

A List of Supernovae Discovered Between 1989 January 1 and 1993 April 1

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A catalog of all supernovae discovered between 1885 and 1988 December 31 has been published by Barbon, Cappellaro & Turatto (1989). In Table 1 a similar listing is given for all 203 supernovae found between 1989 January 1 and 1993 April 1. A statistical discussion of these new data, and references to original sources, will be given in van den Bergh (1994). The main results of that paper are the following: (1) The most recently discovered supernovae, almost all of which were found during systematic search programs, show no evidence for the inclination effect. If no inclination corrections need to be applied then supernova rates in spirals are only half as large as previously believed (van den Bergh & Tammann 1989, Cappellaro *et al.* 1993). (2) The data for supernovae of type II (SNe II) show clear evidence for the Shaw (1979) effect. However, no evidence for such an effect (which is due to the fact that some supernovae are not discovered when they appear projected on the bright nuclear bulges of distant galaxies) is seen for the more luminous supernovae of Type Ia (SNe Ia). (3) Due to more intensive surveillance of bright galaxies supernovae with m (discovery) < 16 are frequently found before maximum light, whereas fainter supernovae are more often discovered at a later phase.

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TABLE 1. List of Recent Supernovae

SN	Galaxy (Type)	α (1950 ^{h,m,s}) V (km/s)	δ (1950°'") m (disc.)	Offsets ("') Type
1989A	N3687	11 25 21.4	+29 47 11	21W,18S
	Sb II-III:	2377	15.3	Ia
1989B	N3627	11 17 38.4	+13 15 55	15W,50N
	Sb II	703	13.0 V	Ia
1989C	...	09 45 10.0	+02 51 33	0:E,0:N
	Sc	...	14.5 B	IIpec
1989D	N2963	09 43 15.0	+73 11 46	2E,23N
	SBab	6538	16.0 B	Ia
1989E	M	13 35 19.5	+29 03 24	5E,0N
	...	7900	18.6 B	Ib
1989F	U8084	12 55 49.1	+03 03 49	18:E,18:N
	SB IV-V	2768	16.5	IIpec
1989G	...	11 11 12.0	+09 52 00	18E,18S
	M	8758	20.0	I
1989H	...	13 36 24.0	+32 32 00	4E,16S
	M	...	20.0 B	...
1989I	...	14 34 16.0	+14 53 14	3W,4S
	...	...	19.0 B	...
1989J	...	13 38 42.1	+32 43 55	4E,5S
	...	...	18.5 B	...
1989K	N5375	13 54 35.0	+29 25 00	65E,10N
	SBab	2270	17.5 R	II
1989L	N7339	22 35 24.0	+23 31 00	38E,1N
	S(B)bc:	1256	16.0	II
1989M	N4579	12 35 12.0	+12 05 36	39W,27N
	Sab II	1627	12.2 V	Ia
1989N	N3646	11 19 05.0	+20 26 42	29W,45S
	Sbc II	4261	14.5	II
1989O	M	00 18 27.2	+34 14 17	16E,9N
	...	19000	18.0 R	IIpec
1989P	N6636	18 22 00.0	+66 36 00	9W,47S
	S?	4226	16.5 R	Ia
1989Q	...	01 42 49.1	+21 50 12	2W,4N
	...	17000	19.5	Ia
1989R	U2912	03 56 06.8	+42 28 31	9W,9N
	S0/a	5000	15.0 R	IIpec
1989S	I226	02 24 50.9	+27 59 09	11E,30S
	S?	10894	19.0 R	Ia
1989T	...	01 44 28.5	+01 44 27	6W,5N
	...	...	18.0	...
1989U	U5295	09 49 47.3	+43 05 03	20W,47N
	S(B)b	4805	17.0 R	II

TABLE 1. List of Recent Supernovae (continued)

