A Catalogue of Galactic Supernova Remnants
(2024 October version)

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- Green D. A. 2024, *'A Catalogue of Galactic Supernova Remnants (2024 October version)'*, Cavendish Laboratory, Cambridge, UK (available at https://www.mrao.cam.ac.uk/surveys/snrs/).

1. The Catalogue Format

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, 1996, 2004, 2009, 2014, 2019), hereafter Versions I, II, III, IV, V, VI, VII and VIII respectively. Detailed versions – dated 2004 January, 2009 March, 2014 May and 2019 June, corresponding to Versions V, VI, VII and VIII respectively – were made available on the web. Additionally, detailed web versions of 1995 July, 1996 August, 1998 September, 2000 August, 2001 December, 2004 January, 2006 April, 2009 March, 2017 June and 2022 December were produced. (Version IV, although published in 1996, was produced in 1993, and a detailed version of this was made available on the Web in 1993 November). The summary data from the 2001 December version of the catalogue was also published as an Appendix in Stephenson & Green (2002).

This, the 2024 October version of the catalogue contains 310 SNRs (which is 7 more than in the previous version; 7 remnants have been added, no objects have been removed), with over three thousand references in the detailed listings, plus notes on many possible or probable remnants. For each remnant in the catalogue the following parameters are given.

- **Galactic Coordinates** of the remnant. These are quoted to a tenth of a degree, as is conventional. In this catalogue additional leading zeros are not used. These are generally taken from the Galactic coordinate based name used for the remnant in the literature. It should be noted that when these names were first defined, they may not follow the IAU recommendation (see: https://cdsweb.u-strasbg.fr/Dic/iau-spec.htx) that coordinates should be truncated, not rounded to construct such names.
- **Other Names** that are commonly used for the remnant. Note that these are given in parentheses if the remnant is only a part of the source. For some well known remnants – e.g. G184.6–5.8 (=Crab nebula) – not all common names are given.
- **Right Ascension** and **Declination** of J2000.0 equatorial coordinates the source centroid. The accuracy of the quoted values depends on the size of the remnant. For small remnants they are to the nearest few seconds of time and the nearest minute of arc respectively, whereas for larger remnants they are rounded to coarser values, but are in every case sufficient to specify a point within the boundary of the remnant. These coordinates are usually deduced from radio images rather than from X-ray or optical observations.

- **Angular Size** of the remnant, in arcminutes. This is usually taken from the highest resolution radio image available. The boundary of most remnants approximates reasonably well to a either circle or to an ellipse. A single value is quoted for the angular size of the more nearly circular remnants, which is the diameter of a circle with an area equal to that of the remnant. For more elongated remnants the product of two values is given, which are the major and minor diameters of the remnant boundary modelled as an ellipse. In a small number of cases an ellipse is not a good description of the boundary of the object (which will be noted in the description of the object given in its catalogue entry), although an angular size is still quoted for information. For 'filled-centre' type remnants (see below), the size quoted is for the largest extent of the observed emission, not, as at times has been used by others, the half-width of the centrally brightened peak.
- **Flux Density** of the remnant at a frequency of 1 GHz, in jansky. This is *not* a measured value, but is instead derived from the observed radio spectrum of the source. The frequency of 1 GHz is chosen because flux density measurements are usually available at both higher and lower frequencies. Some young remnants – notably G111.7–2.1 (=Cassiopeia A) and G184.6–5.8 (=Crab Nebula) – show secular variations in their radio flux density. From Version VIII of the catalogue the 1-GHz flux densities for G111.7–2.1 and G184.6–5.8 have been taken from Perley & Butler (2017), for an epoch of 2016.
- **Spectral Index** of the integrated radio emission from the remnant, α (here defined in the sense, $S \propto \nu^{-\alpha}$, where S is the flux density at a frequency ν), either a value that is quoted in the literature, or one deduced from the available integrated flux densities of the remnant. For several SNRs a simple power law is not adequate to describe their radio spectra, either because there is evidence that the integrated spectrum is curved or the spectral index varies across the face of the remnant. In these cases the spectral index is given as 'varies' (refer to the description of the remnant and appropriate references in the detailed catalogue entry for more information). In some cases, for example where the remnant is highly confused with thermal emission, the spectral index is given as '?' since no value can be deduced with any confidence.
- **Type** of the SNR: 'S' or 'F' if the remnant shows a 'shell' or 'filled-centre' structure, or 'C' if it shows 'composite' (or 'combination') radio structure, with a combination of shell and filled-centre characteristics. If there is some uncertainty, the type is given as 'S?', 'F?' or 'C?', or as '?' in several cases where an object is conventionally regarded as an SNR even though its nature is poorly known or it is not well-understood. Until recently only a few remnants were classified as composite remnants, as available observations were only able to identify the more obvious pulsar-powered, flatter radio spectrum filled-centre components within shells. However, in recent years improved observations – particularly in X-rays with the Chandra satellite – have identified many faint, pulsar powered nebulae in what until then had been identified as pure shell remnants. (Note: the term 'composite' has been used, by some authors, in a different sense, to describe remnants with radio shell and centrally-brightened X-ray emission. An alternative term used to describe such remnants is 'mixed morphology', see Rho & Petre 1998.)

