

1999、2000年の彗星界のまとめ

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題記の2年間に発見・検出された彗星の符号、名称、発見日および軌道要素を一覧表として掲げる。またこの2年間に行われた位置観測について、天文台毎および彗星毎のランキングを紹介し、光度観測については、通算の観測者毎、彗星毎のランキングを紹介する。あわせて関連するトピックスを紹介する。

1. 発見・検出された彗星

この2年間に発見または検出されて、新たに符号が与えられた彗星の数は、

すべての彗星 を含めると	1999年：発見 109個(*)	検出 2個	計 111個
	2000年：発見 108個	検出 7個	計 115個(*)
S O H O彗星 を除くと	1999年：発見 41個(*)	検出 2個	計 43個(*)
	2000年：発見 28個	検出 7個	計 35個

であった(2001年3月末現在)。*は新記録である。S O H O彗星を除く一覧表を表1、2に掲げる。大規模NEOサーベイが大半の彗星を発見してしまう中で、アマチュアによるCCD発見が3件あったこと、久しぶりの日本人による眼視発見があったことは特筆に値する。またサーベイの副産物として、行方不明の(あるいは行方不明に近い)周期彗星が4個も再発見されたことも注目される。

2. 軌道要素

表1、2の彗星の軌道要素を表3に掲げる。2001年3月号までのMPCに掲載された中から最新の要素を掲載した。近日点距離の大きな彗星や、いわゆる中周期彗星が数多く発見されていることが目を引く。

3. S O H Oによって撮影された画像から発見された彗星

S O H Oの画像から発見された彗星は、全部で301個に達している(2001年3月末現在までの公表分)。このうち281個がサングレーザー(いわゆるクロイツ群の彗星)である。1999~2000年の2年間に撮影された画像から発見された148個(うち135個がサングレーザー)について、符号、発見者、発見時刻、軌道要素を表4に掲げる。最近は大半の彗星が、ウェブ上で公開されている画像データから、アマチュアによって発見されている。2000年までの発見数ランキングを表5に掲げる。この2年間に地上から観測されたS O H O彗星はなかった。

4. 位置観測数のランキング

この2年間に行われた位置観測について、天文台(正しくは天文台コード)毎のランキングを表6、7に、彗星毎のランキングを表8、9に掲げる。調査対象は2001年3月号までのMPCに掲載された観測である。NEAの観測に忙しいせい(か?)、全般に観測が低調な中、日本のアマチュアの活躍が目立っている。明るい彗星が非常に多くの観測を集める一方で、暗い彗星の観測が手薄となっている感がある。なおこの項目の調査は、木下一男氏による。

5. 光度観測数のランキング

これまでに報告された光度観測について、観測者(正しくは観測者コード)毎のランキングを表10に、彗星毎のランキングを表11に掲げる。調査対象は2000年10月号までのICQに掲載された観測である。位置観測同様、彗星による偏りが目立つ。なおこの項目の調査は、ダニエル・グリーン氏による。

	Designation	Name	Discoverer (s)	Date (UT)	Mag.	IAUC
	C/1999 A1	Tilbrook	Tilbrook	1 12.486	10.5 T	7084
#	P/1999 D1	Hermann	Hermann	2 20.405	18.4 T	7111
	P/1999 DN3	Korlevic-Juric	Korlevic, Juric	2 18.973	18.7 N	7167
#	C/1999 E1	Li	Li	3 13.176	16.5 T	7126
#	C/1999 F1	Catalina	CSS	3 23.316	18.3 N	7148
#	C/1999 F2	Dalcanton	Dalcanton	3 20.447	15.5 T	7194
	C/1999 G1	LINEAR	LINEAR	4 7.238	18.9 T	7140
	C/1999 H1	Lee	Lee	4 16.5	9 T	7144
	C/1999 H3	LINEAR	LINEAR	4 22.309	16.8 T	7151
#	C/1999 J2	Skiff	Skiff	5 13.403	16.0 T	7165
	C/1999 J3	LINEAR	LINEAR	5 12.283	18.8 T	7166
	C/1999 J4	LINEAR	LINEAR	5 15.318	18.3 N	7170
	P/1999 J5	LINEAR	LINEAR	5 12.359	19.0 N	7201
#	C/1999 K2	Ferris	Ferris	5 19.366	18.1 T	7175
	C/1999 K3	LINEAR	LINEAR	5 20.270	18.7 T	7175
	C/1999 K4	LINEAR	LINEAR	5 17.326	18.7 N	7176
	C/1999 K5	LINEAR	LINEAR	5 20.317	17.2 N	7178
	C/1999 K6	LINEAR	LINEAR	5 20.227	17.6 N	7180
	C/1999 K7	LINEAR	LINEAR	5 24.341	18.6 T	7181
	C/1999 K8	LINEAR	LINEAR	5 26.384	18.6 N	7182
	C/1999 L2	LINEAR	LINEAR	6 11.243	18.6 N	7199
	C/1999 L3	LINEAR	LINEAR	6 9.171	18.3 N	7200
	C/1999 N2	Lynn	Lynn	7 13.451	8.0 T	7222
	C/1999 N4	LINEAR	LINEAR	7 12.254	18.2 N	7226
	141P/1999 P1	Machholz 2	McNaught	8 3.553	20.8 N	7231
	142P/1999 R2	Ge-Wang	Scotti	9 15.444	20.3 T	7255
	P/1999 R028	LONEOS	LONEOS	9 7.330	18.4 T	7253
	C/1999 S2	McNaught-Watson	McNaught, Watson	9 19.720	17.5 T	7260
	C/1999 S3	LINEAR	LINEAR	9 24.344	15.7 T	7264
	C/1999 S4	LINEAR	LINEAR	9 27.398	17.3 N	7267
	C/1999 T1	McNaught-Hartley	McNaught, Hartley	10 7.637	15 T	7273
#	C/1999 T2	LINEAR	LINEAR	10 14.160	17.7 T	7280
	C/1999 T3	LINEAR	LINEAR	10 3.337	18.3 N	7289
	C/1999 U1	Ferris	Ferris	10 18.380	17.3 T	7283
	P/1999 U3	LINEAR	LINEAR	10 30.324	18.5 T	7295
#	C/1999 U4	Catalina-Skiff	CSS	10 31.248	17.0 T	7298
			Skiff	11 1.278	17.4 T	7298
	P/1999 V1	Catalina	Hergenrother	11 5.439	17.6 T	7302
	P/1999 WJ7	Korlevic	Korlevic	11 28.944	17.9 N	7368
#	P/1999 X1	Hug-Bell	Hug, Bell	12 10.333	18.8 T	7331
#	P/1999 XB69	LINEAR	LINEAR	12 7.292	17.9 N	7370
	C/1999 XS87	LINEAR	LINEAR	12 7.378	17.3 N	7344
#	P/1999 XN120	Catalina	CSS	12 5.190	16.9 N	7370
#	C/1999 Y1	LINEAR	LINEAR	12 20.223	17.5 N	7338

表 1. 1999 年に発見・検出された彗星 (SOHO 彗星は除く)

先頭の # は発見前に観測されていたことを示す。光度の T は全光度、N は核光度。

	Designation	Name	Discoverer	Date (UT)	Mag.	IAUC
	C/2000 A1	Montani	Montani	1 12.326	18.9 T	7346
	C/2000 B2	LINEAR	LINEAR	1 29.239	18.8 T	7354
	P/2000 B3	LINEAR	LINEAR	1 27.241	18.9 N	7356
#	C/2000 B4	LINEAR	LINEAR	1 29.248	19.4 N	7368
#	P/2000 C1	Hergenrother	Hergenrother	2 4.458	17.1 T	7357
#	C/2000 CT54	LINEAR	LINEAR	2 2.440	18.9 N	7368
	G/2000 D2	LINEAR	LINEAR	2 25.199	18.1 N	7372
	143P/2000 ET90	Kowal-Mrkos	LINEAR	3 9.303	18.9 N	7403
	P/2000 G1	LINEAR	LINEAR	4 7.454	17.9 T	7396
	C/2000 G2	LINEAR	LINEAR	4 4.386	18.4 N	7411
	G/2000 H1	LINEAR	LINEAR	4 26.388	18.7 N	7410
	C/2000 J1	Ferris	Ferris	5 4.323	19.0 N	7416
#	C/2000 K1	LINEAR	LINEAR	5 26.313	18.0 T	7430
#	C/2000 K2	LINEAR	LINEAR	5 26.379	18.1 T	7430
#	C/2000 O1	Koehn	Koehn	7 20.365	17.6 T	7462
	144P/2000 O2	Kushida	Hainaut, Delahodde	7 25.330		7467
	C/2000 OF8	Spacewatch	Spacewatch	7 24.322	21.3 N	7484
#	145P/2000 R1	Shoemaker-Levy 5	LINEAR	9 6.412	18.5 T	7488
	P/2000 R2	LINEAR	LINEAR	9 3.148	18.7 N	7492
#	C/2000 S1	Skiff	Skiff	9 24.298	14.8 T	7496
	146P/2000 S2	Shoemaker-LINEAR	LINEAR	9 27.446	18.6 T	7498
	C/2000 S3		Skiff	9 29.270	17.7 T	7501
#	C/2000 S4	LINEAR-Spacewatch	LINEAR	9 23.194	19.6 N	7502
			Gehrels	10 2.154	20.5 N	7502
#	C/2000 SV74	LINEAR	LINEAR	9 24.342	17.8 N	7510
	148P/2000 S0253	Anderson-LINEAR	LINEAR	9 24.349	19.8 N	7524
#	147P/2000 T2	Kushida-Muramatsu	Oribe	10 03.719	20.2 T	7507
			Delahodde	10 08.177	21.0 T	7507
	C/2000 U5	LINEAR	LINEAR	10 29.382	17.1 N	7515
	P/2000 U6	Tichy	Tichy	10 23.077	17.8 N	7515
	C/2000 W1	Utsunomiya-Jones	Utsunomiya	11 18.817	8.5 T	7526
			Jones	11 25.64	8 T	7526
	C/2000 WM1	LINEAR	LINEAR	11 16.145	18.0 N	7546
#	P/2000 WT168		LONEOS	11 25.437	17.2 N	7584
			LINEAR	11 27.372	17.8 N	7584
#	C/2000 Y1	Tubbiolo	Tubbiolo	12 16.180	19.3 T	7544
#	C/2000 Y2		Skiff	12 27.335	17.2 T	7549
#	P/2000 Y3	Scotti	Scotti	12 30.163	18.9 T	7552
	149P/2000 Y10	Mueller 4	Oribe	12 22.847	20.5 N	7577