SN	Galaxy (Type)	α (1950 $^h, ^m, ^s$) V (km/s)	δ (1950 $^{\circ}, ^{'} , ^{''}$) m (disc.)	Offsets (") Type
1989V	...	01 29 18.9 18000	+11 56 31 18.5	1W,2S Ia
1989W	...	13 42 41.3	+30 01 07 18.0 R	4E,8N ...
1989X	...	07 23 35.1	+64 00 34 17.5	4:S,4:W ...
1989Y	E SBb	21 14 46.7 4156	-46 30 41 18.9 B	0E,31S ...
1989Z	N4013 Sbc:	11 55 57.6 694	+44 13 40 K	10E,4N ...
1989aa	...	01 16 33.5	+13 00 26 19.5	2W,4N ...
1990A	N500 E	01 20 03.4	+05 07 35 19.5 J	10E,7N ...
1990B	N4568 Sc II-III	12 34 02.6 2260	+11 30 50 16.0	6W,10N Ib
1990C	Not a supernova			
1990D	...	13 41 07.8	+29 21 41 20.0 J	6E,1N ...
1990E	N1035 Sc: III	02 37 01.7 1250	-08 20 54 16.7	3W,9S II
1990F	...	13 36 46.9	+32 24 34 18.7 V	6W,1S Ia
1990G	I2735 Sab	11 18 22.1 10970	+34 37 05 15.0 B	35W,13N Ia
1990H	N3294 Sc I-II	10 33 23.7 1436	+37 35 01 16.0	12W,1S II
1990I	N4650A S0/a:pec	12 42 04.6 2837	-40 26 27 16.7 B	13E,45S Ib
1990J	...	12 13 48.2	+12 48 18 18.0 B	7W,10N Ia
1990K	N150 Sbc II	00 31 46.8 1523	-28 04 45 14.0 V	18W,27N II
1990L	U9927 SB0	15 34 12.0	+22 40 00 19.0 B	20E,2S Ia
1990M	N5493 E7/S0	14 08 52.6 2627	-04 48 35 13.5 V	15W,4N Ia
1990N	N4639 SBb II	12 40 21.4 898	+13 31 50 15.5	65E,1S Ia
1990O	M	17 13 18.0	+16 22 00 17.0 B	20E,3S Ia
1990P	...	16 12 16.3	-15 28 28 19.0 R	4W,6N ...

TABLE 1. List of Recent Supernovae (continued)

SN	Galaxy (Type)	α (1950 $^h, ^m, ^s$) V (km/s)	δ (1950 $^\circ, ' , ''$) m (disc.)	Offsets ('') Type
1990Q	N5917	15 18 52.2	-07 11 54	11E,11N
	Sb?pec	1904	18.0 V	II
1990R	U11699	21 09 54.0	+12 24 00	10E,0N
	SBd:	4812	17.5 B	Ia
1990S	M	12 02 59.0	-29 53 03	7W,5N
	S	8000	15.5 B	II:
1990T	...	19 54 58.0	-56 23 38	25E,2S
	S0?	12000	16.5 B	Ia
1990U	N7479	23 02 26.0	+12 03 06	22W,54S
	SBbc I-II	2394	16.0	Ic
1990V	N7564	23 13 00.1	+07 01 00	11E,16S
	...	10252	18.0 B	II
1990W	N6221	16 48 25.6	-59 08 02	7E,5N
	Sbc II-III	1350	15.0 V	Ic
1990X	U12565	23 20 15.8	+22 56 07	12W,20S
	S?	8534	19.0 B	II
1990Y	...	03 35 24.1	-33 12 16	1E,5S
	E	11000	18.0 B	Ia
1990Z	U12133	22 37 00.0	+08 22 00	26W,30S
	Scd:	7422	19.0 R	II
1990aa	U540	00 50 16.0	+28 45 40	12E,8S
	S?	5096	17.0	Ibc
1990ab	...	21 51 00.1	-40 18 19	4E,9S
	...	10000	18.0 R	Ia
1990ac	...	03 51 08.1	-29 53 34	1W,6N
	...	19000	18.0 R	Ia
1990ad	...	22 40 05.9	+01 02 22	5W,3N
	...	...	19.5 J	II:
1990ae	...	00 20 18.0	+06 33 00	13E,0N
	...	7680	18.0 R	II
1990af	...	21 31 08.7	-62 57 30	7W,7N
	...	14000	17.0 B	Ia
1990ag	...	07 29 35.7	+33 00 48	0E,5S
	S	16000	19.0	IIpec
1990ah	U249	00 23 34.7	+13 22 52	3E,8N
	Sdm:	5242	18.0	II
1990ai	...	07 17 11.3	+21 59 57	...
	...	...	19.5	Ibc
1990aj	N1640	04 40 04.3	-20 31 43	10E,47N
	SBbc I-II	1643	18.0	Ib

