	1955	3.25	2.55	15
32	500710	13.0	J	1	0.26		A	Beyer	1955	3.25	2.55	15
33	500710	10.8						Boyer	1950e	3.25	2.55	15
34	500711	11.0						Krumpholz	1952	3.24	2.55	15
35	500713	11.2	C	1	0.26		A	Beyer	1955	3.23	2.57	15
36	500713	13.1	J	1	0.26		A	Beyer	1955	3.23	2.57	15
37	500715	11.2	C	1	0.26		A	Beyer	1955	3.22	2.58	16
38	500715	13.0	J	1	0.26		A	Beyer	1955	3.22	2.58	16
39	500718	11.0					A	Hirose, Tomita	1952a	3.20	2.61	16
40	500720	13.0	J		0.63		A	Steavenson	1950	3.19	2.63	17
41	500722	11.4	C	1	0.26		A	Beyer	1955	3.18	2.65	17
42	500722	13.0	J	1	0.26		A	Beyer	1955	3.18	2.65	17
43	500724	11.3	C	1	0.26		A	Beyer	1955	3.16	2.67	18
44	500724	12.8	J	1	0.26		A	Beyer	1955	3.16	2.67	18
45	500729	11.5	C	1	0.26		A	Beyer	1955	3.13	2.73	18
46	500730	11.1	C	1	0.26		A	Beyer	1955	3.13	2.74	18
47	500730	12.0	J	1	0.26		A	Beyer	1955	3.13	2.74	18
48	500730	10.5	C		0.61	4	R	Van Biesbroeck	1953	3.13	2.74	18
49	500731	11.5						Adamopoulos	1950a	3.12	2.76	19
50	500801	11.2	C	1	0.26		A	Beyer	1955	3.12	2.77	19
51	500801	13.0	J	1	0.26		A	Beyer	1955	3.12	2.77	19
52	500803	10.9	C	1	0.26		A	Beyer	1955	3.11	2.79	19
53	500803	13.0	J	1	0.26		A	Beyer	1955	3.11	2.79	19
54	500804	11.1	C	1	0.26		A	Beyer	1955	3.10	2.81	19
55	500804	13.1	J	1	0.26		A	Beyer	1955	3.10	2.81	19
56	500805	11.3	C	1	0.26		A	Beyer	1955	3.09	2.82	19
57	500805	13.2	J	1	0.26		A	Beyer	1955	3.09	2.82	19
58	500806	11.0	C	1	0.26		A	Beyer	1955	3.09	2.83	19
59	500806	13.2	J	1	0.26		A	Beyer	1955	3.09	2.83	19
60	500806	11.0	C		0.61	4	R	Van Biesbroeck	1953	3.09	2.83	19
61	500807	11.0	C		0.61	4	R	Van Biesbroeck	1953	3.08	2.85	19
62	500807	11.2	C	1	0.26		A	Beyer	1955	3.08	2.85	19

N	t	m	k	v	d	f	b	observer	l	r	Δ	ψ
63	500807	13.2	J	1	0.26		A	Beyer	1955	3.08	2.85	19
64	500808	11.3	C	1	0.26		A	Beyer	1955	3.08	2.86	19
65	500808	13.2	J	1	0.26		A	Beyer	1955	3.08	2.86	19
66	500809	11.3	C	1	0.26		A	Beyer	1955	3.07	2.88	19
67	500809	13.0	J	1	0.26		A	Beyer	1955	3.07	2.88	19
68	500810	11.4	C	1	0.26		A	Beyer	1955	3.07	2.89	19
69	500810	13.0	J	1	0.26		A	Beyer	1955	3.07	2.89	19
70	500811	11.5	C	1	0.26		A	Beyer	1955	3.06	2.90	19
71	500811	13.4	J	1	0.26		A	Beyer	1955	3.06	2.90	19
72	500812	11.6	C	1	0.26		A	Beyer	1955	3.06	2.92	19
73	500812	13.0	J	1	0.26		A	Beyer	1955	3.06	2.92	19
74	500814	11.3	C	1	0.26		A	Beyer	1955	3.04	2.95	19
75	500814	13.0	J	1	0.26		A	Beyer	1955	3.04	2.95	19
76	500816	11.5					A	Hirose, Tomita	1952a	3.03	2.97	19
77	500818	11.1	C	1	0.26		A	Beyer	1955	3.02	3.00	19
78	500818	13.0	J	1	0.26		A	Beyer	1955	3.02	3.00	19
79	500831	12.0						Adamopoulos	1950b	2.95	3.19	18
80	501217	11.0	C		0.61	4	R	Van Biesbroeck	1953	2.59	3.33	13
81	501217	11.0					A	Hirose, Tomita	1952b	2.59	3.33	13
82	510105	11.0	C		2.08	4	R	Van Biesbroeck	1953	2.57	3.01	18
83	510108	11.0	C		2.08	4	R	Van Biesbroeck	1953	2.57	2.95	19
84	510108	11.5	C	1	0.26		A	Beyer	1955	2.57	2.95	19
85	510108	11.5		3				Johnson	1951	2.57	2.95	19
86	510110	10.0	C		2.08	4	R	Van Biesbroeck	1953	2.57	2.92	19
87	510112	9.5	C		2.08	4	R	Van Biesbroeck	1953	2.57	2.88	20