表2. 2000年に発見・検出された彗星（SOHO彗星は除く）

先頭の#は発見前に観測されていたことを示す。光度のTは全光度、Nは核光度。

Designation	T (TT)	q	e	P	Peri.	Node	Incl.	Arc of obs.	#obs	Cal
C/1999 A1	1999 1 29.6563	0.730750	0.995944		232.6684	259.1216	89.4827	19990113-19990212	66	M
P/1999 D1	1999 2 18.0263	1.654647	0.712831	13.83	173.0972	349.3758	21.5232	19990215-19990414	108	N
P/1999 DN3	1998 9 30.8693	3.908471	0.135104	9.61	161.3096	5.9552	18.7223	19990218-19990614	37	N
C/1999 E1	1999 1 31.7121	3.919986	0.759792	65.92	329.7594	127.8327	46.8866	19990122-20000314	240	N
C/1999 F1	2002 2 13.7476	5.787203	0.998834		255.1636	20.0126	92.0301	19990312-20000313	69	N
C/1999 F2	1998 8 23.9846	4.718792	0.998603		352.3930	210.2960	56.4211	19980618-20000314	87	N
C/1999 G1	1998 7 31.9997	4.040763	0.844885	133	136.0280	23.4856	76.3118	19990408-19990513	42	M
C/1999 H1	1999 7 11.1720	0.708107	0.999743		40.7012	162.6506	149.3529	19990416-19991023	685	N
C/1999 H3	1999 8 18.2366	3.500861	1.002800		101.9118	332.7236	115.8403	19990422-20010103	675	N
C/1999 J2	2000 4 5.9835	7.109792	1.001046		127.1385	50.0427	86.4127	19990512-20001226	741	N
C/1999 J3	1999 9 20.1671	0.976822	0.999483		161.9807	228.9798	101.6566	19990512-19991024	127	N
C/1999 J4	1999 11 17.6088	3.780400	1.0		95.1591	264.4841	118.9108	19990515-19990611	39	N
P/1999 J5	1999 5 12.8467	3.712687	0.169641	9.45	132.2885	112.0163	13.7169	19990512-19990731	57	N
C/1999 K2	1999 4 10.4754	5.290295	0.965878		4.5636	300.3182	82.1903	19990514-19990822	89	M
C/1999 K3	1999 2 27.5306	1.928764	0.991749		341.1481	266.9130	92.2727	19990520-19990718	52	N
C/1999 K4	1999 5 16.338	1.44831	1.0		8.833	241.637	121.310	19990517-19990522	17	M
C/1999 K5	2000 7 4.3925	3.255386	1.001666		241.4869	106.3818	89.4731	19990520-20001218	169	M
C/1999 K6	1999 7 24.6736	2.246977	0.993520		56.7633	245.3721	46.3439	19990520-19991119	282	N
C/1999 K7	1999 2 25.0473	2.324238	1.0		104.7378	50.3130	135.1698	19990524-19990707	34	N
C/1999 K8	2000 4 24.3059	4.200540	1.000788		164.6219	195.3946	52.7332	19990526-20001104	526	N
C/1999 L2	1999 8 4.8904	1.904759	0.995149		178.7186	94.2896	43.9424	19990611-19990721	88	N
C/1999 L3	2000 1 4.9080	1.988915	0.974313	681	353.2975	140.1610	166.0993	19990609-20000120	138	N
C/1999 N2	1999 7 23.0505	0.761284	0.997459		357.8340	254.6757	111.6561	19990714-19990911	168	N
C/1999 N4	2000 5 23.7509	5.504764	1.004248		90.4310	345.9016	156.9229	19990712-20000612	166	M
141P/1999 P1-A	1999 12 9.2742	0.748933	0.751066	5.22	149.3010	246.1372	12.8113	1994 - 1999	241	N
141P/1999 P1-D	1999 12 9.9558	0.749005	0.751066	5.22	149.2918	246.1339	12.8119	1994 - 2000	117	N
142P/1999 R2	1999 6 21.4788	2.496395	0.500320	11.17	177.3858	177.1399	12.1732	1988 - 2000	17	M
P/1999 R028	1999 10 2.3460	1.231710	0.650640	6.62	219.8626	148.4490	8.1894	19990907-19991104	106	N
C/1999 S2	1997 11 22.5084	6.466234	1.007289		223.4712	74.4276	65.8130	19990919-20001222	74	M
C/1999 S3	1999 11 9.0096	1.894980	0.900048	82.55	44.1252	11.8788	70.5622	19990924-20000211	598	N
C/1999 S4	2000 7 26.1741	0.765137	0.999449		151.0490	83.1910	149.3905	19990927-20000722	1070	M
C/1999 T1	2000 12 13.4713	1.171688	0.999797		344.7574	182.4825	79.9750	19991007-20010130	311	N
C/1999 T2	2000 11 24.4679	3.037376	1.002085		104.6690	14.8800	111.0020	19990722-20001105	563	N
C/1999 T3	2000 9 1.5451	5.365722	0.996887		211.3195	223.5118	104.7549	19991003-20001229	197	N
C/1999 U1	1998 9 3.0259	4.137553	1.003649		291.0629	58.2572	105.7348	19981222-20000128	182	M
P/1999 U3	1999 11 18.4668	1.846330	0.619145	10.67	111.3158	306.9784	20.3946	19991030-20000229	199	N
C/1999 U4	2001 10 28.4551	4.915282	1.007716		77.5128	32.2887	51.9260	19990918-20001105	204	N
P/1999 V1	1999 10 25.0500	2.944273	0.550506	16.76	186.6923	294.3111	15.5869	19991105-20000304	94	N
P/1999 WJ7	2000 2 15.8156	3.167369	0.316539	9.98	154.5339	290.5327	2.9793	19991103-20001208	106	N
P/1999 X1	1999 6 20.8337	1.936769	0.472735	7.04	296.9161	103.6511	10.9687	19991010-20000116	77	M
P/1999 XB69	2000 2 17.0403	1.639255	0.631984	9.40	220.1818	256.1667	11.3364	19991114-20000301	49	N
C/1999 XS87	1999 8 6.6066	2.771791	0.841024	72.80	151.3507	266.7311	14.8443	19991104-20000305	89	N
P/1999 XN120	2000 5 1.5442	3.286267	0.213181	8.54	161.8247	285.4553	5.0308	19991103-20000318	66	N
C/1999 Y1	2001 3 24.1114	3.091180	1.000622		184.2856	188.8842	134.7868	19991029-20001104	526	N
C/2000 A1	2000 7 13.7306	9.743162	1.003894		14.2930	111.8355	24.5425	20000104-20001128	88	N
C/2000 B2	1999 11 9.9344	3.776036	1.0		154.5683	284.9897	93.6545	20000129-20000309	78	N
P/2000 B3	2000 2 14.1605	1.700246	0.575202	8.01	130.5069	352.1476	11.1262	20000127-20000508	81	N
C/2000 B4	2000 6 14.5870	6.829602	0.620751	76.42	126.1349	0.6267	15.9093	20000102-20001229	88	N
P/2000 C1	2000 3 19.8701	2.095543	0.406428	6.63	51.1679	127.0442	6.1054	20000104-20000508	162	N
C/2000 CT54	2001 6 19.4766	3.155688	0.998915		272.6552	18.9654	49.2075	20000128-20000709	58	M
C/2000 D2	2000 3 8.6123	2.297627	0.867110	71.89	117.6825	235.8874	156.9918	20000225-20000330	79	N
143P/2000 ET90	2000 7 1.8035	2.546791	0.409022	8.95	320.5886	245.5014	4.6837	1984 - 2000	47	M
P/2000 G1	2000 3 9.8095	1.002897	0.672363	5.36	343.2874	191.0331	10.3741	20000407-20000707	135	M
C/2000 G2	2000 2 6.1533	2.716730	0.809007	53.65	101.7505	328.3872	170.4791	20000404-20000503	126	N
C/2000 H1	2000 1 28.8754	3.636630	1.0		78.7991	356.4441	118.2393	20000426-20000608	85	M
C/2000 J1	2000 5 11.3590	2.542674	0.954791	422	147.2388	28.4397	98.7946	20000504-20000601	24	M
C/2000 K1	1999 12 14.8242	6.275969	1.002241		15.8167	260.1944	116.7824	19990518-20000617	129	M
C/2000 K2	2000 10 11.3666	2.437108	0.995537		106.8242	195.2616	25.6332	20000504-20001222	192	N
C/2000 O1	2000 1 27.3750	5.921773	1.000788		55.1110	88.8620	148.0974	19981214-20000829	45	N
144P/2000 O2	2001 6 27.6952	1.431278	0.628992	7.58	216.0224	245.6245	4.1188	1994 - 2000	303	M
C/2000 OF8	2001 8 5.0028	2.167793	1.0		256.2561	117.1050	152.4104	20000724-20000829	50	M
145P/2000 R1	2000 8 17.0874	1.988614	0.529362	8.69	6.2342	29.6902	11.7706	1991 - 2000	49	M
P/2000 R2	2000 9 12.6574	1.389976	0.583680	6.10	147.0633	187.4992	3.2164	20000903-20001129	54	N
P/2000 S1	2000 7 14.6636	2.513857	0.618364	16.91	308.4412	29.1377	21.0080	20000826-20001129	157	N
146P/2000 S2	2000 7 14.3070	1.319171	0.666798	7.88	317.7613	55.3593	21.6201	1984 - 2000	28	N
C/2000 S3	2000 7 16.2788	2.662181	0.7721816	39.95	298.2643	41.1526	25.1646	20000920-20001227	29	N
P/2000 S4	2000 10 19.1028	2.265372	0.681903	19.01	172.3258	174.6453	28.3258	20000901-20001029	36	M
C/2000 SV74	2002 4 30.4781	3.541380	1.005072		76.2330	24.1852	75.2412	20000905-20001203	134	N
148P/2000 SO253	2001 5 1.9640	1.693679	0.539468	7.05	6.7206	89.8007	3.6824	1963 - 2000	49	N
147P/2000 T2	2001 4 29.5075	2.752369	0.277477	7.44	347.4999	93.7532	2.3679	1994 - 2000	49	M
C/2000 U5	2000 3 12.9347	3.485522	1.001126		298.9339	65.2980	93.6501	20001029-20010104	204	N
P/2000 U6	2000 10 4.6050	2.154900	0.431387	7.38	11.8526	24.4343	19.3694	20001023-20010128	189	N
C/2000 W1	2000 12 26.5593	0.321180	1.0		51.5091	10.7661	160.1654	20001126-20010114	147	M
C/2000 WM1	2002 1 22.6907	0.555454	1.000287		276.7676	237.8938	72.5518	20001116-20010220	116	M
P/2000 WT168	2001 3 23.3243	1.761718	0.546605	7.66	245.4996	272.5523	18.5200	19780306-20010318	190	M
C/2000 Y1	2001 2 3.7351	7.973141	1.001511		181.8301	239.3966	137.9702	20001024-20010121	60	M
C/2000 Y2	2001 3 21.8041	2.768783	0.994356		326.8170	185.8481	12.0876	20001126-20010222	67	M
P/2000 Y3	2000 11 2.0323	4.047492	0.200648	11.39	88.5875	355.2300	2.2474	20001129-20010227	86	M
149P/2000 Y10	2001 2 7.8847	2.646731	0.388590	9.01	43.6165	145.3691	29.7486	1992 - 2001	35	N