TABLE 1. List of Recent Supernovae (continued)

SN	Galaxy (Type)	α (1950 $^h, ^m, ^s$) V (km/s)	δ (1950 $^\circ, ' , ''$) m (disc.)	Offsets ('') Type
1990ak	...	13 22 06.2	-32 09 39	1W,11S
	E	...	18.0	...
1991A	I2973	11 51 15.5	+33 38 35	28E,10S
	SBd:	3199	17.0	Ic
1991B	N5426	14 00 47.0	-05 49 52	10W,20S
	Sct	2371	16.0 V	Ia
1991C	...	11 30 06.0	+05 37 30	5E,5S
	...	...	18.0 B	II
1991D	...	13 38 32.5	-14 23 39	13E,8S
	S	...	16.5 V	Ib
1991E	...	06 34 13.9	-65 30 44	6E,5N
	...	7000	19.0 R	II
1991F	N3458	10 52 58.0	+57 23 00	13E,12S
	SB0	1818	18.0 B	I
1991G	N4088	12 03 00.7	+50 49 07	37W,13S
	S(B)c II-III	723	17.0 R	II
1991H	...	12 56 17.4	-10 27 40	2W,11S
	...	...	17.5 R	II
1991I	...	05 25 17.2	-52 16 03	0W,1N
	...	11000	18.5 R	II
1991J	N5020	13 10 11.0	+12 51 53	34W,56S
	S(B)bc	3359	17.0 R	II
1991K	N2851	09 18 09.0	-16 16 57	5E,19S
	S0	5000	18.0 R	Ib
1991L	M	16 39 32.9	+39 23 05	2W,8N
	...	9000	18.0 R	Ibc
1991M	I1151	15 56 16.5	+17 35 03	60N,36E
	SBc	2083	17.5	Ia
1991N	N3310	10 35 40.3	+53 45 45	5E,7S
	Sbc pec	1018	15.0 V	Ibc
1991O	...	14 23 32.3	+65 59 02	10E,5N
	...	...	18.0 R	Ia
1991P	...	13 15 24.3	-15 02 19	8E,9S
	S	11000	20.0 R	II
1991Q	N4926A	12 59 43.5	+27 55 01	6W,2N
	S0 pec?	...	18.0 V	...
1991R	...	15 52 39.8	+19 09 37	6W,9S
	...	10500	18.0 J	Ibc
1991S	U5691	10 26 43.1	+22 15 48	5E,18N
	...	16000	17.5 B	Iapec?
1991T	N4527	12 31 34.9	+02 55 47	26E,44N
	Sb II	1727	15.0 V	Iapec?

TABLE 1. List of Recent Supernovae (continued)

SN	Galaxy (Type)	α (1950 $^h, ^m, ^s$) V (km/s)	δ (1950 $^{\circ}, ^{'} , ^{''}$) m (disc.)	Offsets (") Type
1991U	I4232	13 20 37.0	-25 51 00	3W,6N
	Sbc:pec	9000	16.0 B	Ia
1991V	I4508	14 45 42.0	+31 59 00	0E,14S
	...	...	18.5 R	...
1991W		Not a supernova		
1991X	N4902	12 58 21.6	-14 14 40	14E,11N
	...	2625	13.8 V	Ia
1991Y	...	17 13 42.0	+57 22 00	0E,7N
	...	...	19.0 B	...
1991Z	...	10 52 07.4	-03 56 33	10E,4N
	...	...	20.0 R	...
1991aa	...	12 42 33.8	-06 02 33	13E,5S
	...	3280	16.0 R	Ia
1991ab	...	13 56 59.3	+19 55 27	8E,11N
	...	19000	19.5	Ia
1991ac	...	12 58 55.5	+29 27 06	4W,1N
	...	...	18.5	...
1991ad	...	16 17 09.7	+17 45 56	11E,2N
	...	20900	18.5 B	Ia
1991ae	M	15 48 24.0	+68 15 00	2W,8N
	...	...	18.0 B	IIpec
1991af	...	17 25 06.0	+29 31 00	7E,3S
	...	...	19.0 B	Ia
1991ag	I4919	19 56 11.0	-55 30 42	3W,22N
	SBdm pec	4286	15.0 B	Ia
1991ah	...	22 07 01.7	-46 34 10	5W,6N
	...	11000	18.5 B	II
1991ai	I4434	14 25 32.6	+16 25 49	7E,5S
	...	...	18.5	Ia
1991aj	M	16 28 06.0	+41 53 09	5E,2N
	S	9600	18.0	Ia
1991ak	N5378	13 54 42.0	+38 02 37	28W,19S
	SB0	3017	15.5 B	Ia
1991al	...	19 38 18.0	-55 13 00	17E,7S
	S	3000	16.0 B	II
1991am	M	16 40 05.4	+37 49 44	6E,5N
	S	...	18.0 R	Ia:
1991an	...	17 39 19.0	+67 43 56	33W,4N
	...	...	20.3	...
1991ao	U270	00 25 18.7	+32 29 56	18W,11N
	S?	4923	17.8	II
1991ap		Not a supernova		