note: N = 2, 79 - approximate brightness values.

Comet 1951 I Minkowski - after perihelion

1	510117	8.5					A	Hirose, Tomita	1952b	2.57	2.78	21
2	510117	10.0						Johnson	1951a	2.57	2.78	21
3	510117	10.0						Boyer	1951a	2.57	2.78	21
4	510204	9.0					A	Hirose, Tomita	1952b	2.58	2.40	22
5	510204	11.0	C		2.08	4	R	Van Biesbroeck	1953	2.58	2.40	22
6	510208	11.0	C		2.08	4	R	Van Biesbroeck	1953	2.59	2.32	22
7	510304	10.0					A	Hirose, Tomita	1952b	2.62	1.90	18
8	510315	9.8	C					Jones	1952	2.65	1.80	14
9	510315	11.7	J					Jones	1952	2.65	1.80	14
10	510327	9.0						Rožkovskij	1951	2.68	1.78	11
11	510330	9.5		2				Abbott	1951	2.69	1.79	11
12	510403	11.0	C		0.61	4	R	Van Biesbroeck	1953	2.70	1.82	12
13	510406	10.5	C	1	0.26		A	Beyer	1955	2.71	1.84	13
14	510406	10.5	C		0.61	4	R	Van Biesbroeck	1953	2.71	1.84	13
15	510424	11.0						Krumpholz	1954	2.78	2.11	18
16	510503	10.5	C	1	0.26		A	Beyer	1955	2.82	2.30	20

N	t	m	k	v	d	f	b	observer	l	r	Δ	ψ
17	510630	12.6						Jones	1951	3.11	3.61	15
18	511027	13.0						Cunningham	1952a	3.90	4.20	13
19	511101	13.5	C		2.08	4	R	Van Biesbroeck	1953	3.93	4.15	14
20	511104	13.5	C		2.08	4	R	Van Biesbroeck	1953	3.95	4.13	14
21	511129	14.0						Johnson	1951b	4.14	3.90	14
22	511207	14.0	C		0.61	4	R	Johnson	1953	4.20	3.84	13
23	511223	14.0						Cunningham	1952a	4.31	3.75	11
24	520315	16.5	C		0.61	4	R	Johnson	1953	4.94	4.60	11
25	520316	16.5	C		0.61	4	R	Johnson	1953	4.95	4.63	11
26	520422	17.0	C		2.08	4	R	Van Biesbroeck	1953	5.23	5.46	10
27	520424	17.0	C		2.08	4	R	Van Biesbroeck	1953	5.24	5.51	10
28	520923	19.0			1.52		R	Cunningham	1952b	6.39	6.61	9
29	521018	19.0			1.52		R	Cunningham	1952b	6.57	6.41	9
30	521221	19.0			2.08	4	R	Van Biesbroeck	1955a	7.05	6.23	5
31	521223	19.0			2.08	4	R	Van Biesbroeck	1955a	7.06	6.24	5
32	530114	18.0			2.08	4	R	Van Biesbroeck	1955a	7.22	6.45	5
33	530119	18.0			2.08	4	R	Van Biesbroeck	1955a	7.26	6.52	5