表3. 1999~2000年に発見・検出された彗星の軌道要素
計算者 (Cal) のNは中野圭一、Mはブライアン・マースデン

Obs	Cal	Designation	Discoverer	Date(UT)	IAUC	T (TT)	q	e	Peri.	Node	Incl.	MPC
66	M	C/1999 C1	Le	2 6. 459	7123	02 07. 87	0. 0062	1. 0	81. 72	3. 63	144. 81	34126
108	N	C/1999 C2	Bi	2 6. 099	7422	02 06. 74	0. 0068	1. 0	72. 41	354. 19	144. 16	40668
37	N	C/1999 E2	Oa	3 2. 513	7377	03 03. 72	0. 0051	1. 0	82. 50	4. 27	145. 42	39021
240	N	C/1999 G2	Bi	4 13. 338	7142	04 13. 73	0. 0049	1. 0	82. 65	358. 79	145. 01	34421
69	N	C/1999 G3	Oa	4 2. 021	7458	04 02. 41	0. 0092	1. 0	73. 82	2. 98	144. 09	40987
87	N	C/1999 G4	Oa	4 3. 496	7458	04 03. 86	0. 0073	1. 0	75. 85	1. 74	145. 06	40987
42	M	C/1999 G5	Oa	4 11. 246	7459	04 11. 62	0. 0062	1. 0	77. 96	2. 66	143. 42	40987
685	N	C/1999 H2	Bi	4 19. 229	7147	04 19. 63	0. 0051	1. 0	83. 70	3. 33	145. 38	34421
675	N	C/1999 H4	Gr	4 26. 821	7157	04 27. 87	0. 0055	1. 0	85. 20	6. 35	144. 45	34421
741	N	C/1999 H5	Oa	4 24. 455	7454	04 24. 87	0. 0051	1. 0	85. 47	5. 51	144. 57	40987
127	N	C/1999 H6	Oa	4 28. 729	7458	04 29. 15	0. 0062	1. 0	79. 75	1. 33	144. 92	40987
39	N	C/1999 H7	Oa	4 20. 413	7459	04 20. 85	0. 0082	1. 0	79. 79	6. 99	142. 60	40987
57	N	C/1999 J1	Bi	5 7. 804	7162	05 08. 50	0. 0062	1. 0	83. 51	7. 70	142. 66	34734
89	N	C/1999 J6	Oa	5 10. 726	7386	05 11. 59	0. 0492	1. 0	22. 47	81. 69	26. 53	39791
52	N	C/1999 J7	Oa	5 5. 326	7439	05 05. 79	0. 0070	1. 0	86. 23	11. 90	143. 00	40822
17	M	C/1999 J8	Oa	5 7. 726	7439	05 08. 13	0. 0056	1. 0	84. 11	7. 60	141. 95	40822
169	N	C/1999 J9	Oa	5 9. 226	7439	05 09. 61	0. 0050	1. 0	79. 96	0. 53	143. 92	40822
282	N	C/1999 J10	Oa	5 10. 976	7439	05 11. 44	0. 0072	1. 0	85. 40	10. 20	142. 38	40822
34	N	C/1999 J11	Oa	5 14. 504	7439	05 14. 93	0. 0051	1. 0	83. 78	4. 02	144. 48	40822
526	N	C/1999 J12	Oa	5 3. 035	7459	05 03. 48	0. 0051	1. 0	79. 31	352. 92	147. 21	40988
88	N	C/1999 K1	Bi	5 20. 279	7173	05 21. 37	0. 0051	1. 0	83. 51	5. 49	143. 78	34735
138	N	C/1999 K9	Vo	5 23. 698	7204	05 24. 48	0. 0065	1. 0	84. 91	8. 45	142. 66	34735
168	N	C/1999 K10	Bi	6 1. 698	7204	06 01. 35	0. 0055	1. 0	84. 21	5. 29	144. 89	34735
166	M	C/1999 K11	Oa	5 19. 960	7439	05 20. 32	0. 0050	1. 0	84. 85	7. 16	143. 07	40822
241	N	C/1999 K12	Oa	5 23. 563	7439	05 23. 98	0. 0065	1. 0	39. 88	311. 54	145. 92	40822
117	N	C/1999 K13	Oa	5 24. 327	7439	05 24. 68	0. 0075	1. 0	52. 37	323. 08	138. 40	40822
17	M	C/1999 K14	Oa	5 27. 976	7439	05 28. 46	0. 0064	1. 0	86. 73	9. 08	143. 36	40822
106	N	C/1999 K15	Oa	5 28. 810	7439	05 29. 25	0. 0051	1. 0	78. 55	358. 08	144. 79	40823
74	M	C/1999 L1	Bi	6 5. 013	7197	06 05. 90	0. 0053	1. 0	80. 66	1. 10	143. 91	34735
598	N	C/1999 L4	Vo	6 1. 448	7204	06 02. 02	0. 0078	1. 0	70. 86	348. 49	137. 95	34736
1070	N	C/1999 L5	Bi	6 10. 613	7208	06 11. 58	0. 0077	1. 0	85. 28	6. 76	144. 42	39021
311	M	C/1999 L6	Oa	6 1. 299	7452	06 01. 70	0. 0050	1. 0	57. 85	332. 27	145. 65	40988
563	N	C/1999 L7	Oa	6 3. 129	7452	06 03. 68	0. 0076	1. 0	79. 99	0. 20	146. 01	40988
197	N	C/1999 L8	Oa	6 6. 310	7452	06 06. 72	0. 0054	1. 0	60. 79	337. 71	145. 44	40988
182	M	C/1999 M1	Bi	6 16. 138	7208	06 16. 93	0. 0055	1. 0	86. 30	7. 64	144. 21	35208
199	N	C/1999 M2	Bi	6 27. 314	7212	06 27. 72	0. 0049	1. 0	85. 74	6. 91	144. 33	35208
204	N	C/1999 N1	Le	7 1. 071	7213	07 01. 69	0. 0052	1. 0	91. 95	13. 70	142. 78	35208
94	N	C/1999 N3	Bi	7 9. 363	7222	07 10. 38	0. 0055	1. 0	85. 58	7. 02	144. 43	35208
106	N	C/1999 O1	Lo	7 31. 513	7367	08 01. 12	0. 0051	1. 0	78. 96	359. 34	144. 42	38307
77	M	C/1999 O2	Le	7 21. 888	7376	07 22. 56	0. 0079	1. 0	62. 39	338. 37	139. 26	39021
49	N	C/1999 O3	Lo	7 31. 446	7376	08 01. 36	0. 0052	1. 0	89. 76	10. 06	143. 44	39021