TABLE 1. List of Recent Supernovae (continued)

SN	Galaxy (Type)	α (1950 $^h, ^m, ^s$) V (km/s)	δ (1950 $^\circ, ' '$) m (disc.)	Offsets (") Type
1991aq	...	01 53 42.1	-81 52 57	5W,11S
	S	...	18.0 R	...
1991ar	I49	00 41 22.0	+01 34 36	8E,12N
	S(B)c	4571	17.0 J	Ib
1991as	...	22 46 10.0	+07 54 36	9E,13S
	...	...	18.0 B	Ia
1991at	U733	01 08 00.0	+16 20 00	20E,34N
	SBb	12307	18.0 B	Ia
1991au	U11616	20 40 00.3	+63 19 00	14W,2S
	Scd:	2612	18.5 R	II:
1991av	...	21 53 28.0	+00 45 33	7E,5N
	...	...	18.0 R	IIpec.
1991aw	...	17 42 20.8	+67 30 20	2W,9N
	S	...	15.4 B	...
1991ax	...	03 03 22.6	-41 57 46	11W,1N
	...	...	16.5 B	II
1991ay	...	00 44 33.9	+40 16 11	0W,5S
	...	15000	18.5 B	Ia
1991az	M	02 22 24.0	+24 02 00	10W,3S
	S?	9711	18.0 B	II
1991ba	E	01 28 36.7	-42 43 10	1W,11N
	Ir	7341	18.5 V	II
1991bb	U2892	03 50 00.7	+18 57 00	9E,2N
	SBbc	7963	18.0 R	Ia
1991bc	U2691	03 18 12.9	-01 13 27	5E,6S
	S	6401	16.0 J	Ia
1991bd	U2936	04 00 12.4	+01 49 33	21E,30N
	SBd	3812	17.0 V	Ia
1991be	...	21 30 04.5	-42 26 04	7W,1S
	...	...	18.5 J	...
1991bf	E	23 49 41.0	-29 43 34	12W,23N
	S0	...	17.5 I	Ia
1991bg	N4374	12 22 31.0	+13 09 48	57S,1E
	E1	1029	14.3 V	Iapec
1991bh	...	02 42 16.2	+14 57 13	5E,17S
	...	...	18.0 B	Ia
1991bi	N5127	13 21 44.0	+31 49 36	13W,6S
	E pec	4782	18.5 J	Ia
1991bj	I344	03 39 00.3	-04 49 31	14E,8N
	...	5450	18.8	Ia
1992A	N1380	03 34 31.8	-35 08 24	3W,62N
	S0/Sa	1861	12.8	Ia

TABLE 1. List of Recent Supernovae (continued)