In the detailed listings, for each remnant, notes on a variety of topics are given. First, it is noted if other Galactic coordinates have at times been used to label it (usually before good observations have revealed the full extent of the object), if the SNR is thought to be the remnant of a historical SN, or if the nature of the source as an SNR has been questioned (in which case an appropriate reference is usually given later in the entry). Brief descriptions of the remnant from the available radio, optical and X-ray observations as applicable are then given, together with notes on available distance determinations, and any point sources or pulsars in or near the object (although they may not necessarily be related to the remnant). Finally, appropriate published references to observations are given for each remnant, complete with journal, volume, page, and a short description of what information each paper contains (for radio observations these include the telescopes used, the observing frequencies and resolutions, together with any flux density determinations). These references are *not* complete, but cover representative and recent observations of the remnant – up to the end of 2023 in this version of the catalogue – and they should themselves include references to earlier work. Results from the primary literature should be used for any detailed quantitative studies.

The references do not generally include large observational surveys. Of particular interest in this respect are: the Effelsberg 100-m survey at 2.7 GHz of the Galactic plane $358° \le l \le 240°$, $|b| \le 5°$ by Reich et al. (1990) and Fürst et al. (1990a); reviews of the radio spectra of some SNRs by Kassim (1989), Kovalenko, Pynzar' & Udal'tsov (1994) and Trushkin (1998); the Parkes 64-m survey at 2.4 GHz of the Galactic plane $238° < l < 365°$, $|b| < 5°$ by Duncan et al. (1995) and Duncan et al. (1997); the Molonglo Galactic plane survey at 843 MHz of $245° < l < 355°$, $|b| < 1\overset{\circ}{.}5$ by Green et al. (1999); the survey of $345° < l < 255°$, $|b| < 5°$ at 8.35 and 14.35 GHz by Langston et al. (2000); the Multi-Array Galactic Plane Imaging Survey (MAGPIS, `https://third.ucllnl.org/gps/`), see White, Becker & Helfand (2005) and Helfand et al. (2006); the VLA Galactic Plane Survey, see Stil et al. (2006); the GLOSTAR Galactic radio survey of the region $358° \le l \le 60°$, $|b| \le 1°$, see Dokara et al. (2021); the survey of HI emission towards SNRs by Koo & Heiles (1991); the study of possible molecular cloud associations with SNRs, in the region $1° \le l \le 230°$, $|b| \le 5\overset{\circ}{.}5$) by Zhou et al. (2023); surveys of IRAS observations of SNRs and their immediate surroundings by Arendt (1989) and by Saken, Fesen & Shull (1992); various Spitzer surveys of inner galaxy (Reach et al. 2006; Carey et al. 2009; Pinheiro Gonçalves et al. 2011); the catalogue by Fesen & Hurford (1996) of UV/optical/infrared lines identified in SNRs; references to the first Fermi SNR catalogue (Acero et al. 2016) are included for the 30 'Classified Candidates' and 14 'Marginally Classified Candidates' remnants listed in Table 1, but not for the other remnants with non-detection; the H.E.S.S. high energy γ-ray Galactic plane survey (H.E.S.S. Collaboration: Abdalla et al. 2018a) and the 4th Fermi LAT Catalogue (Abdollahi et al. 2020). See also Ferrand & Safi-Harb (2012), who present a catalogue of X-/γ-ray observations of Galactic SNRs, updates of which are available at `http://snrcat.physics.umanitoba.ca/`.