89	N	C/1999 P2	Sc	8 5. 362	7234	08 06. 18	0. 0084	1. 0	82. 37	4. 43	144. 76	38307
66	N	C/1999 P3	Le	8 3. 238	7367	08 04. 06	0. 0063	1. 0	84. 02	5. 59	144. 16	38307
526	N	C/1999 P4	Le	8 9. 429	7376	08 10. 14	0. 0050	1. 0	89. 07	10. 74	144. 33	39021
88	N	C/1999 P5	Vo	8 12. 138	7376	08 12. 99	0. 0063	1. 0	72. 99	355. 21	144. 69	39021
78	N	C/1999 Q1	Lo	8 23. 821	7376	08 24. 47	0. 0053	1. 0	96. 26	15. 74	142. 16	39021
81	N	C/1999 Q2	Sc	8 24. 471	7376	08 25. 10	0. 0050	1. 0	79. 36	0. 48	144. 55	39022
88	N	C/1999 Q3	Bi	8 30. 738	7376	08 31. 74	0. 0052	1. 0	86. 52	7. 55	144. 42	39022
162	N	C/1999 R1	Lo	9 4. 896	7251	09 05. 52	0. 0565	1. 0	43. 74	5. 22	13. 69	35814
58	M	C/1999 R3	Sc	9 4. 863	7376	09 06. 08	0. 0053	1. 0	79. 73	1. 53	144. 37	39022
79	M	C/1999 R4	Lo	9 5. 846	7383	09 06. 62	0. 0051	1. 0	83. 00	3. 17	143. 91	39022
47	M	C/1999 S1	Sh	9 16. 679	7256	09 17. 87	0. 0050	1. 0	80. 27	1. 11	144. 06	40668
135	M	C/1999 S5	Sc	9 20. 638	7383	09 21. 39	0. 0050	1. 0	80. 68	1. 79	144. 40	41158
126	N	C/1999 S6	Sc	9 21. 179	7383	09 21. 82	0. 0065	1. 0	89. 64	8. 51	143. 85	41158
85	M	C/1999 S7	Sc	9 24. 196	7383	09 24. 95	0. 0051	1. 0	82. 08	3. 20	143. 99	39022
24	M	C/1999 U2	Gr Sh	10 25. 221	7292	10 25. 23	0. 0492	1. 0	22. 22	82. 05	27. 05	36654
129	M	C/1999 U5	Bi	10 31. 495	7386	11 01. 40	0. 0072	1. 0	54. 48	331. 61	132. 50	39791
192	N	C/1999 U6	Oa	10 17. 910	7508	10 18. 27	0. 0055	1. 0	81. 51	2. 23	144. 17	41525
45	N	C/1999 U7	Oa	10 27. 129	7517	10 27. 49	0. 0050	1. 0	84. 10	3. 57	145. 54	41525
303	M	C/1999 U8	Oa	10 29. 326	7517	10 29. 68	0. 0051	1. 0	83. 10	5. 31	143. 96	41525
50	M	C/1999 U9	Oa	10 30. 271	7517	10 30. 61	0. 0053	1. 0	82. 09	4. 02	142. 86	41525
49	M	C/1999 V2	Oa	11 7. 721	7517	11 08. 50	0. 0049	1. 0	85. 09	6. 55	144. 56	41525
54	N	C/1999 V3	Oa	11 14. 746	7517	11 15. 13	0. 0056	1. 0	78. 36	357. 22	146. 24	41525
157	N	C/1999 V4	Oa	11 15. 538	7517	11 15. 92	0. 0051	1. 0	89. 69	10. 38	142. 57	41525
28	N	C/1999 W1	Bi	11 23. 188	7386	11 23. 64	0. 0088	1. 0	87. 47	9. 34	136. 57	39791
29	N	C/1999 X2	Oa	12 3. 896	7459	12 04. 23	0. 0059	1. 0	69. 11	346. 83	148. 35	40988
36	N	C/1999 Y2	Ce	12 28. 279	7343	12 28. 71	0. 0483	1. 0	342. 21	235. 50	111. 42	37479
134	N	C/1999 Y3	Vo	12 21. 496	7386	12 21. 88	0. 0056	1. 0	85. 05	6. 49	144. 43	39791
49	N	C/2000 A2	Da	1 14. 596	7562	01 15. 21	0. 0061	1. 0	80. 15	2. 55	145. 65	41897
204	N	C/2000 B1	Sh	1 24. 388	7349	01 25. 83	0. 0054	1. 0	86. 21	7. 65	144. 52	40668
189	N	C/2000 B5	Bi	1 17. 863	7386	01 18. 87	0. 0054	1. 0	82. 17	2. 86	144. 21	39791
147	M	C/2000 B6	Me Lo Sh Oa	1 29. 446	7386	01 30. 21	0. 0052	1. 0	84. 28	359. 24	140. 89	39791
116	M	C/2000 B7	Me Lo	1 31. 846	7386	02 01. 49	0. 0050	1. 0	79. 36	0. 45	144. 63	39791
60	M	C/2000 C2	Ce	2 3. 704	7364	02 03. 76	0. 0344	1. 0	44. 41	41. 27	113. 92	38308
67	M	C/2000 C3	Bi	2 4. 563	7364	02 04. 84	0. 0460	1. 0	53. 23	4. 81	146. 19	38308
86	M	C/2000 C4	Me	2 5. 163	7364	02 05. 44	0. 0460	1. 0	53. 23	4. 81	146. 19	38308
35	N	C/2000 C5	Oa	2 7. 788	7364	02 07. 88	0. 0344	1. 0	55. 22	41. 67	101. 94	38308
		C/2000 C6	Lo	2 9. 221	7364	02 10. 71	0. 0062	1. 0	82. 41	4. 47	144. 78	40669
		C/2000 D1	Le	2 28. 571	7370	03 01. 06	0. 0051	1. 0	78. 43	0. 93	144. 56	40669
		C/2000 D3	Me Ce	2 26. 413	7386	02 26. 65	0. 0066	1. 0	68. 93	339. 90	139. 71	39792
		C/2000 E1	Me Bo Hr Oa	3 4. 404	7376	03 05. 55	0. 0050	1. 0	89. 13	9. 73	144. 33	39023
		C/2000 F1	Me Sh	3 31. 846	7393	04 01. 52	0. 0060	1. 0	88. 92	7. 52	144. 40	39792
		C/2000 H2	Lo Bo Oa Go	4 28. 513	7412	04 30. 19	0. 0055	1. 0	82. 11	2. 94	144. 17	40669
		C/2000 H3	Oa	4 17. 254	7572	04 17. 66	0. 0050	1. 0	86. 03	6. 32	144. 57	42106

