

A Catalogue of Galactic Supernova Remnants

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1. The Catalogue

This catalogue of Galactic supernova remnants (SNRs) is an updated version of those presented in detail in Green (1984, 1988) and in summary form in Green (1991). The basic parameters of the 182 SNRs included in this (1993 May) version of the catalogue are presented below. Notes on how these parameters are derived from observational data are given in Green (1988). It should be noted that there are serious selection effects which apply to the identification of Galactic SNRs (see Green 1991), so that great care should be taken if these data are used in statistical studies. There are many objects that have been identified as SNRs and are listed in the catalogue, although they have been barely resolved in the available observations, or are faint, and have not been well separated from confusing background or nearby thermal emission. The identification of these objects as SNRs, or at least their parameters remain uncertain (see Green 1988).

2. Revisions

Since Green (1991) the following eight SNRs have been added to the catalogue:

- Three new remnants (G59.5+0.1, G67.7+1.8 and G84.9+0.5) of the the eleven possible SNRs reported by Taylor, Wallace & Goss (1992).
- G156.2+5.7, which was first identified from X-ray observations by ROSAT (Pfeffermann, Aschenbach & Predehl 1991).
- G318.9+0.4, a complex of radio arcs reported by Whiteoak (1990).
- G322.5-0.1, reported by Whiteoak (1992).
- G343.1-2.3, an incomplete radio shell, with an associated pulsar (McAdam, Osborne & Parkinson 1993).
- G348.5-0.0, a radio arc near G348.5+0.1 (=CTB 37A), revealed by Kassim, Baum & Weiler (1991).

Also note that G308.7+0.0 has been renamed G308.8-0.1 because of improved observations revealing its extent more fully (see Caswell et al. 1992).

A detailed version of the catalogue, in the format of Green (1988), complete with references for each object, and notes on possible remnants not included and questionable SNRs listed in the catalogue is available from me on request. The summary data presented in the table below are also available in computer readable form (either by e-mail, or by 'ftp').

REFERENCES

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Galactic SNRs

<i>l</i>	<i>b</i>	RA (1950.0) (h m s)	Dec (° ')	size (arcmin)	type	Flux at 1 GHz (Jy)	spectral index	other names
0.0	+0.0	17 42 33	-28 59	3.5 × 2.5	S	100?	0.8?	Sg r A East
0.9	+0.1	17 44 12	-28 08	8	C	18?	varies	
1.9	+0.3	17 45 37	-27 09	1.2	S	0.6	0.7	
4.2	-3.5	18 05 45	-27 04	28	S	3.2?	0.6?	
4.5	+6.8	17 27 42	-21 27	3	S	19	0.64	Kepler, SN1604, 3C358
5.2	-2.6	18 04 25	-25 45	18	S	2.6?	0.6?	
5.4	-1.2	17 59 00	-24 55	35	C?	35?	0.2?	Milne 56
5.9	+3.1	17 44 20	-22 15	20	S	3.3?	0.4?	
6.1	+1.2	17 51 55	-23 05	30 × 26	F	4.0?	0.3?	
6.4	-0.1	17 57 30	-23 25	42	C	310	varies	W28
6.4	+4.0	17 42 10	-21 20	31	S	1.3?	0.4?	
7.7	-3.7	18 14 20	-24 05	18	S	10	0.32	1814-24
8.7	-5.0	18 21 05	-23 50	26	S	4.4	0.3	
8.7	-0.1	18 02 35	-21 25	45	S?	80	0.5	(W30)
9.8	+0.6	18 02 10	-20 14	12	S	3.9	0.5	

Galactic SNRs (continued)