Comet 1954 X Abell - before perihelion

1	531015	15.0	C		1.20		S	Abell	1954	3.81	3.50	15
2	531020	16.5			0.51		A	Roemer	1954	3.76	3.41	15
3	531026	15.5	C		0.61	4	R	Van Biesbroeck	1955a	3.69	3.31	15
4	531027	16.5			0.51		A	Roemer	1954	3.68	3.29	15
5	531029	15.5	C		0.61	4	R	Van Biesbroeck	1955a	3.66	3.26	15
6	531029	15.0						see notes	1953	3.66	3.26	15
7	531030	15.0						see notes	1953	3.65	3.25	15
8	531031	15.0						see notes	1953	3.64	3.23	15
9	531109	15.0	C		0.61	4	R	Van Biesbroeck	1955a	3.54	3.09	15
10	531110	14.0	C		0.61	4	R	Van Biesbroeck	1955a	3.53	3.08	15
11	531114	14.0	C		0.61	4	R	Van Biesbroeck	1955a	3.48	3.02	16
12	531128	16.5			0.51		A	Roemer	1954	3.44	2.97	16
13	531205	13.0	C		0.61	4	R	Van Biesbroeck	1955a	3.25	2.76	16
14	531208	13.0	C		0.61	4	R	Van Biesbroeck	1955a	3.21	2.72	17
15	531224	13.0	C		0.61	4	R	Van Biesbroeck	1955a	3.03	2.57	18
16	531229	12.5	C		0.26		A	Beyer	1958	2.97	2.53	18
17	531229	14.0	J		0.26		A	Beyer	1958	2.97	2.53	18
18	540101	16.2			0.51		A	Roemer	1954	2.94	2.50	19
19	540105	12.3	C		0.26		A	Beyer	1958	2.89	2.47	19
20	540105	14.0	J		0.26		A	Beyer	1958	2.89	2.47	19
21	540106	11.8	C		0.26		A	Beyer	1958	2.88	2.46	19
22	540106	13.8	J		0.26		A	Beyer	1958	2.88	2.46	19
23	540107	12.5	C		0.61	4	R	Van Biesbroeck	1955a	2.87	2.45	19
24	540110	12.5	C		0.61	4	R	Van Biesbroeck	1955a	2.83	2.43	20
25	540121	11.9	C		0.26		A	Beyer	1958	2.70	2.36	21

N	t	m	k	v	d	f	b	observer	l	r	Δ	φ
26	540121	14.0	J		0.26		A	Beyer	1958	2.70	2.36	21
27	540123	11.9	C		0.26		A	Beyer	1958	2.68	2.34	21
28	540123	12.0	C		0.61	4	R	Van Biesbroeck	1955a	2.68	2.34	21
29	540124	11.8	C		0.26		A	Beyer	1958	2.67	2.34	21
30	540124	14.0	J		0.26		A	Beyer	1958	2.67	2.34	21
31	540125	11.7	C		0.26		A	Beyer	1958	2.65	2.33	22
32	540126	11.7	C		0.26		A	Beyer	1958	2.64	2.32	22
33	540126	13.9	J		0.26		A	Beyer	1958	2.64	2.32	22
34	540127	11.5	C		0.26		A	Beyer	1958	2.63	2.32	22
35	540127	14.0	J		0.26		A	Beyer	1958	2.63	2.32	22
36	540128	11.6	C		0.26		A	Beyer	1958	2.62	2.31	22
37	540128	14.2	J		0.26		A	Beyer	1958	2.62	2.31	22
38	540129	11.6	C		0.26		A	Beyer	1958	2.61	2.30	22
39	540129	13.9	J		0.26		A	Beyer	1958	2.61	2.30	22
40	540130	11.6	C		0.26		A	Beyer	1958	2.60	2.30	22
41	540130	13.9	J		0.26		A	Beyer	1958	2.60	2.30	22
42	540130	12.5	C		2.08	4	R	Van Biesbroeck	1955a	2.60	2.30	22
43	540131	9.5						Hirose, Tomita	1956	2.58	2.29	22
44	540201	11.2	C		0.26		A	Beyer	1958	2.57	2.28	22
45	540201	13.9	J		0.26		A	Beyer	1958	2.57	2.28	22
46	540204	11.4	C		0.26		A	Beyer	1958	2.54	2.27	23
47	540204	14.0	J		0.26		A	Beyer	1958	2.54	2.27	23
48	540205	11.3	C		0.26		A	Beyer	1958	2.52	2.26	23
49	540205	13.8	J		0.26		A	Beyer	1958	2.52	2.26	23
50	540206	11.2	C		0.26		A	Beyer	1958	2.51	2.25	23
51	540206	13.8	J		0.26		A	Beyer	1958	2.51	2.25	23
52	540206	11.5	C		2.08	4	R	Van Biesbroeck	1955a	2.51	2.25	23