#	C/2000 H4	Oa	4	30.504	7572	04	30.92	0.0049	1.0	87.45	8.34	144.92	42106
	C/2000 H5	Bi	4	30.504	7572	04	30.93	0.0050	1.0	88.09	9.18	144.80	42106
#	C/2000 J2	Oa	5	7.243	7418	05	08.02	0.0335	1.0	272.21	32.19	146.61	40669
	C/2000 J3	Ce Bo	5	9.725	7422	05	10.48	0.0057	1.0	85.51	10.01	142.96	40669
#	C/2000 J4	Oa Lp	5	14.904	7426	05	15.54	0.0065	1.0	84.92	8.91	142.56	40670
	C/2000 J5	Oa	5	11.810	7433	05	12.16	0.0081	1.0	64.05	341.35	138.42	40823
#	C/2000 J6	Sa	5	11.410	7567	05	11.85	0.0064	1.0	84.61	10.21	142.38	42106
	C/2000 J7	Oa	5	04.338	7572	05	04.74	0.0055	1.0	81.95	4.59	143.48	42106
#	C/2000 K3	Bo	5	19.893	7433	05	20.31	0.0051	1.0	74.99	353.01	145.47	40823
	C/2000 K4	Oa	5	22.576	7433	05	23.02	0.0055	1.0	81.93	2.79	145.78	40823
#	C/2000 K5	Oa Bo	5	25.979	7433	05	26.41	0.0055	1.0	81.87	2.78	144.24	40824
	C/2000 K6	Oa Lp Bo	5	27.088	7435	05	27.52	0.0051	1.0	84.45	6.27	143.17	40824
#	C/2000 K7	Lp	5	19.160	7567	05	19.62	0.0062	1.0	85.53	9.68	143.07	42106
	C/2000 K8	Oa	5	29.788	7567	05	30.21	0.0053	1.0	76.89	358.92	144.98	42106
#	C/2000 L1	Oa	6	3.479	7439	06	03.97	0.0053	1.0	89.94	12.66	144.03	40824
	C/2000 L2	Bo	6	9.813	7439	06	10.30	0.0056	1.0	83.74	4.67	143.42	40824
#	C/2000 L3	Bo Lp	6	10.165	7439	06	10.57	0.0054	1.0	61.59	340.31	145.41	40824
	C/2000 L4	Bo Me Lp	6	14.576	7445	06	15.03	0.0061	1.0	84.38	4.89	142.19	40988
#	C/2000 L5	Bo Sh	6	15.576	7445	06	16.08	0.0075	1.0	87.54	9.05	143.99	40988
	C/2000 L6	Oa	6	11.229	7572	06	11.60	0.0074	1.0	31.92	309.34	141.06	42106
#	C/2000 M1	Bo Sk	6	17.757	7445	06	18.27	0.0055	1.0	83.93	5.22	144.96	40988
	C/2000 M2	Oa	6	18.208	7450	06	18.67	0.0052	1.0	90.04	12.65	144.01	40988
#	C/2000 M3	Me	6	19.347	7452	06	19.76	0.0051	1.0	67.80	347.41	145.25	40988
	C/2000 M4	Me Bo	6	22.121	7452	06	22.57	0.0055	1.0	63.33	343.32	145.77	40988
#	C/2000 M5	Mi Sk	6	24.132	7452	06	24.52	0.0067	1.0	73.57	354.90	146.53	40988
	C/2000 M6	Me	6	25.479	7453	06	25.91	0.0050	1.0	81.87	2.90	145.19	40988
#	C/2000 M7	Lu Me	6	26.471	7453	06	27.42	0.0055	1.0	80.82	1.59	144.40	40988
	C/2000 M8	Bi	6	27.779	7453	06	28.39	0.0050	1.0	93.94	15.71	142.18	40988
#	C/2000 M9	Me Lo	6	30.971	7454	07	01.97	0.0054	1.0	86.17	7.63	144.53	40988
	C/2000 N1	Bo	7	1.929	7454	07	03.25	0.0049	1.0	81.21	1.88	144.08	40988
#	C/2000 N2	Bo Sk	7	8.221	7453	07	08.82	0.0067	1.0	91.63	12.38	143.83	40988
	C/2000 N3	Oa	7	04.785	7572	07	05.08	0.0050	1.0	86.95	7.75	145.48	42106
#	C/2000 O3	Sh	7	30.221	7479	07	30.94	0.0540	1.0	48.12	53.46	14.58	41159
	C/2000 P1	Bo	8	6.654	7479	08	07.26	0.0049	1.0	86.44	7.24	143.41	41159
#	C/2000 P2	Bo	8	14.721	7479	08	15.47	0.0050	1.0	84.73	4.16	143.55	41159
	C/2000 Q1	Da	8	28.473	7484	08	29.43	0.0568	1.0	83.66	256.11	87.14	41159
#	C/2000 T1	Da	10	9.821	7506	10	11.45	0.0050	1.0	79.94	1.62	144.04	41338
	C/2000 T3	Bi	10	11.254	7508	10	11.61	0.0051	1.0	88.67	4.77	145.22	41526
#	C/2000 T4	Da	10	12.071	7508	10	12.55	0.0051	1.0	87.12	7.49	144.67	41526
	C/2000 U1	Oa	10	21.393	7514	10	21.76	0.0051	1.0	89.30	10.96	144.25	41526
#	C/2000 U2	Bo	10	22.279	7514	10	23.42	0.0075	1.0	86.24	7.68	144.49	41526
	C/2000 U3	Da	10	24.029	7514	10	24.84	0.0074	1.0	66.93	344.74	141.43	41526
#	C/2000 U4	Oa	10	25.076	7514	10	25.45	0.0050	1.0	85.11	359.74	146.50	41526
	C/2000 V1	Bo	11	4.471	7520	11	05.12	0.0056	1.0	81.71	2.59	144.08	41717
#	C/2000 V2	Bi	11	5.643	7520	11	05.97	0.0070	1.0	69.95	347.37	140.24	41717
	C/2000 V3	Oa	11	10.904	7536	11	11.63	0.0051	1.0	82.91	3.77	144.00	41717
#	C/2000 W2	Oa	11	16.271	7548	11	16.64	0.0051	1.0	75.32	353.04	146.40	41898
	C/2000 W3	Me	11	18.229	7548	11	18.69	0.0076	1.0	86.48	8.23	144.38	41898
#	C/2000 W4	Oa	11	19.388	7562	11	20.36	0.0053	1.0	79.61	359.32	144.52	41898
	C/2000 W5	Oa	11	27.288	7562	11	27.69	0.0049	1.0	84.40	5.15	145.72	42107
#	C/2000 X1	Bo	12	3.518	7562	12	03.95	0.0050	1.0	87.16	7.00	145.96	42107
	C/2000 X2	Bo	12	5.904	7562	12	06.50	0.0055	1.0	90.21	12.94	143.15	42107
#	C/2000 X3	Bo	12	5.654	7562	12	06.57	0.0056	1.0	79.03	359.30	144.49	42107
	C/2000 X4	Zh	12	5.435	7562	12	05.76	0.0059	1.0	38.13	314.54	141.91	42107
#	C/2000 X5	Oa	12	7.076	7562	12	07.47	0.0055	1.0	80.32	3.76	143.18	42107
	C/2000 X6	Bo	12	7.451	7562	12	07.81	0.0077	1.0	68.37	346.04	138.16	42107
#	C/2000 X7	Bo	12	10.643	7562	12	11.05	0.0059	1.0	61.09	340.27	147.79	42107
	C/2000 X8	Bi	12	12.743	7572	12	13.22	0.0054	1.0	98.14	23.50	140.57	42107
#	C/2000 Y4	Lo	12	17.263	7562	12	18.08	0.0051	1.0	52.89	324.92	132.68	42107
	C/2000 Y5	Bo	12	19.736	7567	12	20.06	0.0070	1.0	38.85	315.39	142.93	42107
#	C/2000 Y6	Me	12	20.454	7567	12	20.85	0.0252	1.0	88.03	229.47	87.30	42108
	C/2000 Y7	Ho	12	20.463	7567	12	20.85	0.0245	1.0	89.13	228.93	89.02	42108
#	C/2000 Y8	Bo	12	23.788	7567	12	24.14	0.0060	1.0	79.51	3.25	145.95	42108
	C/2000 Y9	Oa	12	25.121	7567	12	25.45	0.0051	1.0	66.36	343.96	147.66	42108

表4. 1999～2000年にS O H Oで撮影された画像から発見された彗星
先頭の#はサングレーザー（いわゆるクロイツ群）ではない彗星を示す

Code	Name	#Dis	Code	Name	#Dis
Oa:	M. Oates	108	Ha:	D. Hammer	5
Bi:	D. A. Biesecker	50	Ce:	K. Cernis	4
Lp:	X. Leprette	29	Cy:	C. St. Cyr	3
Bo:	M. Boschat	24	Sk:	P. Shkreby	3
St:	S. Stezelberger	19	Gr:	S. Gregory	2
Me:	M. Meyer	17	Zh:	X.-m. Zhou	1
Lo:	T. Lovejoy	11	Ho:	S. Hoenig	1
Le:	D. Lewis	10	Lu:	H. Luethen	1
Mc:	B. McCarty	9	Mi:	A. Mimeev	1
Da:	J. Danaher	7	Go:	R. Gorelli	1
Sh:	J. D. Shanklin	7	Hr:	T. Harincar	1
Sc:	K. Schenk	7	Ma:	T. Makinen	1
Vo:	A. Vourlidas	5	Sa:	T. Scarmato	1