<i>l</i>	<i>b</i>	RA (1950.0) (h m s)	Dec (° ')	size (arcmin)	type	Flux at 1 GHz (Jy)	spectral index	other names
10.0	-0.3	18 05 40	-20 26	8?	S?	2.9	0.8	
11.2	-0.3	18 08 30	-19 26	4	S	22	0.49	
11.4	-0.1	18 07 50	-19 06	8	S?	6	0.5	
12.0	-0.1	18 09 15	-18 38	5?	?	3.5	0.7	
13.5	+0.2	18 11 20	-17 13	5 × 4	S	3.5?	1.0?	
15.1	-1.6	18 21 05	-16 36	30 × 24	S	5.5?	0.8?	
15.9	+0.2	18 16 00	-15 03	7 × 5	S?	4.5?	0.7?	
16.7	+0.1	18 18 05	-14 21	4	C	3.0	0.6	
16.8	-1.1	18 22 30	-14 48	30 × 24?	?	2?	?	
17.4	-2.3	18 28 05	-14 54	24?	S	4.8?	0.8?	
17.8	-2.6	18 30 00	-14 41	24	S	4.0?	0.3?	
18.8	+0.3	18 21 10	-12 25	18 × 13	S	27	0.5	Kes 67
18.9	-1.1	18 27 00	-13 00	33	C?	37	varies	
20.0	-0.2	18 25 20	-11 37	10	F	10	0.0	
21.5	-0.9	18 30 47	-10 37	1.2	F	6	0.0	
21.8	-0.6	18 30 00	-10 10	20	S	69	0.5	Kes 69
22.7	-0.2	18 30 30	-09 15	26	S?	33	0.6	
23.3	-0.3	18 32 00	-08 50	27	S	70	0.5	W41
23.6	+0.3	18 30 20	-08 15	10?	?	8?	0.3	
24.7	-0.6	18 36 00	-07 35	15?	S?	8	0.5	
24.7	+0.6	18 31 30	-07 07	30 × 15	C?	20?	0.2?	
27.4	+0.0	18 38 40	-04 59	4	S	6	0.68	4C-04.71
27.8	+0.6	18 37 06	-04 28	50 × 30	F	30	varies	
29.7	-0.3	18 43 48	-03 02	3	C?	10	0.7	Kes 75
30.7	-2.0	18 51 50	-02 58	16	?	0.5?	0.7?	
30.7	+1.0	18 42 10	-01 35	24 × 18	S?	6	0.4	
31.5	-0.6	18 48 35	-01 35	18?	S?	2?	?	
31.9	+0.0	18 46 50	-00 59	5	S	24	0.55	3C391
32.0	-4.9	19 03 00	-03 00	60?	S?	22?	0.5?	3C396.1
32.8	-0.1	18 48 50	-00 12	17	S?	11?	0.2?	Kes 78
33.2	-0.6	18 51 12	-00 05	18	S	5?	varies	
33.6	+0.1	18 50 15	+00 37	10	S	22	0.5	Kes 79, 4C00.70, HC13
34.7	-0.4	18 53 30	+01 18	35 × 27	S	230	0.30	W44, 3C392
36.6	-0.7	18 58 05	+02 52	25?	S?	?	?	
36.6	+2.6	18 46 20	+04 23	17 × 13?	S	0.7?	0.5?	
39.2	-0.3	19 01 40	+05 23	8 × 6	S	18	0.6	3C396, HC24, NRAO 593
39.7	-2.0	19 10 00	+04 50	120 × 60	?	85?	0.7?	W50, SS433
40.5	-0.5	19 04 45	+06 26	22	S	11	0.5	
41.1	-0.3	19 05 08	+07 03	4.5 × 2.5	S	22	0.48	3C3 97
42.8	+0.6	19 04 55	+09 00	24	S	3?	0.5?	
43.3	-0.2	19 08 44	+09 01	4 × 3	S	38	0.48	W49B
43.9	+1.6	19 03 30	+10 25	60?	F?	8.6?	0.0?	
45.7	-0.4	19 14 05	+11 04	22	S	4.2?	0.4?	
46.8	-0.3	19 15 50	+12 04	17 × 13	S	14	0.42	(HC30)
49.2	-0.7	19 21 30	+14 00	25?	S?	160?	0.3?	(W51)

Galactic SNRs (continued)