notes: N = 6-8 - observers: Kresák and Vozárová, N = 26, 33, 37, 39, 41 - approximate brightness values.

Comet 1955 III Mrkos - after perihelion

1	551025	12.0			0.61	4	R	Van Biesbroeck	1957a	2.56	3.48	7
2	551027	12.0			0.61	4	R	Van Biesbroeck	1957a	2.58	3.51	7
3	560417	17.5			0.51		A	Jeffers	1957	4.59	3.68	6

Comet 1955 VI Baade - before perihelion

1	540731	15.0		2	1.20		S	Baade	1954	5.04	5.22	11
2	540810	15.0			0.61	4	R	Van Biesbroeck	1954	4.99	5.21	11
3	540812	16.0			0.51		A	Roemer	1955	4.98	5.21	11
4	540818	15.0			0.51		A	Vasilevskis	1955	4.94	5.19	11
5	540820	14.5			0.61	4	R	Van Biesbroeck	1957a	4.93	5.19	11
6	540824	15.0			0.51		A	Innes	1955	4.91	5.18	11
7	540829	15.0			0.61	4	R	Van Biesbroeck	1957a	4.89	5.16	11
8	540903	14.0			0.61	4	R	Van Biesbroeck	1957a	4.86	5.14	11

N	t	m	k	v	d	f	b	observer	l	r	Δ	φ
9	540922	13.0			0.61	4	R	Van Biesbroeck	1957a	4.77	5.05	11
10	540930	16.0						Roemer	1955	4.73	4.99	11
11	541004	13.0			2.08	4	R	Van Biesbroeck	1957a	4.71	4.96	11
12	541005	13.0			2.08	4	R	Van Biesbroeck	1957a	4.71	4.96	12
13	541023	13.0			2.08	4	R	Van Biesbroeck	1957a	4.62	4.81	12
14	541024	13.0			2.08	4	R	Van Biesbroeck	1957a	4.62	4.80	12
15	541025	14.5						Waterfield	1954	4.62	4.79	12
16	541026	13.0			2.08	4	R	Van Biesbroeck	1957a	4.61	4.78	12
17	541107	12.5			0.61	4	R	Van Biesbroeck	1957a	4.56	4.66	12
18	541115	14.0						Waterfield	1954	4.52	4.58	12
19	541129	15.0						Roemer	1955	4.46	4.43	13
20	541224	13.0			0.61	4	R	Van Biesbroeck	1955b	4.36	4.19	13
21	550114	12.5			0.61	4	R	Van Biesbroeck	1957a	4.28	4.03	13
22	550211	13.0						Hirose, Tomita	1957	4.18	3.95	14
23	550213	13.0			0.61	4	R	Van Biesbroeck	1957a	4.18	3.95	14
24	550221	12.7	C		0.26		A	Beyer	1958	4.15	3.96	14
25	550222	13.0	C		0.26		A	Beyer	1958	4.15	3.96	14
26	550222	14.0	J		0.26		A	Beyer	1958	4.15	3.96	14
27	550223	12.8	C		0.26		A	Beyer	1958	4.15	3.96	14
28	550223	14.0	J		0.26		A	Beyer	1958	4.15	3.96	14
29	550224	12.9	C		0.26		A	Beyer	1958	4.14	3.96	14
30	550224	14.1	J		0.26		A	Beyer	1958	4.14	3.96	14
31	550225	12.7	C		0.26		A	Beyer	1958	4.14	3.97	14
32	550225	14.0	J		0.26		A	Beyer	1958	4.14	3.97	14
33	550227	12.2	C		0.26		A	Beyer	1958	4.13	3.97	14
34	550227	14.0	J		0.26		A	Beyer	1958	4.13	3.97	14
35	550301	12.4	C		0.26		A	Beyer	1958	4.13	3.98	14
36	550302	12.6	C		0.26		A	Beyer	1958	4.13	3.98	14
37	550310	12.4	C		0.26		A	Beyer	1958	4.10	4.01	14
38	550310	13.9	J		0.26		A	Beyer	1958	4.10	4.01	14
39	550310	12.0						Steavenson	1957	4.10	4.01	14
40	550311	12.5	C		0.26		A	Beyer	1958	4.10	4.02	14
41	550312	12.6	C		0.26		A	Beyer	1958	4.10	4.03	14
42	550312	14.0	J		0.26		A	Beyer	1958	4.10	4.03	14
43	550312	13.0			0.61	4	R	Van Biesbroeck	1957a	4.10	4.03	14
44	550313	13.0			0.61	4	R	Van Biesbroeck	1957a	4.09	4.03	14
45	550317	12.7	C		0.26		A	Beyer	1958	4.08	4.05	14
46	550317	14.0	J		0.26		A	Beyer	1958	4.08	4.05	14
47	550318	12.8	C		0.26		A	Beyer	1958	4.08	4.06	14
48	550318	14.0	J		0.26		A	Beyer	1958	4.08	4.06	14
49	550327	12.4	C		0.26		A	Beyer	1958	4.06	4.12	14
50	550328	12.6	C		0.26		A	Beyer	1958	4.05	4.13	14
51	550409	12.5	C		0.61	4	R	Van Biesbroeck	1957a	4.02	4.22	14
52	550414	12.8	C		0.26		A	Beyer	1958	4.01	4.26	14