A summary of the data available for all 310 remnants in the catalogue is given in Table I. The other names for SNRs are listed in Table II, and the abbreviations for journals, proceedings and telescopes are listed in Table III. A list of the many possible and probable SNRs reported in the literature (see Section 2.3) is given in Table V. The detailed listings for each SNR are given in Table IV.

2. Revisions and Notes

2.1 Objects no longer thought to be SNRs

The following objects, which were listed in Version I of the catalogue were removed because they were no longer thought to be remnants, or were poorly observed (see Version II for references and further details): G2.4+1.4 (see also Gray 1994a; Goss & Lozinskaya 1995; Polcaro et al. 1995, Prajapati et al. 2019, Green 2022), G41.9–4.1 (=CTB 73, PKS 1920+06), G47.6+6.1 (=CTB 63), G53.9+0.3 (part of HC40), G93.4+1.8 (=NRAO 655), G123.2+2.9, G194.7+0.4 (the Origem Loop, but see below for more recent work), G287.8–0.5 (see below), G322.3–1.2 (=Kes 24) and G343.0–6.0 (but note that G343.0–6.0 was subsequently reinstated into the catalogue, due to improved observations, see below). Note that subsequently Leahy, Tian & Wang (2008) again proposed that a large (about $0\overset{\circ}{.}5$) radio shell, G53.9+0.2, as a possible old SNR. As noted above, this feature was included, as G53.9+0.3 (part of HC40), in Version I of the catalogue, but was subsequently removed, following the discussions of Caswell (1985) who concluded is was a thermal source (see also Velusamy, Goss & Arnal 1986; Zychová & Ehlerová 2016; Driessen et al. 2018).

G350.1–0.3 was removed from Version III of the catalogue, as observations by Salter et al. (1986) did not allow a clear identification of the nature of this source (but, due improved observations it was subsequently reinstated into the catalogue, see below).

G358.4–1.9, which was listed in Version IV of the catalogue, was removed, as following the discussion of Gray (1994a), as it is not clear that this is a SNR.

G240.9–0.9, G299.0+0.2 and G328.0+0.3, which were listed in 1995 July version of the catalogue, were removed from the 1996 August version, following the improved observations of Duncan et al. (1996) and Whiteoak & Green (1996).

For the 1998 September revision of the catalogue G350.0–1.8 was incorporated into G350.0–2.0, and G337.0–0.1 refers to a smaller remnant than that previously catalogued with the same name.

G112.0+1.2, G117.4+5.0, G152.2–1.2 and G211.7–1.1 – which were reported as SNRs by Bonsignori-Facondi & Tomasi (1979) – were removed from the 2001 December version of the catalogue, as the first three of these are not confirmed as SNRs from the Canadian Galactic Plane Survey (Roland Kothes, private communication).

G10.0–0.3, which was regarded as a remnant – possibly associated with a soft-gamma repeater – was removed from the 2004 January version of the catalogue, as it is now thought to be radio nebula powered by a stellar wind (see Gaensler et al. 2001, Corbel & Eikenberry 2004, and references therein).

G166.2+2.5 (=OA 184) was removed from the 2006 April version of the catalogue, as it was identified as an HII region by Foster et al. (2006).

G84.9+0.5 was removed from Version VI of the catalogue, as it was identified as an HII region by Foster et al. (2007), see also Kothes et al. (2006).

G16.8–1.1 was removed from Version VII of the catalogue (Sun et al. 2011; Stupar & Parker 2011).

G192.8–1.1 was removed from the 2017 June version of the catalogue, as Gao et al. (2011) had shown this is not a SNR (Kang, Koo & Byun 2014). It was erroneously not removed in Version VII of the catalogue.

