VDS - Fachgruppe Kometen

Circ. Nr. 1
21.10.84

Liebe Kometenfreunde!

Heute sende ich Ihnen unsere erste Mitteilung für Kometenbeobachter. Leider können wir hier nur relativ schwache Kometen anbieten. Die meisten Chancen dürfte der Komet "Austin 1984i" bieten, der mit ca. 2 Größenklassen heller wurde, als erwartet.
Da die erste Ephemeride von "Austin" bereits mit den anderen Kometen kopiert wurde, ist hier noch die neueste aus IUA-Circular Nr. 3990 wiedergegeben. Der Komet "1984k" soll sich durch sein sternförmiges Erscheinungsbild auszeichnen, deshalb ist er evtl. bereits mit einem 4-Zöller sichtbar.

Bitte senden Sie Ihre Beobachtungen baldmöglichst an uns. Nur so können wir Ihre Beobachtungen zu einem Artikel zusammenfassen und veröffentlichen.

Wer fotografisch beobachten will, sollte beachten, daß die Kometen noch sternförmig erscheinen, denn bei merklicher Koma ist keine ausreichende Helligkeitsbestimmung mit Amateurmitteln möglich.
Und nun viel Spaß bei Beobachten.

Circular Nr. 3990 siehe Rückseite

Circular No. 3990

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COMET AUSTIN (1984i)

Further precise positions, extending to Aug. 1, are given on MPC 9042. Only two post-perihelion positions have been reported:

1984 UT	$\alpha_{1950.0}$	$\delta_{1950.0}$	m_1	Observer
Sept. 4.81267	$8^h54^m25\overset{s}{.}55$	$+26^\circ38'57\overset{''}{.}0$	7	Seki
17.36340	8 23 26.44	+32 54 19.3		McCrosky

T. Seki (Geisei). 0.4-m reflector. 5' tail in p.a. 315°.
R. E. McCrosky (Oak Ridge Observatory). 0.4-m astrograph. End of difficult trail measured by D. W. E. Green.

The following elliptical orbital elements, by the undersigned, satisfy 21 observations from July 8 to Sept. 17 with mean residual 1".1. Full perturbations were taken into account.

Epoch = 1984 Aug. 8.0 ET

T = 1984 Aug. 12.1373 ET ω = 353°.1261
e = 0.999837 Ω = 170.8758] 1950.0
q = 0.291283 AU i = 164.1597

1984 ET	$\alpha_{1950.0}$	$\delta_{1950.0}$	Δ	r	m_1
Sept.27	7^h49^m58	+38°27'.0	1.009	1.186	8.3
Oct. 2	7 24.78	+41 36.8			
7	6 52.36	+44 46.7	0.890	1.375	8.6
12	6 10.34	+47 32.7			
17	5 18.48	+49 15.7	0.820	1.555	9.0
22	4 20.65	+49 15.7			
27	3 24.55	+47 19.1	0.835	1.727	9.5
Nov. 1	2 36.93	+43 54.0			
6	2 00.00	+39 48.3	0.950	1.893	10.2
11	1 32.64	+35 41.8			
16	1 12.72	+31 56.7	1.148	2.053	10.9

Further total visual magnitude estimates: Sept. 13.38 UT, 7.2 (D. W. E. Green, 20 x 80 binoculars, Cambridge, MA); 14.51, 7.6 (C. S. Morris, 20 x 80 binoculars, Tujunga, CA); 15.51, 7.5 (Morris; 16.50, 7.5 (Morris); 17.37, 7.5 (Green). Tail and antitail lengths and position angles by Morris (0.25-m reflector): Sept. 6.51, 30', 301°, 20', 114°; 9.50, -, -, 12', 111°.5; 15.51, -, -, 20', 109°. A 4-min exposure in moonlight by J. Gibson with the Palomar 1.2-m Schmidt (103a-D emulsion+Wratten 12 filter) on Sept. 18.5 showed a 12'-15' antitail in p.a. 130° but no main tail.

1984 September 19 Brian G. Marsden

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PERIODIC COMET AREND-RIGAUX (1984k)

This comet has been recovered as follows:

1984 UT	α_{1950}	δ_{1950}	m_1	Observer
Aug. 7.44239	$3^h48^m17^s.84$	+0°47'55".2	18.5	Gibson
8.41739	3 50 34.31	+0 49 11.0		
8.76667	3 51 24.35	+0 49 53.9	18-18.5	Seki

J. Gibson (Palomar Mountain Observatory). 12-min exposures with the 1.2-m Schmidt show the object to be of stellar appearance. A 24-min exposure on Aug. 6 shows a hint of a very faint tail 1'-2' long in p.a. 255°.