N	t	m	k	v	d	f	b	observer	l	r	Δ	φ
53	550414	13.9	J		0.26		A	Beyer	1958	4.01	4.26	14
54	550416	13.0	C		0.26		A	Beyer	1958	4.01	4.27	13
55	550416	14.1	J		0.26		A	Beyer	1958	4.01	4.27	13
56	550417	13.0	C		0.26		A	Beyer	1958	4.01	4.28	13
57	550417	14.0	J		0.26		A	Beyer	1958	4.01	4.28	13
58	550418	12.8	C		0.26		A	Beyer	1958	4.00	4.29	13
59	550418	14.1	J		0.26		A	Beyer	1958	4.00	4.29	13
60	550421	12.0	C		2.08	4	R	Van Biesbroeck	1957a	4.00	4.31	13
61	550425	12.0	C		2.08	4	R	Van Biesbroeck	1957a	3.99	4.35	13
62	550516	12.7	C		0.26		A	Beyer	1958	3.95	4.51	11
63	550519	12.6	C		0.26		A	Beyer	1958	3.94	4.53	11
64	550719	15.5			0.61	4	R	Van Biesbroeck	1957a	3.88	4.66	9
65	550720	15.5			0.61	4	R	Van Biesbroeck	1957a	3.88	4.66	9
66	550731	16.0	J		0.91	5.8	R	Roemer	1956a	3.87	4.60	10

note: N = 36, 38, 50 - approximate brightness values.