SN	Galaxy (Type)	α (1950 h,m,s) V (km/s)	δ (1950 $^{\circ} \text{ '} \text{ ''}$) m (disc.)	Offsets (") Type
1992B	...	11 13 15.5	+55 45 48	13E,4N
	S	16000	17.8 V	Ia
1992C	N3367	10 43 54.7	+14 00 58	27E,28S
	SBc II	3037	16.5 B	II
1992D	...	05 58 51.0	-20 22 02	1W,7S
	...	15000	19.0 R	IIpec
1992E	...	06 34 37.4	-59 53 31	8W,2S
	...	17000	20.0 R	Ia
1992F	...	11 22 34.6	+56 52 28	3W,4N
	...	...	19.0	...
1992G	N3294	10 33 23.9	+37 34 58	27E,10S
	Sc I-II	1571	14.0 V	Ia
1992H	N5377	13 54 18.0	+47 29 00	57E,19N
	S(B)a	1796	15.0 V	II-L
1992I	N2565	08 16 52.2	+22 11 21	28W,7N
	SBbc:	3675	18.0	...
1992J	...	10 06 43.0	-26 24 00	11W,13N
	S	13000	18.4 V	Ia
1992K	E	13 07 10.0	-46 10 12	2W,14S
	S(B)ab	3080	16.2 V	Ia
1992L	...	07 34 09.3	-47 10 13	6W,5S
	...	...	20.0 R	...
1992M	...	07 11 31.7	+45 31 12	3W,7S
	...	...	18.2 I	Ia
1992N	I4831	19 10 09.2	-62 21 31	94E,43S
	Sab	4314	19.0 B	II
1992O	...	19 19 07.3	-62 55 19	7W,1N
	...	12000	17.8 V	Ia
1992P	I3690	12 40 17.8	+10 37 51	6W,11N
	S?	7617	16.8 B	Ia
1992Q	...	12 08 28.1	-01 35 58	5W,11S
	...	...	18.5 B	...
1992R	M	16 36 15.7	+58 15 55	13E,4S
	S	15687	18.0 B	I
1992S	...	14 15 30.2	+31 16 49	15E,0N
	S	...	18.5 B	...
1992T	...	13 40 10.0	-31 38 24	4E,6S
	S	...	18.0 B	II
1992U	E	20 35 42.0	-70 52 21	18E,9N
	SB	3000	18.5 B	II
1992V	...	12 32 13.7	+14 49 58	10E,8N
	S	...	18.0 B	Ia

TABLE 1. List of Recent Supernovae (continued)

SN	Galaxy (Type)	α (1950 $^h, ^m, ^s$) V (km/s)	δ (1950 $^\circ, ^\prime, ^\prime\prime$) m (disc.)	Offsets ('') Type
1992W		Not a Supernova		
1992X		Not a Supernova		
1992Y	N3527	11 04 36.1	+28 47 50	13E,6S
	SBa:	10093	18.8 B	...
1992Z	...	13 26 09.0	-29 45 17	3E,4N
	...	...	19.0 B	II
1992aa	N6464	17 45 12.0	+60 55 00	0E,11S
	S	...	18.0 R	II
1992ab	N6389	17 30 25.9	+16 26 16	80E,20S
	Sbc	3081	17.0 R	II
1992ac	M	16 36 15.7	+58 15 55	...
		15687	...	Ia
1992ad	N4411B	12 24 15.0	+09 09 42	35E,26S
	S(B)cd	1250	13.5 V	II
1992ae	...	21 24 26.8	-61 46 12	3E,5N
	...	20000	18.0 B	Ia
1992af	E	20 27 17.0	-42 28 39	10E,3S
	S	6000	17.5 B	II
1992ag	E	13 21 26.0	-23 37 06	4W,0N
	S?	7000	16.5 B	Ia
1992ah	...	17 35 26.2	+12 56 00	25W,8S
	...	...	17.0 R	Ia
1992ai	...	01 26 50.4	-32 31 52	2W,7S
	S	...	17.5 B	Ia
1992aj	...	23 45 12.5	-35 28 39	9E,5N
	S	...	17.0	II
1992ak	U3862	07 24 51.1	+20 29 54	...
	S?	8151	16.0	...
1992al	E	20 42 17.4	-51 34 26	18E,12S
	SBc:	4362	16.0 R	Ia
1992am	...	01 22 32.0	-04 54 36	19W,1S
	S	14000	18.5 B	II
1992an	...	13 34 59.0	-30 26 12	6E,6N
	S	15000	18.0 B	IIpec
1992ao	N7637	23 22 10.6	-82 10 15	54E,57N
	...	3679	17.0 R	II
1992ap	U10430	16 28 47.6	+41 35 25	7E,16N
	SBbc	9072	18.0 B	Ia
1992aq	...	23 01 49.0	-37 36 48	2E,7S
	...	29000	19.0 B	Ia
1992ar	...	23 14 42.0	-44 55 18	2W,5S
	...	40000	19.0 B	Ic

TABLE 1. List of Recent Supernovae (continued)