T. Seki (Geisei). Stellar appearance. Communicated by S. Nakano.

The Palomar observations indicate that the object is precisely in the position predicted on MPC 7659. An ephemeris follows:

1984/85 ET	α_{1950}	δ_{1950}	Δ	r	m_1
Sept.17	$5^h27^m.52$	+0°08'.5	1.281	1.661	13.8
27	5 52.86	- 0 25.7			
Oct. 7	6 18.11	- 1 04.1	1.082	1.568	13.1
17	6 43.05	- 1 41.3			
27	7 07.33	- 2 11.2	0.914	1.498	12.4
Nov. 6	7 30.57	- 2 25.1			
16	7 52.37	- 2 13.7	0.774	1.456	11.9
26	8 12.21	- 1 25.8			
Dec. 6	8 29.51	+ 0 10.7	0.660	1.447	11.5
16	8 43.73	+ 2 46.5			
26	8 54.25	+ 6 28.1	0.582	1.471	11.3
Jan. 5	9 00.80	+11 11.0			
15	9 03.59	+16 32.7	0.563	1.527	11.5
25	9 03.42	+21 55.7			
Feb. 4	9 01.91	+26 39.3	0.629	1.608	12.1
14	9 00.80	+30 17.4			
24	9 01.49	+32 43.4	0.780	1.710	13.0

COMET AUSTIN (1984i)

Total visual magnitude estimates and tail (in p.a. 129°) lengths by R. H. McNaught, Siding Spring Observatory: Aug. 1.37 UT, 5.6, 2'4 (9 x 63 binoculars); 3.36, 5.1, 3'1; 7.36, 5.2, 0'2 (10 x 80 binoculars; very low altitude, slight haze and twilight).

1984 August 10 Brian G. Marsden

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COMET AUSTIN (1984i)

E. P. Ney, University of Minnesota, reports the following infrared magnitudes, obtained on Aug. 10.8 UT using a 26"-diameter diaphragm: 1.2 μm, 4.8; 1.6 μm, 4.5; 2.2 μm, 3.5; 3.5 μm, 0.4; 4.8 μm, -1.2; 8.5 μm, -3.2; 10.5 μm, -3.6; 12.5 μm, -3.9. Comet 1984i is about 4 times dimmer than comet 1973 XII at the same distances from sun and earth and has a muted or missing silicate feature.

The following orbital elements are taken from MPC 9026:

T = 1984 Aug. 12.1346 ET ω = 353°1070
Ω = 170.8769] 1950.0
q = 0.291380 AU i = 164.1578

1984 ET	α_{1950}	δ_{1950}	Δ	r	m_1
Aug. 28	$9^h12^m.41$	+22°46'.3	1.346	0.552	8.1
30	9 07.68	+23 47.9			
Sept. 1	9 03.07	+24 47.7	1.318	0.642	8.7
3	8 58.54	+25 46.3			
5	8 54.04	+26 44.2	1.282	0.731	9.2
7	8 49.50	+27 42.0			
9	8 44.89	+28 40.1	1.239	0.818	9.6
11	8 40.14	+29 38.8			
13	8 35.20	+30 38.6	1.192	0.903	9.9
15	8 30.02	+31 39.7			
17	8 24.53	+32 42.5	1.141	0.987	10.2
19	8 18.66	+33 47.1			
21	8 12.33	+34 53.7	1.089	1.068	10.5
23	8 05.45	+36 02.5			
25	7 57.94	+37 13.6	1.036	1.147	10.7
27	7 49.67	+38 26.6			
29	7 40.53	+39 41.6	0.984	1.225	10.8
Oct. 1	7 30.39	+40 57.9			
3	7 19.11	+42 14.9	0.935	1.301	11.0
5	7 06.53	+43 31.4			
7	6 52.53	+44 46.2	0.891	1.375	11.1
9	6 36.98	+45 57.4			
11	6 19.79	+47 02.6	0.855	1.448	11.3
13	6 00.95	+47 59.3			
15	5 40.55	+48 44.6	0.829	1.520	11.4

1984 August 20 Brian G. Marsden

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WATER MASER IN NGC 3079

C. Henkel, R. Guesten, C. Thum, and D. Downes communicate the discovery with the Effelsberg 100-m telescope of the most luminous H_2O maser yet found, in the galaxy NGC 3079. The maser is located at $\alpha = 9^h58^m35^s.0$, $\delta = +55°55'17".6$ (± 5 arcsec, equinox 1950.0), and has a peak flux density of 11 Jy and H_2O features over a velocity range of at least 140 km/s, centered on v_{lsr} = 960 km/s. For isotropic emission and a source distance of 15 Mpc, the total luminosity in the 22-GHz H_2O line is 600 $L_\odot$. The galaxy is also one of the strongest emitters in the IRAS survey.