<i>l</i>	<i>b</i>	RA (1950.0) (h m s)	Dec (° ')	size (arcmin)	type	Flux at 1 GHz (Jy)	spectral index	other names
53.6	-2.2	19 36 30	+17 08	28	S	8	0.6	3C400.2, NRAO 611
54.1	+0.3	19 28 28	+18 46	1.5	F?	0.5	0.1	
54.4	-0.3	19 31 10	+18 50	40	S	28	0.5	(HC40)
55.7	+3.4	19 19 10	+21 38	23	S	1.4	0.6	
57.2	+0.8	19 32 50	+21 50	12?	S?	1.8?	?	(4C21.53)
59.5	+0.1	19 40 25	+23 28	5	S	3?	?	
59.8	+1.2	19 36 50	+24 12	20 × 16?	?	1.6	0.5	
65.1	+0.6	19 52 30	+28 25	90 × 50	S	6	0.6	
65.3	+5.7	19 31 00	+31 05	310 × 240	S?	52?	0.6?	
65.7	+1.2	19 50 10	+29 18	18	?	5.1	0.6	DA 495
67.7	+1.8	19 52 34	+31 21	9	S	1.4	0.3	
68.6	-1.2	20 06 40	+30 28	28 × 25?	?	0.7?	0.0?	
69.0	+2.7	19 51 30	+32 45	80?	?	120?	varies	CTB 80
69.7	+1.0	20 00 45	+32 35	16	S	1.6	0.8	
73.9	+0.9	20 12 20	+36 03	22?	S?	9?	0.3?	
74.0	-8.5	20 49 00	+30 30	230 × 160	S	210	varies	Cygnus Loop
74.9	+1.2	20 14 10	+37 03	8 × 6	F	9	varies	CTB 87
78.2	+2.1	20 19 00	+40 15	60	S	340	0.5	DR4, γ Cygni
82.2	+5.3	20 17 30	+45 20	95 × 65	S	120?	0.5?	W63
84.2	-0.8	20 51 30	+43 16	20 × 16	S	11	0.5	
84.9	+0.5	20 48 45	+44 42	6	S	0.8	0.4	
89.0	+4.7	20 43 30	+50 25	120 × 90	S	220	0.40	HB2 1
93.3	+6.9	20 51 00	+55 10	27 × 20	S	9	0.54	DA 530, 4C(T)55.38.1
93.7	-0.2	21 27 45	+50 35	80	S	65	0.3	CTB 104A, DA 551
94.0	+1.0	21 23 10	+51 40	30 × 25	S	15	0.44	3C434 .1
109.1	-1.0	22 59 30	+58 37	28	S	20	0.50	CTB 109
111.7	-2.1	23 21 10	+58 32	5	S	2720	0.77	Cassiopeia A, 3C461
112.0	+1.2	23 13 40	+61 30	30?	S?	7?	0.6?	
114.3	+0.3	23 34 45	+61 38	90 × 55	S	6?	0.3?	
116.5	+1.1	23 51 20	+62 58	80 × 60	S	11?	0.8?	
116.9	+0.2	23 56 40	+62 10	34	S	9?	0.5?	CTB 1
117.4	+5.0	23 52 30	+67 30	60 × 80?	S?	30?	0.5?	
119.5	+10.2	00 04 00	+72 30	90?	S	36	0.3	CTA 1
120.1	+1.4	00 22 30	+63 52	8	S	56	0.61	Tycho, 3C10, SN1572
126.2	+1.6	01 18 30	+64 00	70	S?	7	varies	
127.1	+0.5	01 25 00	+62 55	45	S	13	0.6	R5
130.7	+3.1	02 01 55	+64 35	9 × 5	F	33	0.10	3C58, SN1181
132.7	+1.3	02 14 00	+62 30	80	S	45	0.6	HB3
152.2	-1.2	04 05 30	+48 24	110?	S?	16?	0.7?	
156.2	+5.7	04 54 40	+51 47	110	S	5	0.5	
160.9	+2.6	04 57 00	+46 36	140 × 120	S	110	0.6	HB 9
166.0	+4.3	05 23 00	+42 52	55 × 35	S	7?	0.4?	VRO 42.05.01
166.2	+2.5	05 15 30	+41 50	90 × 70	S	11	0.5	OA 184
179.0	+2.6	05 50 30	+31 05	70	S?	7	0.4	
180.0	-1.7	05 36 00	+27 50	180	S	65	varies	S147