Five entries (G20.4+0.1, G21.5–0.1, G23.6+0.3, G59.8+1.2 and G65.8–0.5) were removed from Version VIII of the catalogue, as Anderson et al. (2017), based on THOR and VGPS radio and IR survey observations, concluded they are not SNRs, but have been confused with HII regions. Anderson et al. also identified one other entry, G54.1+0.3 as not being a SNR. This used to be in the catalogue as a filled-centre remnant, as it shows a centrally brightened morphology in radio and X-ray observations, and contains a pulsar. It was reclassified as somewhat larger possible composite remnant when a larger, faint X-ray emission was identified, from which radio emission, with polarised loops was subsequently found. Thus G54.1+0.3 was retained in the catalogue as a composite remnant because of its X-ray and polarised radio emission, although it may be an isolated PWN.

In the 2022 December version of the catalogue five entries were removed as they were identified as HII regions rather than SNRs: G11.1–1.0 and G16.4–0.5 (Gao et al. 2019), G8.3–0.0 (Hurley-Walker et al. 2019a), G10.5–0.0 and G14.3+0.1 (Dokara et al. 2021). Dokara et al. also identified G11.1–1.0 as an HII region, and questioned the identification of G6.1+0.5 as a SNR. Gao et al. and Hurley-Walker et al. also identified G20.4+0.1 as an HII region, but this source had already been removed from Version VIII of the catalogue.

The following objects, which have been reported as SNRs, but have not been included in any of the versions of the SNR catalogue, have subsequently been shown not to be SNRs.

- G70.7+1.2, which was reported as a SNR by Reich et al. (1985), but this has not been confirmed by later observations (see Green 1986; de Muizon et al. 1988; Becker & Fesen 1988; Bally et al. 1989; Kulkarni et al. 1992; Phillips, Onello & Kulkarni 1993; Onello et al. 1995; Cameron & Kulkarni 2007).
- G81.6+1.0 a possible SNR in W75 reported by Ward-Thompson & Robson (1991). From the published data (see the observations in Wendker, Higgs & Landecker 1991) it was noted in Version IV of the catalogue that this is thermal source not a SNR, because of its thermal radio spectrum, and high infrared-to-radio emission (see also the subsequent discussion by Wendker et al. 1993).
- Green & Gull (1984) suggested G227.1+1.0 as a very young SNR, but subsequent observations (Channan et al. 1986; Green & Gull 1986) have shown that this is most likely an extragalactic source, not an SNR.
- A candidate SNR, G274.7–2.8, identified by Helfand & Channan (1989), has been shown not to be a SNR by Caswell & Stewart (1991).
- G159.6–18.5, was suggested as a SN by Pauls & Schwartz (1989), from IRAS and other observations – see also Fiedler et al. (1994) – but appears to be an HII region (see also Andersson et al. 2000; Ridge et al. 2006; Remy et al. 2018; Millard et al. 2021).
- G25.5+0.2, which was reported as a very young SNR by Cowan et al. (1989), although this identification was not certain (see also White & Becker 1990; Green 1990a; Zijlstra 1991). Sramek et al. (1992) report the detection of recombination lines from this source (see also Subrahmanyan et al. 1993). Becklin et al. (1994) identify G25.5+0.2 as a ring nebula around a luminous blue star. See also Clark, Steele & Langer (2000), and Phillips & Ramos-Larios (2008) who identified G25.5+0.2 as a possible symbiotic outflow.
- Trushkin (1990) reported additional radio observations of extended radio sources from the Kallas & Reich (1980) Galactic single-dish survey at 1.4 GHz. Eight sources identified with non-thermal radio spectra were noted as possible SNRs. However, more recent higher resolution observations reveals most of these sources are compact sources (Kerton 2006), and two remaining extended sources, KR 48 and KR 171, are identified as more likely being HII regions (also note KR 48 is G104.7+2.8, see further discussion below).
- Joncas & Higgs (1990) report two extended radio sources, 24P 114 and 24P130, as candidate young SNRs. However, subsequent higher resolution observations (Green & Joncas 1994) showed these to be compact sources.
- Several of the possible SNRs listed by Gorham (1990) – following up SNR candidates suggested by Kassim (1988a) – have been shown likely not to be SNRs by Gorham, Kulkarni & Prince (1993).
- A possible SNR (near $l = 32\overset{\circ}{.}15$, $b = +0\overset{\circ}{.}13$) reported from optical spectroscopy by Thompson, Djorgovski & de Carvalho (1991), following up radio and infrared observations of Jones, Garwood & Dickey (1988), although this has a thermal radio spectrum, and has been identified as an ultra-compact HII region (e.g. Watson et al. 2003, Leto et al. 2009, Kalcheva et al. 2018).
- G203.2–12.3, a optical ring about 3 arcmin in diameter, was reported as a possible SNR by Winkler & Reipurth (1992), but was shown to be an Herbig–Haro object (HH 311) by Reipurth, Bally & Devine (1997), see also Rosado, Raga & Arias (1999).
- G104.7+2.8, a possible SNR suggested by Green & Joncas (1994), which instead appears to be an HII region, based on the improved observations by Kerton (2006) and Kothes et al. (2006). See also Anderson et al. (2015) and Karska et al. (2022).
- G247.8+4.9 was noted as a possible optical SN by Weinberger (1995), see also Zanin & Kerber (2000). However, it is regarded as a possible or probable planetary nebula (PN) by Parker et al. (2006). See also Boffin et al. (2012) and Frew, Bojičić & Parker (2013).