SUPERNOVA IN NGC 991

R. Buta, Mount Stromlo Observatory, telexes that a spectrum of the supernova in NGC 991 obtained by J. Lewis with the 1.9-m telescope indicates that this is probably a type II supernova about one month past maximum light, rather than type I as indicated by Buta on IAUC 3981 (he notes that colors of supernovae are fairly ambiguous at phases well past maximum). The spectrum was in the range 500-540 nm and shows features similar to those observed in the supernova 1979c on 1979 May 28 (Branch et al. 1981, Am. J. 244, 780).

PERIODIC COMET WOLF-HARRINGTON (1984g)

Total visual magnitude estimate by C. S. Morris (near Mt. Wilson, CA, 0.25-m reflector): Aug. 28.50 UT, 12.8. Ephemeris from the elements on MPC 8289, T corrected to Sept. 22.759 ET:

1984 ET	α_{1950}	δ_{1950}	Δ	r	m_1
Aug. 28	$6^h33^m.13$	+25°26'.2	1.951	1.636	12.7
Sept. 7	7 02.37	+23 21.4			
17	7 30.29	+20 50.5	1.807	1.617	12.4
27	7 56.64	+17 56.7			
Oct. 7	8 21.21	+14 43.7	1.677	1.622	12.3
17	8 43.87	+11 15.6			
27	9 04.48	+ 7 36.5	1.558	1.651	12.2
Nov. 6	9 22.90	+ 3 50.8			
16	9 38.97	+ 0 02.5	1.448	1.702	12.3
26	9 52.47	- 3 43.9			
Dec. 6	10 03.14	- 7 23.9	1.348	1.771	12.4
16	10 10.69	-10 52.4			

1984 September 6 Daniel W. E. Green

Circular No. 3987

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PERIODIC COMET SCHAUMASSE (1976 XV = 1984m)

Elements from the new computations mentioned on IAUC 3986:

Epoch = 1976 Sept. 19.0 ET
T = 1976 Sept. 5.066 ET
ω = 57°232
Ω = 80.569] 1950.0
i = 11.861
q = 1.20543 AU
e = 0.70425
a = 4.07580 AU
n° = 0.119780
P = 8.23 years

Epoch = 1984 Dec. 6.0 ET
T = 1984 Dec. 6.482 ET
ω = 57°368
Ω = 80.423] 1950.0
i = 11.840
q = 1.21265 AU
e = 0.70324
a = 4.08635 AU
n° = 0.119317
P = 8.26 years

1984/85 ET	α_{1950}	δ_{1950}	Δ	r	m_1
Sept.17	$7^h20^m.94$	+20°50'.3	1.719	1.582	13.2
27	7 56.40	+20 34.4			
Oct. 7	8 34.13	+19 53.5	1.485	1.439	12.2
17	9 13.88	+18 44.5			
27	9 55.14	+17 05.8	1.313	1.321	11.4
Nov. 6	10 37.17	+14 58.9			
16	11 19.11	+12 28.9	1.212	1.242	10.8
26	12 00.09	+ 9 43.8			
Dec. 6	12 39.31	+ 6 53.6	1.174	1.213	10.6
16	13 16.25	+ 4 07.8			
26	13 50.50	+ 1 34.3	1.177	1.239	10.8
Jan. 5	14 21.81	- 0 41.5			
15	14 50.04	- 2 37.2	1.190	1.316	11.2
25	15 15.05	- 4 11.9			
Feb. 4	15 36.67	- 5 26.6	1.191	1.439	11.7
14	15 54.75	- 6 23.4			
24	16 09.04	- 7 05.0	1.171	1.574	12.3
Mar. 6	16 19.26	- 7 34.5			
16	16 25.17	- 7 55.3	1.136	1.731	12.9

PERIODIC COMET NEUJMIN 1 (1984c)

Total visual magnitude estimates and coma diameters: Aug. 25.21 UT, 13.6, 0.5 (C. S. Morris, Lookwood Valley, CA, 0.25-m reflector); 28.20, 11.5:, 0.7 (R. Keen, Mt. Thorodin, CO, 0.30-m reflector); 31.22, 13.5, 0.6 (Morris).

1984 September 12 Brian G. Marsden