SN	Galaxy (Type)	α (1950 $^h, ^m, ^s$) V (km/s)	δ (1950 $^{\circ}, ^{'} , ^{''}$) m (disc.)	Offsets ('') Type
1992as	...	21 00 36.0	-44 50 48	3W,4S
	...	7000	18.5 B	II
1992at	...	21 24 03.4	-37 12 51	6E,11S
	SB		18.0 B	Ia
1992au	...	00 08 08.0	-50 13 36	21E,9N
	...	18000	17.0 B	Ia
1992av	...	17 43 12.6	+67 50 16	11E,5N
	...		20.0 V	...
1992aw	...	19 05 39.4	+50 58 06	13E,7N
	...	11000	18.0 R	II
1992ax	...	22 08 24.0	+44 47 04	0W,20S
	...		18.5 B	I
1992ay	...	04 28 50.2	-46 30 32	6E,6N
	...	18000	18.5 B	IIpec
1992az	N818	02 05 42.6	+38 32 26	28E,16S
	S(B)c:	4457	18.0	II
1992ba	N2082	05 41 35.3	-64 19 21	60W,0N
	Sc II-III	1241	14.0 V	II
1992bb	...	21 15 36.5	-07 47 46	19W,4N
	S	...	17.5 B	Ia
1992bc	E	03 03 22.2	-39 45 15	15E,5N
	S	6000	15.0 B	Ia
1992bd	N1097	02 44 11.0	-30 29 06	2E,9S
	SBbc I-II	1274	15.0 V	II
1992be	...	03 59 28.7	+27 38 47	3W,10N
	...		17.0 R	II
1992bf	N930	02 25 06.1	+20 06 32	9E,11S
	Sa	4086	17.0 B	I
1992bg	...	07 41 19.0	-62 24 06	3W,6N
	S	10000	17.8 B	Ia
1992bh	...	04 58 40.0	-58 54 10	1E,2S
	...	13000	17.3 B	Ia
1992bi	...	16 08 28.3	+39 54 57	2E,0N
	...	108000	22.0 R	...
1992bj	...	23 19 21.8	+24 53 02	0W,5N
	...	16000	19.8	II
1992bk	E	03 41 43.4	-53 46 55	12E,21N
	E	17000	18.0 B	Ia
1992bl	E	23 12 25.0	-45 00 36	15E,22S
	SBa:	13000	17.0 B	Ia
1992bm	...	07 29 30.4	+50 34 52	0W,11S
	...	15000	18.0 B	II

TABLE 1. List of Recent Supernovae (continued)

SN	Galaxy (Type)	α (1950 $^h, m, s$) V (km/s)	δ (1950 $^{\circ}, '$ '') m (disc.)	Offsets ('') Type
1992bn	...	01 26 20.6	+08 53 32	1W,7S
	...	...	19.0	...
1992bo	E	01 19 44.1	-34 27 29	48W,55S
	Sa	6000	17.0 B	Ia
1992bp	...	03 34 22.3	-18 31 04	6W,2S
	S	23000	18.0 B	Ia
1992bq	...	10 14 43.6	-34 30 08	15E,1S
	S	...	17.0 B	...
1992br	...	01 43 55.4	-56 20 57	2E,7S
	...	25000	18.5 B	Ia
1992bs	...	03 27 37.2	-37 26 38	9W,4N
	S	19000	18.0 B	Ia
1993A	...	07 38 38.4	-61 56 11	6W,4S
	...	...	18.5 B	II-P
1993B	...	10 32 35.1	-34 11 03	1E,5N
	S	20000	18.0 B	Ia
1993C	...	09 37 40.6	+15 08 58	5W,50N
	E	3821	18.7 B	Ia
1993D	E	11 26 29.7	-22 12 27	11W,7S
	SB0	8190	18.0 R	Ia
1993E	...	09 40 27.4	+49 31 34	11W,8N
	...	...	19.0	II
1993F	...	07 54 26.4	+20 13 06	1E,2S
	...	...	18.5	...
1993G	N3690	11 25 44.2	+58 50 23	2W,15S
	IBm pec	3033	16.6 R	II
1993H	E	13 49 58.0	-30 27 54	1E,12N
	SBab	7265	16.5 B	Ia
1993I	M	12 32 11.4	+09 16 48	14W,8S
	...	...	18.0	Ia
1993J	N3031	09 51 27.7	+69 18 13	45W,167S
	Sb I-II	-49	12.0 V	IIb
1993K	N2223	06 22 30.0	-22 48 36	30E,31N
	SBbc I-II	2722	14.5	II