- G359.87+0.18 was reported as a possible young SNR near the Galactic Centre by Yusef-Zadeh, Cotton & Reynolds (1998), but was shown to be a radio galaxy by Lazio et al. (1999).
- Zhang (2003) identified four candidate SNRs from radio surveys, on the basis of shell structure with apparent non-thermal radio spectra. One of these – called G41.9+0.04 by Zhang – corresponds to the catalogued SNR G42.0–0.1. However, the other three proposed SNR candidates appear to be thermal sources, not SNRs. First, the source called G47.8+2.03 by Zhang has a thermal spectrum on the basis of its published 2.7-GHz flux density (Fürst et al. 1990b) and Zhang's 1.4-GHz flux density. Second, Zhang's source G74.8+0.63 is a known HII region Sharpless Sh 2-104 (e.g. Dickel & Milne 1972; Israël 1977; Weiler & Shaver 1978; Pineault & Chastenay 1990). Note that Israël had discussed that this source had been included in some SNR earlier catalogues (Milne 1970; Downes 1971), before the HII region identification became clear. Third, Zhang's source G93.2+2.63, is identified as a thermal source by Arvidsson, Kerton & Foster (2009), as radio recombination lines from it have been detected.
- Morris et al. (2006) suggested small remnant observed by Spitzer, which has subsequently instead been identified as a likely PN by Fesen & Milisavljevic (2010), see also Mizuno et al. (2010).
- Bhatnagar (2001) suggested G3.7–0.1 as a compact ($\approx 1'$) SNR, based on GMRT and other radio observations (see also Yusef-Zadeh, Hewitt & Cotton 2004, who call the candidate SNR G3.66–0.1). However, this source had already been identified as a compact HII region by Wink et al. (1982). See also Giveon et al. (2005).
- An extended region of X-ray emission, near $l = 356^\circ\!.8$, $b = -1^\circ\!.7$ is reported as a possible SNR by Tomsick et al. (2009). Subsequently Barrière et al. (2015) identified this as a galaxy cluster and a blazar. See also Watanabe et al. (2019).
- The TeV γ-ray source MGRO J2019+37 is discussed by Saha & Bhattcharjee (2014) as either a PWN or SNR. (Note that declination for the source given by Saha & Bhattcharjee is wrong.) However, the SNR identification is not supported by observations by Aliu et al. (2014), who resolve MGRO J2019+37 into two sources, one associated with G74.9+1.2, and the other with the pulsar J2021+3651.
- Demetroullas et al. (2015) suggest a region of radio emission, NGC 6334D (near $l = 351^\circ\!.6$, $b = 0^\circ\!.2$), seen in their 31-GHz observations, apparently with a non-thermal radio spectrum, might be a SNR. (Note that the coordinates of some figures in Demetroullas et al. are in error.) However, other available observations of this region do not support a SNR identification for NGC 6334D. Demetroullas et al. noted there are two sources in the Northern VLA Sky Survey (NVSS, Condon et al. 1998, at 1.4 GHz with a resolution of 45 arcsec) in the region of NGC 6334D, with peaks of 2.1 and 2.0 Jy beam^{-1}. Each of these sources have integrated flux densities of about 3.8 Jy in the NVSS, and other observations (e.g. Murphy et al. 2007) show they have relatively flat radio spectra. They are each associated with one or more compact HII regions identified by Giveon et al. (2005), from higher resolution 5-GHz and IR observations. The NVSS sources are separated by about 4 arcmin, and – with flat radio spectra – explain the extended emission of NGC 6334D seen in Demetroullas et al.'s lower resolution 31-GHz image. Higher quality 1.4-GHz observations from the SGPS (Haverkorn et al. 2006) do not show any obvious emission, apart from that from the NVSS sources, in this region that might indicate a SNR.
- A sample of 'giant radio sources' identified in the NVSS is presented by Proctor (2016). One of these sources, NVGRC J205051.1+312728 is annotated as 'SNR?' (among other possibilities), but this is actually part of the Cygnus Loop (=G74.0–8.5, e.g. see Green 1990b). Several other of these sources correspond to other parts of the Cygnus Loop, or to other known SNRs.
- Dzib et al. (2018) present observations of small (only $\approx 15''$ in extent) radio shell, which they suggest may be a SNR. However, this source has already been identified as a candidate PN by Froebrich et al. (2015) from its extended IR H_2 emission.
- Hurley-Walker et al. (2019a) identified as HII regions several sources previously reported as possible SNRs: G1.2–0.0 (Sawada et al. 2009), G5.3+0.1 (Trushkin 2001), G12.75–0.15 and G19.00–0.35 (Gosachinskiĭ 1985), and G354.4+0.0 (Roy & Pal 2013).
- Martí, Luque-Escamilla & Sánchez-Ayaso (2023) identify an HI cavity and radio continuum features as a possible old SNR. This corresponds to Lynds Bright Nebula 315 (Lynds 1965), and is listed as a known HII region in the online version (V2.3, see: `http://astro.phys.wvu.edu/wise`) of the WISE HII region catalogue (Anderson et al. 2014), see also Anderson et al. (2015).