Comet 1955 VI Baade - after perihelion

1	550814	13.0						Van Biesbroeck	1955c	3.87	4.50	11
2	550819	14.5			0.91	5.8	R	Stephenson	1956	3.87	4.46	11
3	550830	16.0	J		0.91	5.8	R	Roemer	1956a	3.87	4.34	12
4	550909	12.0	C		0.26		A	Beyer	1958	3.88	4.22	13
5	550917	12.2	C		0.26		A	Beyer	1958	3.88	4.11	14
6	550919	12.6	C		0.26		A	Beyer	1958	3.88	4.09	14
7	550921	16.0	J		0.91	5.8	R	Roemer	1956a	3.88	4.06	14
8	550923	14.0	J		0.26		A	Beyer	1958	3.89	4.03	14
9	550926	16.0	J		0.91	5.8	R	Roemer	1956a	3.89	3.98	15
10	551008	17.0	J		0.91	5.8	R	Roemer	1956a	3.90	3.80	15
11	551011	12.0						Hirose, Tomita	1957	3.90	3.76	15
12	551012	12.0			2.08	4	R	Van Biesbroeck	1957a	3.90	3.74	15
13	551013	12.0			2.08	4	R	Van Biesbroeck	1957a	3.91	3.72	15
14	551015	12.5	C		0.26		A	Beyer	1958	3.91	3.69	15
15	551015	14.0	J		0.26		A	Beyer	1958	3.91	3.69	15
16	551024	15.5	J		0.91	5.8	R	Roemer	1956a	3.92	3.56	14
17	551111	14.0			2.08	4	R	Van Biesbroeck	1957a	3.95	3.31	12
18	551111	12.0	C		0.26		A	Beyer	1958	3.95	3.31	12
19	551111	14.0	J		0.26		A	Beyer	1958	3.95	3.31	12
20	551114	12.1	C		0.26		A	Beyer	1958	3.95	3.27	11
21	551114	13.9	J		0.26		A	Beyer	1958	3.95	3.27	11
22	551114	12.0						Hirose, Tomita	1957	3.95	3.27	11
23	551116	12.0	C		0.26		A	Beyer	1958	3.96	3.25	11
24	551116	14.0	J		0.26		A	Beyer	1958	3.96	3.25	11
25	551125	12.0	C		0.10		H	Roemer	1956b	3.97	3.16	9
26	551125	15.8	J		0.91	5.8	R	Roemer	1956a	3.97	3.16	9
27	551126	15.8	J		0.91	5.8	R	Roemer	1956a	3.98	3.15	9

N	t	m	k	v	d	f	b	observer	l	r	Δ	ψ
28	551204	12.0						Waterfield	1956	3.99	3.10	7
29	551211	11.9	C		0.26		A	Beyer	1958	4.01	3.08	5
30	551211	13.8	J		0.26		A	Beyer	1958	4.01	3.08	5
31	551212	12.1	C		0.26		A	Beyer	1958	4.01	3.07	5
32	551212	13.8	J		0.26		A	Beyer	1958	4.01	3.07	5
33	551215	12.5		3				Johnson,Morgan	1955	4.02	3.07	4
34	551215	13.1		3				Johnson,Morgan	1955	4.02	3.07	4
35	551215	13.6		3				Johnson,Morgan	1955	4.02	3.07	4
36	551215	14.4		3				Johnson,Morgan	1955	4.02	3.07	4
37	551216	13.1		3				Johnson,Morgan	1955	4.02	3.07	4
38	551216	13.8		3				Johnson,Morgan	1955	4.02	3.07	4
39	551216	14.6		3				Johnson,Morgan	1955	4.02	3.07	4
40	551219	11.8	C		0.26		A	Beyer	1958	4.03	3.07	4
41	551219	13.6	J		0.26		A	Beyer	1958	4.03	3.07	4
42	551231	13.5						Waterfield	1956	4.06	3.12	5
43	560102	12.3	C		0.26		A	Beyer	1958	4.06	3.14	5
44	560102	14.0	J		0.26		A	Beyer	1958	4.06	3.14	5
45	560103	12.3	C		0.26		A	Beyer	1958	4.06	3.14	6
46	560103	14.2	J		0.26		A	Beyer	1958	4.06	3.14	6
47	560103	12.5	C					Reinmuth	1957	4.06	3.14	6
48	560104	15.0			0.61	4	R	Van Biesbroeck	1957a	4.07	3.15	6
49	560109	15.0			0.61	4	R	Van Biesbroeck	1957a	4.08	3.20	7
50	560113	12.5	C		0.26		A	Beyer	1958	4.09	3.24	8
51	560113	14.0	J		0.26		A	Beyer	1958	4.09	3.24	8
52	560116	12.4	C		0.26		A	Beyer	1958	4.10	3.28	9
53	560116	14.0	J		0.26		A	Beyer	1958	4.10	3.28	9
54	560129	12.6	C		0.26		A	Beyer	1958	4.14	3.48	11
55	560129	14.0	J		0.26		A	Beyer	1958	4.14	3.48	11
56	560130	12.5	C		0.26		A	Beyer	1958	4.14	3.50	11
57	560130	14.0	J		0.26		A	Beyer	1958	4.14	3.50	11
58	560201	12.7	C		0.26		A	Beyer	1958	4.15	3.53	12
59	560201	14.0	J		0.26		A	Beyer	1958	4.15	3.53	12
60	560202	16.5	J					Roemer	1957a	4.15	3.55	12
61	560203	12.6	C		0.26		A	Beyer	1958	4.15	3.57	12
62	560203	14.0	J		0.26		A	Beyer	1958	4.15	3.57	12
63	560204	14.0			0.61	4	R	Van Biesbroeck	1957a	4.16	3.58	12
64	560205	14.0			0.61	4	R	Van Biesbroeck	1957a	4.16	3.60	12
65	560206	12.7	C		0.26		A	Beyer	1958	4.16	3.62	12
66	560206	14.5	J		0.26		A	Beyer	1958	4.16	3.62	12
67	560211	12.8	C		0.26		A	Beyer	1958	4.18	3.72	13
68	560211	14.3	J		0.26		A	Beyer	1958	4.18	3.72	13
69	560212	12.5	C		0.26		A	Beyer	1958	4.18	3.74	13
70	560212	14.3	J		0.26		A	Beyer	1958	4.18	3.74	13
71	560216	12.5	C		0.26		A	Beyer	1958	4.20	3.82	13