表5. 発見者の略号と、2000年末までの通算発見数

No.	Obs. Code	Site/ Observatory	Number PCT	of CMT	Obs. Total	Number PCT	of CMT	Comets Total
1	249	SOHO	0	1229	1229	0	68	68
2	704	LINEAR	289	773	1062	25	51	76
3	402	Dynic	220	796	1016	24	53	77
4	360	Kuma Kogen	260	490	750	32	56	88
5	897	Chiyoda	181	401	582	22	42	64
6	349	Ageo	143	400	543	11	20	31
7	046	Klet	66	474	540	9	42	51
8	118	Modra	107	334	441	13	38	51
9	355	Hadano	63	306	369	14	26	40
10	351	Sakamoto	109	222	331	10	17	27
11	372	Geisei	63	260	323	11	36	47
12	900	Moriyama	78	182	260	12	22	34
13	561	Piszkesteto	3	241	244	1	4	5
14	693	Catalina Stn	154	84	238	29	18	47
15	504	Le Creusot	40	175	215	7	16	23
16	834	Buenos Aires	57	154	211	3	9	12
17	844	Los Molinos	58	146	204	3	12	15
18	750	Fall Creek	16	175	191	4	10	14
19	958	Dax	0	160	160	0	7	7
20	071	Smolyan	29	126	155	2	14	16
21	557	Ondrejov	20	123	143	7	26	33
22	699	ONEOS	37	96	133	9	18	27
23	903	Fukuchiyama	14	117	131	5	15	20
24	367	Yatsuka	10	119	129	3	27	30
25	610	Pianoro	30	97	127	2	7	9
26	113	Schoenbrunn	12	86	98	4	15	19
27	428	Reedy Creek	3	94	97	1	13	14
28	867	Saji	26	69	95	8	18	26
29	057	Belgrade	0	93	93	0	5	5
	426	Woomera	0	93	93	0	10	10
	848	Cottage Grove	0	93	93	0	9	9
32	347	Utsunomiya	26	66	92	3	7	10
	642	Victoria	0	92	92	0	3	3
	691	Spacewatch	43	49	92	8	10	18
35	422	Loomberah	3	84	87	1	8	9
	859	Wykrota	0	87	87	0	14	14
37	703	CSS	34	52	86	8	8	16
	860	Valinhos	0	86	86	0	14	14
39	467	Auckland	3	82	85	1	7	8
40	352	Konan	20	60	80	6	16	22
41	695	Kitt Peak	52	20	72	16	5	21
42	413	Siding Spring	31	38	69	3	5	8
	762	Lake Leelanau	0	69	69	0	4	4
44	143	Gnosca	8	57	65	3	16	19
	423	North Ryde	0	65	65	0	2	2
46	120	Visnjan	0	64	64	0	9	9
47	108	Montelupo	2	58	60	1	11	12
48	587	Sormano	18	33	51	5	13	18
49	470	Geccano	2	46	48	1	8	9
	734	Eskridge	0	48	48	0	6	6
51	758	Cocoa	11	36	47	3	6	9
52	159	Monte Agliale	16	30	46	3	4	7
	474	Lake Tekapo	12	34	46	3	7	10
54	411	Oizumi	0	42	42	0	5	5
	945	Monte Deva	0	42	42	0	2	2
56	104	San Marcello	0	41	41	0	11	11
	658	NRC of Canada	0	41	41	0	11	11
58	321	Craigie	4	36	40	1	2	3
	466	Mt. Molehill	0	40	40	0	2	2
	720	Monterrey	0	40	40	0	3	3
	850	Sewanee	0	40	40	0	5	5
62	461	JATE Survey	3	36	39	1	7	8
63	713	Thornton	0	38	38	0	6	6
64	629	JATE, Szeged	1	36	37	1	6	7
65	540	Linz	5	31	36	1	5	6
66	808	El Leoncito	8	25	33	2	4	6
67	701	Sierra Vista	0	29	29	0	4	4
68	886	Mishima	0	27	27	0	4	4
69	017	Hoher List	20	5	25	3	1	4
	145	's-Gravenwezel	8	17	25	1	2	3
	620	Mallorca	0	25	25	0	7	7
72	627	Blauvac	20	4	24	4	1	5
	726	Brainerd	0	24	24	0	2	2
74	106	Crni Vrh	0	21	21	0	5	5
	711	McDonald Obs.	0	21	21	0	5	5
76	322	Bickley	8	12	20	2	3	5

	613	Heisingen	7	13	20	3	3	6
	888	Gekko	0	20	20	0	3	3
	910	ODAS	0	20	20	0	1	1
80	107	Cavezzo	4	15	19	1	7	8
	605	Marl	5	14	19	1	3	4
82	309	Cerro Paranal	18	0	18	1	0	1
	595	Farra d'Isonzo	0	18	18	0	4	4
	611	Heppenheim	0	18	18	0	8	8
	732	Oaxaca	0	18	18	0	1	1
86	169	Airali	0	17	17	0	1	1
	621	Bergisch Gladba	0	17	17	0	1	1
88	327	Xinglong Stn	0	15	15	0	5	5
	430	Rainbow Obs.	0	15	15	0	2	2
	615	St. Veran	0	15	15	0	1	1
	840	Flint	3	12	15	1	3	4
	967	Greens Norton	12	3	15	1	1	2
93	697	McGraw-Hill	0	14	14	0	1	1
	952	Marxuquera	0	14	14	0	3	3
95	138	Village-Neuf	2	11	13	1	3	4
	427	Stockport	0	13	13	0	2	2
	784	Alfred Univ.	0	13	13	0	4	4
	853	Biosphere 2	0	13	13	0	3	3
	946	Ametlla de Mar	0	13	13	0	4	4
100	133	Les Tardieux	0	11	11	0	2	2
	491	Yebes	0	11	11	0	3	3
	718	Univ. of Utah	3	8	11	1	1	2
	809	La Silla	9	2	11	2	1	3
104	294	Staten Island	5	5	10	1	1	2
	684	Prescott	8	2	10	1	1	2
	896	Yatsugatake	7	3	10	2	1	3
107	681	Calgary	0	9	9	0	2	2
	688	Anderson Mesa	0	9	9	0	5	5
	739	Olathe	1	8	9	1	2	3
110	652	Rock Finder Obs	0	8	8	0	1	1
	719	Etscorn	0	8	8	0	3	3
	954	Teide Obs.	8	0	8	2	0	2
113	392	Sapporo	0	7	7	0	2	2
	468	Campo Catino	0	7	7	0	2	2
	706	Salida	5	2	7	2	1	3
	735	Needville	0	7	7	0	1	1
117	049	Kvistaberg	0	6	6	0	1	1
	095	Crimea-Nauchnij	0	6	6	0	1	1
	431	Bathurst	0	6	6	0	1	1
	619	Sabadell	0	6	6	0	2	2
	649	Louisburg	0	6	6	0	2	2
	696	Mt. Hopkins	6	0	6	1	0	1
123	348	Ayabe	0	5	5	0	2	2
	670	Camarillo	0	5	5	0	2	2
125	122	Pises Obs.	4	0	4	1	0	1
	160	Castelmartini	2	2	4	2	2	4
	167	Bulach Obs.	0	4	4	0	2	2
	365	Uto Obs.	0	4	4	0	2	2
	385	Nihondaira	0	4	4	0	1	1
	596	Guidonia	0	4	4	0	2	2
	628	Mulheim-Ruhr	0	4	4	0	1	1
	662	Mt. Hamilton	0	4	4	0	1	1
	714	Bagdad	0	4	4	0	1	1
	871	Akou	0	4	4	0	1	1
	963	Werrington	0	4	4	0	1	1
136	130	Lumezzane	0	3	3	0	1	1
	162	Potenza	0	3	3	0	1	1
	568	Mauna Kea	3	0	3	1	0	1
	618	Martigues	0	3	3	0	1	1
	673	Table Mountain	0	3	3	0	1	1
	816	Rand Obs.	0	3	3	0	1	1
	841	Blacksburg	0	3	3	0	1	1
	965	Portimao	0	3	3	0	1	1
144	012	Uccle	0	2	2	0	1	1
	097	Wise Obs.	2	0	2	1	0	1
	292	Burlington	0	2	2	0	1	1
	429	Hawker	0	2	2	0	1	1
	432	Boambee	0	2	2	0	1	1
	645	Apache Point	0	2	2	0	1	1
	829	El Leoncito	0	2	2	0	1	1
151	151	Winterthur	1	0	1	1	0	1
	807	Cerro Tololo	0	1	1	0	1	1
Total			2561	10677	13238	57	138	195