See also further comments in Section 2.3, when there is evidence that some other objects which have been proposed SNRs are not remnants.

Some entries in the catalogue have been renamed, due to improved observations revealing a larger true extent for the object (previously G5.3–1.0 is now G5.4–1.2; G308.7+0.0 is now incorporated into G308.8–0.1). G337.0–0.1 now refers to a small (1.5 arcmin) remnant, rather than larger supposed remnant at this position (see Sarma et al. 1997), and G350.0–2.0 now incorporates the previously catalogued G350.0–1.8, based on the improved observations of Gaensler (1998). G106.6+2.9, which was proposed as a small remnant by Halpern et al. (2001), is incorporated into the larger catalogued remnant G106.3+2.7.

2.2 New SNRs

The following remnants were added to Version II of the catalogue: G0.9+0.1, G1.9+0.3, G5.9+3.1, G6.4+4.0, G8.7–0.1, G18.9–1.1, G20.0–0.2, G27.8+0.6, G30.7+1.0, G31.5–0.6, G36.6–0.7, G42.8+0.6, G45.7–0.4, G54.1+0.3, G73.9+0.9, G179.0+2.6, G312.4–0.4, G357.7+0.3 and G359.1–0.5.

The following remnants were added to Version III of the catalogue: G4.2–3.5, G5.2–2.6, G6.1+1.2, G8.7–5.0, G13.5+0.2, G15.1–1.6, G16.7+0.1, G17.4–2.3, G17.8–2.6, G30.7–2.0, G36.6+2.6, G43.9+1.6, G59.8+1.2, G65.1+0.6, G68.6–1.2, G69.7+1.0, G279.0+1.1, G284.3–1.8 (=MSH 10–53), G358.4–1.9 and G359.0–0.9 (although, as noted above, G59.8+1.2 and G358.4–1.9 have subsequently been removed).

The following remnants were added to Version IV of the catalogue: G59.5+0.1, G67.7+1.8, G84.9+0.5, G156.2+5.7, G318.9+0.4, G322.5–0.1, G343.1–2.3 and G348.5–0.0 (although, as noted above, G84.9+0.5 was subsequently removed).