Galactic SNRs (continued)

<i>l</i>	<i>b</i>	RA (1950.0) (h m s)	Dec (° ')	size (arcmin)	type	Flux at 1 GHz (Jy)	spectral index	other names
184.6	-5.8	05 31 30	+21 59	7 × 5	F	1040	0.30	Crab Nebula, 3C144, SN1054
189.1	+3.0	06 14 00	+22 36	45	S	160	0.36	IC443, 3C157
192.8	-1.1	06 06 30	+17 20	78	S	20?	0.6?	PKS 0607+17
205.5	+0.5	06 36 00	+06 30	220	S	160	0.5	Monoceros Nebula
206.9	+2.3	06 46 00	+06 30	60 × 40	S?	6	0.5	PKS 0646+06
211.7	-1.1	06 43 10	+00 24	70?	S?	15?	0.5?	
240.9	-0.9	07 40 30	-25 06	95?	S?	24?	0.1?	
260.4	-3.4	08 20 30	-42 50	60 × 50	S	130	0.5	Pupp is A, MSH 08-44
261.9	+5.5	09 02 20	-38 30	40 × 30	S	10?	0.4?	
263.9	-3.3	08 32 30	-45 35	255	C	1750	varies	Vela (XYZ)
279.0	+1.1	09 56 00	-53 00	95	S	30?	0.6?	
284.3	-1.8	10 16 30	-58 45	24?	S	11?	0.3?	MSH 10-53
290.1	-0.8	11 01 00	-60 40	15 × 10	S	42	0.4	MSH 11-61A
291.0	-0.1	11 09 45	-60 22	10	F	16	0.29	(MSH 11-62)
292.0	+1.8	11 22 20	-59 00	12 × 8	C?	15	0.4	MSH 11-54
293.8	+0.6	11 32 40	-60 37	20	C	5.5?	0.6?	
296.1	-0.5	11 48 40	-62 17	33?	S	8?	0.6?	
296.5	+10.0	12 07 00	-52 10	90 × 65	S	48	0.5	PKS 1209-51/52
296.8	-0.3	11 56 00	-62 18	14	S	9	0.6	1156-62
298.5	-0.3	12 10 00	-62 35	5?	?	5	0.4	
298.6	-0.0	12 11 00	-62 20	12 × 8?	S	4.3	0.3	
299.0	+0.2	12 15 00	-62 12	11?	S?	9?	?	
302.3	+0.7	12 42 55	-61 52	15	S	5.5	0.4	
304.6	+0.1	13 02 50	-62 26	8?	S?	14	0.5	Kes 17
308.8	-0.1	13 39 00	-62 08	20 × 30?	C?	15?	0.4?	
309.2	-0.6	13 43 00	-62 39	17 × 13	S	7?	0.4?	
309.8	+0.0	13 47 00	-61 50	24	S	17	0.5	
311.5	-0.3	14 02 00	-61 44	3?	?	3.7	0.5	
312.4	-0.4	14 09 20	-61 29	36 × 27	S	44?	0.3?	
315.4	-2.3	14 39 00	-62 17	40	S	49	0.6	RCW 86, MSH 14-63
315.4	-0.3	14 32 10	-60 23	15 × 10	S	8	0.4	
316.3	-0.0	14 37 40	-59 47	25 × 15	S	24	0.4	(MSH 14-57)
318.9	+0.4	14 54 40	-58 17	30 × 20?	?	3.5?	0.1?	
320.4	-1.2	15 10 30	-58 58	30	C	60?	0.4?	MSH 15-52, RCW 89
321.9	-0.3	15 16 45	-57 23	30 × 20	S	13	0.3	
322.5	-0.1	15 19 30	-56 55	15	C	1.9	0.3?	
323.5	+0.1	15 24 50	-56 11	10?	S	3?	0.4?	
326.3	-1.8	15 49 00	-56 00	36	C	145	varies	MSH 15-56
327.1	-1.1	15 50 30	-55 00	14?	S?	8?	?	
327.4	+0.4	15 44 30	-53 40	20	S	34	0.6	Kes 27
327.6	+14.6	14 59 35	-41 44	30	S	19	0.6	SN1006, PKS 1459-41
328.0	+0.3	15 49 30	-53 20	6?	?	2.4?	0.6?	
328.4	+0.2	15 51 40	-53 08	6	F	16	0.2	(MSH 15-57)
330.0	+15.0	15 05 00	-39 30	180?	S	350?	0.5?	Lupus Loop
330.2	+1.0	15 57 20	-51 26	10	S?	7	0.3	