表6. 1999年の天文台別位置観測数

No.	Obs. Code	Site/ Observatory	Number PCT	of CMT	Obs. Total	Number PCT	of CMT	Comets Total
1	249	SOHO	292	1701	1993	1	81	82
2	704	LINEAR	522	1073	1595	26	46	72
3	349	Ageo	281	780	1061	20	29	49
4	360	Kuma Kogen	215	496	711	31	49	80
5	402	Dynic	95	481	576	18	51	69
6	046	Klet	57	421	478	7	34	41
7	699	LONEOS	109	174	283	18	23	41
8	170	Begues	17	257	274	9	16	25
9	900	Moriyama	48	223	271	12	24	36
10	958	Dax	0	213	213	0	4	4
11	118	Modra	46	136	182	13	25	38
12	750	Fall Creek	34	122	156	4	7	11
13	355	Hadano	23	131	154	6	14	20
	372	Geisei	25	129	154	6	22	28
15	903	Fukuchiyama	18	123	141	6	18	24
16	557	Ondrejov	16	117	133	4	20	24
17	351	Sakamoto	25	106	131	6	10	16
18	691	Spacewatch	17	108	125	3	8	11
19	860	Valinhos	7	112	119	2	19	21
20	642	Victoria	0	118	118	0	8	8
21	300	Bisei SG Center	36	77	113	7	11	18
22	143	Gnosca	14	94	108	3	9	12
23	352	Konan	29	72	101	7	17	24
24	867	Saji	50	45	95	11	12	23
25	322	Bickley	16	75	91	2	7	9
26	620	Mallorca	18	69	87	1	5	6
27	467	Auckland	11	66	77	1	7	8
28	474	Lake Tekapo	3	72	75	1	10	11
29	367	Yatsuka	21	48	69	6	10	16
30	348	Ayabe	14	52	66	5	11	16
	610	Pianoro	25	41	66	2	4	6
32	071	Smolyan	45	16	61	2	2	4
33	734	Eskridge	10	47	57	2	7	9
34	422	Loomberah	16	39	55	1	7	8
	611	Heppenheim	12	43	55	6	13	19
36	347	Utsunomiya	14	40	54	3	5	8
	428	Reedy Creek	2	52	54	1	7	8
	695	Kitt Peak	25	29	54	8	9	17
	834	Buenos Aires	33	21	54	2	4	6
40	762	Lake Leelanau	0	48	48	0	4	4
41	049	Kvistaberg	15	30	45	4	4	8
42	809	La Silla	38	6	44	8	1	9
43	921	SWISR, Cloudcro	5	37	42	2	8	10
44	858	Edgewood	0	40	40	0	8	8
45	897	Chiyoda	16	23	39	4	4	8
46	658	NRC of Canada	3	35	38	1	10	11
47	057	Belgrade	0	36	36	0	2	2
	413	Siding Spring	5	31	36	1	9	10
	587	Sormano	19	17	36	7	6	13
50	106	Crni Vrh	3	29	32	1	8	9
	183	Starlab Obs.	7	25	32	1	5	6
	703	CSS	4	28	32	1	6	7
53	613	Heisingen	0	31	31	0	5	5
54	711	McDonald Obs.	9	21	30	2	6	8
55	504	Le Creusot	7	20	27	2	4	6
	941	Pla D'Arguines	8	19	27	2	5	7
57	341	Akashina	7	19	26	2	5	7
	540	Linz	8	18	26	2	2	4
	719	Etscorn	0	26	26	0	6	6
60	152	Moletai	0	24	24	0	7	7
	608	Haleakala-AMOS	6	18	24	2	3	5
62	151	Winterthur	0	23	23	0	5	5
63	017	Hoher List	0	21	21	0	3	3
64	651	Grasslands	0	20	20	0	5	5
	808	El Leoncito	0	20	20	0	6	6
	850	Sewanee	0	20	20	0	4	4
67	411	Oizumi	0	17	17	0	3	3
68	320	Chiro Obs.	8	8	16	2	4	6
	461	JATE Survey	3	13	16	1	5	6
	859	Wykrota	9	7	16	1	1	2
71	568	Mauna Kea	11	4	15	1	1	2
	670	Camarillo	0	15	15	0	5	5
73	127	Bornheim	0	13	13	0	2	2
	908	Toyama	3	10	13	1	3	4
	970	Chelmsford	0	13	13	0	1	1

76	673	Table Mountain	0	12	12	0	2	2
77	388	Mitaka	0	11	11	0	2	2
	706	Salida	2	9	11	1	3	4
79	026	Zimmerwald	0	10	10	0	1	1
	104	San Marcello	0	10	10	0	3	3
	113	Schoenbrunn	0	10	10	0	4	4
	145	's-Gravenwezel	3	7	10	1	1	2
	319	Perth-Lowell	10	0	10	1	0	1
	693	Catalina Stn	2	8	10	1	3	4
	732	Oaxaca	10	0	10	1	0	1
	853	Biosphere 2	0	10	10	0	2	2
87	696	Mt. Hopkins	6	3	9	2	2	4
88	120	Visnjan	0	8	8	0	1	1
	365	Uto Obs.	0	8	8	0	3	3
	561	Piszkesteto	8	0	8	3	0	3
	589	Stroncone	0	8	8	0	1	1
	854	Sabino Canyon	0	8	8	0	3	3
93	012	Uccle	0	7	7	0	2	2
	344	Bohyunsan	0	7	7	0	2	2
	595	Farra d' Isonzo	0	7	7	0	3	3
	681	Calgary	0	7	7	0	2	2
	739	Olathe	0	7	7	0	2	2
	952	Marxuquera	0	7	7	0	1	1
99	095	Crimea-Nauchnij	0	6	6	0	1	1
	163	Luxembourg	0	6	6	0	2	2
	294	Staten Island	0	6	6	0	1	1
	649	Louisburg	0	6	6	0	1	1
	688	Anderson Mesa	0	6	6	0	3	3
	735	Needville	6	0	6	1	0	1
	913	Montevideo	2	4	6	1	1	2
106	159	Monte Agliale	0	5	5	0	1	1
	180	Mauguio	0	5	5	0	1	1
	350	Kurohone	0	5	5	0	1	1
109	108	Montelupo	0	4	4	0	1	1
	205	Bologna	0	4	4	0	1	1
	423	North Ryde	0	4	4	0	1	1
	697	McGraw-Hill	4	0	4	1	0	1
	919	Desert Beaver	0	4	4	0	2	2
	950	La Palma	0	4	4	0	2	2
115	154	Cortina	0	3	3	0	1	1
	165	Barcelona	0	3	3	0	1	1
	565	Bassano Brescia	0	3	3	0	1	1
	596	Guidonia	0	3	3	0	1	1
	678	Fountain Hills	0	3	3	0	1	1
	684	Prescott	3	0	3	1	0	1
	725	Fair Oaks Ranch	3	0	3	1	0	1
	888	Gekko	0	3	3	0	1	1
	945	Monte Deva	0	3	3	0	1	1
	965	Portimao	0	3	3	0	1	1
125	171	San Gwann	0	2	2	0	1	1
	327	Xinglong Stn	0	2	2	0	1	1
	392	Sapporo	0	2	2	0	1	1
	599	Campo Imperator	0	2	2	0	1	1
	676	San Clemente	0	2	2	0	1	1
	707	Chamberlin	2	0	2	1	0	1
	807	Cerro Tololo	2	0	2	1	0	1
	823	Fitchburg	0	2	2	0	1	1
	886	Mishima	0	2	2	0	1	1
134	493	Calar Alto	1	0	1	1	0	1
	682	Kanab	0	1	1	0	1	1
Total			2499	9076	11575	48	144	192

表 7. 2000 年の天文台別位置観測数

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No.	Comet	Total	Japan
1	C/1999 H1 (Lee)	1049	366
2	C/1999 S3 (LINEAR)	640	290
3	C/1999 S4 (LINEAR)	548	278
4	P/1998 U3 (Jager)	437	127
5	C/1999 K8 (LINEAR)	418	158
6	C/1999 J2 (Skiff)	398	145
7	C/1999 H3 (LINEAR)	366	175
8	C/1999 K6 (LINEAR)	322	89
9	10P/Tempel 2	317	130
10	C/1998 M5 (LINEAR)	300	170
11	C/1998 P1 (Williams)	267	127
12	C/1999 E1 (Li)	249	93
13	141P/Machholz 2	224	158
14	C/1999 N2 (Lynn)	216	70
15	C/1999 T2 (LINEAR)	212	95
16	C/1995 O1 (Hale-Bopp)	198	0
17	52P/Harrington-Abell	197	102
18	C/1999 J3 (LINEAR)	193	115
19	37P/Forbes	192	87
20	C/1999 U1 (Ferris)	183	98
21	C/1999 T1 (McNaught-Har)	174	62
22	114P/Wiseman-Skiff	163	94
23	P/1999 U3 (LINEAR)	162	85
24	C/1999 T3 (LINEAR)	157	65
25	C/1999 K5 (LINEAR)	150	35
26	C/1999 Y1 (LINEAR)	139	55
27	P/1999 D1 (Hermann)	127	58
28	93P/Lovas 1	122	42
	C/1999 N4 (LINEAR)	122	23
30	C/1999 U4 (Catalina-Skiff)	120	71
31	C/1999 L3 (LINEAR)	116	61
32	P/1998 W1 (Spahr)	109	50
	P/1999 R028 (LONEOS)	109	25
34	106P/Schuster	108	68
	P/1998 Y2 (Li)	108	55
36	C/1998 T1 (LINEAR)	106	34
37	140P/Bowell-Skiff	105	49
38	C/1999 K2 (Ferris)	102	18
39	C/1999 L2 (LINEAR)	98	20
40	C/1998 W3 (LINEAR)	92	50
41	74P/Smirnova-Chernykh	90	36
42	21P/Giacobini-Zinner	89	56
43	P/1998 X1 (ODAS)	87	30
44	84P/Giclas	86	49
45	C/1999 F2 (Dalcanton)	84	28
46	29P/Schwassmann-Wachmann 1	78	37
47	C/1999 A1 (Tilbrook)	75	20
48	60P/Tsuchinshan 2	72	21
49	C/1998 Y1 (LINEAR)	67	45
	P/1999 V1 (Catalina)	67	27
51	C/1999 S2 (McNaught-Watso)	66	0
52	P/1999 J5 (LINEAR)	65	12
53	C/1999 G1 (LINEAR)	64	18
54	C/1999 F1 (Catalina)	63	16
55	59P/Kearns-Kwee	59	35
	C/1999 K3 (LINEAR)	59	21
57	P/1998 S1 (LINEAR-Mueller)	57	21
58	137P/Shoemaker-Levy 2	55	20
59	P/1999 X1 (Hug-Bell)	55	14
60	63P/Wild 1	50	46
Total		12009	4824