N	t	m	k	v	d	f	b.	observer	l	r	Δ	φ
72	560229	15.0			0.61	4	R	Van Biesbroeck	1957a	4.24	4.09	14
73	560303	12.5	C		0.26		A	Beyer	1958	4.25	4.15	13
74	560305	12.8	C		0.26		A	Beyer	1958	4.26	4.19	13
75	560307	13.0	C		0.26		A	Beyer	1958	4.26	4.24	13
76	560307	14.5	J		0.26		A	Beyer	1958	4.26	4.24	13
77	560312	12.9	C		0.26		A	Beyer	1958	4.28	4.34	13
78	560312	14.0	J		0.26		A	Beyer	1958	4.28	4.34	13
79	560313	15.5			0.61	4	R	Van Biesbroeck	1957a	4.29	4.36	13
80	560327	13.2	C		0.26		A	Beyer	1958	4.34	4.65	12
81	560327	14.2	J		0.26		A	Beyer	1958	4.34	4.65	12
82	560328	13.3	C		0.26		A	Beyer	1958	4.34	4.67	12
83	560328	14.5	J		0.26		A	Beyer	1958	4.34	4.67	12
84	560331	13.6	C		0.26		A	Beyer	1958	4.35	4.73	12
85	560331	14.7	J		0.26		A	Beyer	1958	4.35	4.73	12
86	560404	13.4	C		0.26		A	Beyer	1958	4.37	4.81	11
87	560404	14.5	J		0.26		A	Beyer	1958	4.37	4.81	11
88	560407	13.4	C		0.26		A	Beyer	1958	4.38	4.86	11
89	560407	14.7	J		0.26		A	Beyer	1958	4.38	4.86	11
90	560412	16.0			0.61	4	R	Van Biesbroeck	1957a	4.40	4.96	10
91	560911	17.0			0.61	4	R	Van Biesbroeck	1957b	5.12	5.25	11
		18.5			0.61	4	R	Van Biesbroeck	1958			
92	561005	17.0						Roemer	1957b	5.25	5.00	11
93	570219	16.5			0.51		A	Jeffers	1958	6.04	5.89	9
94	570920	19.5						Roemer	1966	7.33	7.24	8
95	571102	19.5			0.51		A	Jeffers	1958	7.60	7.14	7
96	571126	19.0						Roemer	1966	7.75	7.21	6

notes: N = 19, 24-25, 30, 40, 80 - approximate brightness values, N = 33 - diameter of diaphragm 60", N = 34, 37 - diameter of diaphragm 34", N = 35, 38 - diameter of diaphragm 19", N = 36, 39 - diameter of diaphragm 11".

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