Galactic SNRs (continued)

<i>l</i>	<i>b</i>	RA (1950.0) (h m s)	Dec (° ')	size (arcmin)	type	Flux at 1 GHz (Jy)	spectral index	other names
332.0	+0.2	16 09 30	-50 45	10	S	9	0.5	
332.4	-0.4	16 13 45	-50 55	9	S	28	0.5	RCW 103
332.4	+0.1	16 11 30	-50 35	15	S	26	0.5	MSH 16-51, Kes 32
335.2	+0.1	16 24 00	-48 40	19	S	18	0.5	
336.7	+0.5	16 28 30	-47 13	13 × 10	S	6	0.5	
337.0	-0.1	16 32 10	-47 27	14?	S?	17?	0.5?	(CTB 33)
337.2	-0.7	16 35 45	-47 45	4?	?	2.1	0.7	
337.3	+1.0	16 29 00	-46 30	11	S	16	0.5	Kes 40
337.8	-0.1	16 35 20	-46 53	7?	?	18	0.5	Kes 41
338.1	+0.4	16 34 20	-46 18	12	S	4.5	0.4	
338.3	-0.0	16 37 20	-46 28	8?	S?	15?	0.7?	
338.5	+0.1	16 37 30	-46 13	8?	?	28?	0.3?	
340.4	+0.4	16 42 55	-44 34	6	S	6	0.4	
340.6	+0.3	16 44 05	-44 29	5	S	5.1	0.4	
341.9	-0.3	16 51 25	-43 56	6	S	3.2	0.5	
342.0	-0.2	16 51 15	-43 48	11 × 7	S?	3.5?	0.4?	
343.1	-2.3	17 04 30	-44 15	44 × 32?	S	25?	0.5?	
344.7	-0.1	17 00 20	-41 38	8?	S?	3.0	0.5	
346.6	-0.2	17 06 50	-40 07	8	S	10	0.5	
348.5	-0.0	17 12 00	-38 25	10?	S?	10?	0.4?	
348.5	+0.1	17 10 40	-38 29	15	S	72	0.3	CTB 37A
348.7	+0.3	17 10 30	-38 08	10	S	26	0.3	CTB 37B
349.7	+0.2	17 14 35	-37 23	2.5 × 2	S?	20	0.5	
350.0	-1.8	17 23 40	-38 20	30?	S?	31	0.5	
351.2	+0.1	17 19 05	-36 08	7	C	5.8	0.4	
352.7	-0.1	17 24 20	-35 05	6 × 5	S?	6?	0.6?	
355.9	-2.5	17 42 35	-33 42	13	S	8	0.5	
357.7	-0.1	17 37 15	-30 56	3 × 8?	?	37	0.4	MSH 17-39
357.7	+0.3	17 35 20	-30 42	24	S	10	0.4?	
358.4	-1.9	17 46 05	-31 16	40 × 36	S	12.5?	0.5?	
359.0	-0.9	17 43 35	-30 15	23	S	23	0.5	
359.1	-0.5	17 42 20	-29 56	24	S	14	0.4?	