表 8. 1999 年の彗星別位置観測数
(SOHOの観測は除く)

No.	Comet	Total	Japan
1	C/1999 S4 (LINEAR)	781	319
2	C/1999 Y1 (LINEAR)	596	281
3	C/1999 T2 (LINEAR)	399	176
4	C/1999 J2 (Skiff)	387	192
5	C/1999 H3 (LINEAR)	358	184
6	C/2000 U5 (LINEAR)	233	78
7	C/1999 L3 (LINEAR)	232	116
8	C/2000 K2 (LINEAR)	208	100
9	C/2000 K1 (LINEAR)	206	61
10	9P/Tempel 1	190	21
	C/1999 K8 (LINEAR)	190	109
12	P/2000 S1 (Skiff)	189	73
13	P/2000 C1 (Hergenrother)	185	87
	P/2000 U6 (Tichy)	185	30
15	C/2000 W1 (Utsunomiya-J)	174	62
16	C/2000 SV74 (LINEAR)	170	48
17	73P/Schwassmann-Wachmann 3	161	137
18	P/2000 G1 (LINEAR)	146	54
19	C/2000 G2 (LINEAR)	144	13
20	74P/Smirnova-Chernykh	141	49
21	C/1999 U4 (Catalina-Skiff)	138	74
22	C/1999 T1 (McNaught-Hartle	132	84
23	47P/Ashbrook-Jackson	131	66
24	C/1998 T1 (LINEAR)	127	36
25	C/1999 N4 (LINEAR)	126	64
26	110P/Hartley 3	123	51
27	114P/Wiseman-Skiff	111	53
28	C/1999 E1 (Li)	108	57
29	41P/Tuttle-Giacobini-K	106	95
	P/2000 B3 (LINEAR)	106	43
31	59P/Kearns-Kwee	104	29
32	C/2000 A1 (Montani)	100	37
33	C/2000 H1 (LINEAR)	99	22
34	145P/Shoemaker-Levy 5	97	41
35	C/2000 B4 (LINEAR)	89	23
36	113P/Spitaler	88	16
	C/2000 WM1 (LINEAR)	88	25
38	C/2000 B2 (LINEAR)	86	30
39	P/1999 WJ7 (Korlevic)	84	23
40	C/2000 D2 (LINEAR)	80	10
41	P/2000 WT168	79	2
42	C/1999 XS87 (LINEAR)	77	33
43	C/1997 BA6 (Spacewatch)	70	28
44	17P/Holmes	69	38
	143PKowal-Mrkos	69	15
46	141P/Machholz 2	67	33
47	C/2000 CT54 (LINEAR)	61	17
48	C/1999 T3 (LINEAR)	60	22
49	P/2000 R2 (LINEAR)	56	12
50	C/1999 F2 (Dalcanton)	55	22
51	97P/Metcalf-Brewington	54	15
52	14P/Wolf	53	14
53	148P/Anderson-LINEAR	51	2
	P/1999 V1 (Catalina)	51	23
55	C/1995 O1 (Hale-Bopp)	50	0
	C/2000 OF8 (Spacewatch)	50	0
	C/2000 Y1 (Tubbiolo)	50	14
58	71P/Clark	46	13
	146P/Shoemaker-LINEAR	46	12
60	84P/Giclas	45	11
Total		9582	3823

表 9. 2000 年の彗星別位置観測数
(SOHOの観測は除く)

No.	Code	Observer's Name	#Pos	#Neg
1	NAK01	Akimasa Nakamura	3482	133
2	BOR	John E. Bortle	3287	90
3	BOU	Reinder J. Bouma	2721	30
4	MOR	Charles S. Morris	2694	107
5	JON	Albert F. Jones	2488	1
6	SHA02	Jonathan D. Shanklin	2433	181
7	BEY	Max Beyer	2392	75
8	HAL	Alan Hale	2214	832
9	HOR02	Kamil Hornoch	1993	86
10	PEA	Andrew R. Pearce	1791	145
11	LEH	Martin Lehky	1685	26
12	MOE	Michael Moeller	1510	0
13	MOR03	Warren C. Morrison	1500	0
14	BIV	Nicolas Biver	1431	2
15	KRO02	Gary W. Kronk	1361	0
16	KEI	Graham Keitch	1292	5
17	SEA	David A. J. Seargent	1256	7
18	SPR	Cristopher E. Spratt	1236	0
19	BAR06	Alexandr R. Baransky	1181	24
20	SCO01	James V. Scotti	1174	0
21	ISH02	Akiyoshi Ishikawa	1146	0
22	MOD	Robert J. Modic	1145	402
23	GRE	Daniel W. E. Green	1144	3
24	PER01	Alfredo Jose Pereira	1077	0
25	SEA01	John Seach	1024	5
26	COM	Georg Comello	1015	2
27	HAS02	Werner Hasubick	910	49
28	DES01	Jose G. de Souza Aguiar	906	0
29	GRA04	Bjoern Haakon Granslo	882	12
30	RES	M. Reszelski	872	7
31	MIK	Herman Mikuz	807	38
32	KEE	Richard A. Keen	771	4
33	KOR01	Valeriy L. Korneyev	724	8
34	PLE01	Janusz Pleszka	721	12
35	CLA	Maurice L. Clark	718	0
36	MEY	Maik Meyer	702	2
37	CHE03	Kazimieras T. Cernis	687	7
38	YOS04	Seiichi Yoshida	676	46
39	KAN	Kiyotaka Kanai	608	0
40	KYS	J. Kysely	575	32
41	MER	Jean-Claude Merlin	570	30
42	SCH04	Alex H. Scholten	554	0
43	KOS	Attila Kosa-Kiss	551	0
44	CAM03	Paul Camilleri	540	7
	PAN	Roy W. Panther	540	1
46	LOO01	Frans R. van Loo	519	0
	ZNO	Vladimir Znojil	519	0
48	MAC	Donald E. Machholz	492	14
49	SAR02	Krisztian Sarneczky	473	58
50	BUS01	E. P. Bus	464	0

表 1 O. 観測者別通算光度観測数
 #Posは観測数、#Negは見えなかった観測数

No.	Comet	#Obs
1	C/1995 O1 (Hale-Bopp)	12204
2	1P/Halley	7096
3	C/1990 K1 (Levy)	4827
4	C/1996 B2 (Hyakutake)	3980
5	109P/Swift-Tuttle	2674
6	C/1989 X1 (Austin)	2346
7	C/1987 P1 (Bradfield)	2219
8	19P/Borrelly	1960
9	29P/Schwassmann-Wachmann 1	1920
10	21P/Giacobini-Zinner	1818
11	103P/Hartley 2	1506
12	C/1989 Q1 (Okazaki-Levy-R)	1477
13	C/1999 H1 (Lee)	1438
14	C/1988 A1 (Liller)	1426
15	22P/Kopff	1424
16	2P/Encke	1167
17	C/1975 N1 (Kobayashi-B-Milon)	1166
18	23P/Brorsen-Metcalf	1146
19	9P/Tempel 1	1139
20	C/1999 S4 (LINEAR)	1138
21	C/1977 R1 (Kohler)	1137
22	6P/d'Arrest	1120
23	C/1998 M5 (LINEAR)	1119
24	C/1993 Y1 (McNaught-Russell)	1068
25	122P/de Vico	1052
26	10P/Tempel 2	1046
27	24P/Schaumasse	1036
28	C/1996 Q1 (Tabur)	1021
29	C/1982 M1 (Austin)	1002
30	C/1997 J2 (Meunier-Dupouy)	956
31	C/1973 E1 (Kohoutek)	954
32	81P/Wild 2	918
33	4P/Faye	893
34	C/1986 P1 (Wilson)	861
35	C/1991 T2 (Shoemaker-Levy)	860
36	C/1993 A1 (Mueller)	849
37	67P/Churyumov-Gerasimenko	830
38	C/1974 C1 (Bradfield)	683
39	C/1980 Y2 (Panther)	674
40	38P/Stephan-Oterma	664
41	141P/Machholz 2	660
42	C/1979 Y1 (Bradfield)	656
43	C/1969 Y1 (Bennett)	630
44	C/1992 F1 (Tanaka-Machholz)	622
45	C/1994 N1 (Nakamura-N-M)	614
46	C/1986 V1 (Sorrells)	576
47	C/1994 G1 (Takamizawa-Levy)	556
48	55P/Tempel-Tuttle	549
49	C/1975 V1 (West)	542
50	C/1996 N1 (Brewington)	540
51	C/1970 N1 (Abe)	511
52	52P/Harrington-Abell	507
53	C/1985 R1 (Hartley-Good)	497
54	C/1969 T1 (Tago-Sato-Kosaka)	476
55	73P/Schwassmann-Wachmann 3	471
56	31P/Schwassmann-Wachmann 2	467
57	C/1984 N1 (Austin)	454
58	C/1996 B1 (Szczepanski)	447
59	P/1998 U3 (Jager)	446
60	C/1989 W1 (Aarseth-Brewinton)	444
Total		116,511

表 1 1. 彗星別光度観測数