The following remnants were added to 1995 July version of the catalogue: G1.0–0.1, G1.4–0.1, G3.7–0.2, G3.8+0.3, G28.8+1.5, G76.9+1.0, G272.2–3.2, G341.2+0.9, G354.1+0.1, G355.6–0.0, G356.3–0.3, G356.3–1.5 and G359.1+0.9.

The following remnants were added to the 1996 August version of the catalogue: G13.3–1.3, G286.5–1.2, G289.7–0.3, G294.1–0.0, G299.2–2.9, G299.6–0.5, G301.4–1.0, G308.1–0.7, G310.6–0.3, G310.8–0.4, G315.9–0.0, G317.3–0.2, G318.2+0.1, G320.6–1.6, G321.9–1.1, G327.4+1.0, G329.7+0.4, G342.1+0.9, G343.1–0.7, G345.7–0.2, G349.2–0.1, G351.7+0.8, G351.9–0.9 and G354.8–0.8.

The following remnants were added to the 1998 September version of the catalogue: G0.3+0.0, G32.1–0.9, G55.0+0.3, G63.7+1.1 and G182.4+4.3.

The following remnants were added to the 2000 August version of the catalogue: G7.0–0.1, G16.2–2.7, G29.6+0.1, G266.2–1.2 and G347.3–0.5.

The following remnants were added to the 2001 December version of the catalogue: G4.8+6.2, G28.6–0.1, G85.4+0.7, G85.9–0.6, G106.3+2.7, G292.2–0.5, G343.0–6.0, G353.9–2.0, G356.2+4.5 and G358.0+3.8.

G312.5–3.0 was added to Version V of the catalogue.

The following remnants were added to the 2006 April version of the catalogue: G5.5+0.3, G6.1+0.5, G6.5–0.4, G7.2+0.2, G8.3–0.0, G8.9+0.4, G9.7–0.0, G9.9–0.8, G10.5–0.0, G11.0–0.0, G11.1–0.7, G11.1–1.0, G11.1+0.1, G11.8–0.2, G12.2+0.3, G12.5+0.2, G12.7–0.0, G12.8–0.0, G14.1–0.1, G14.3+0.1, G15.4+0.1, G16.0–0.5, G16.4–0.5, G17.0–0.0, G17.4–0.1, G18.1–0.1, G18.6–0.2, G19.1+0.2, G20.4+0.1, G21.0–0.4, G21.5–0.1, G32.4+0.1, G96.0+2.0, G113.0+0.2 and G337.2+0.1 (as noted above, G8.3–0.0, G10.5–0.0, G11.1–1.0, G14.3+0.1, G16.4–0.5, G20.4+0.1 and G21.5–0.1 have subsequently been removed).

The following remnants were added to Version VI of the catalogue: G83.0–0.3, G108.2–0.6, G315.1+2.7, G332.5–5.6, G327.2–0.1, G350.1–0.3, G353.6–0.7, G355.4+0.7, G358.1+1.0 and G358.5–0.9. Note that G358.1+1.0 was in Versions VI and VII with the wrong name, G358.1+0.1, which was corrected in the 2017 June version.

The following remnants were added to Version VII of the catalogue: G21.6–0.8, G25.1–2.3, G35.6–0.4, G38.7–1.3, G41.5+0.4, G42.0–0.1, G64.5+0.9, G65.8–0.5, G66.0–0.0, G67.6+0.9, G67.8+0.5, G152.4–2.1, G159.6+7.3, G178.2–4.2, G190.9–2.2, G213.0–0.6, G296.7–0.9, G306.3–0.9, G308.4–1.4, G310.6–1.6 and G322.1+0.0 (as noted above, G65.8–0.5 has subsequently been removed).

G70.0–21.5 and G351.0–5.4 were added to the 2017 June version of the catalogue.

The following remnants were added to Version VIII of the catalogue: G181.1+9.5, G323.7–1.0, G150.3+4.5 and G53.4+0.0.

The following remnants were added to the 2022 December version of the catalogue: G3.1–0.6, G7.5–1.7, G13.1–0.5, G15.5–0.1, G21.8–3.0 G28.3+0.2, G28.7–0.4, G107.0+9.0, G249.5+24.5, G345.1–0.2, G345.1+0.2, G348.8+1.1, G353.3–1.1 and G359.2–1.1.

The following remnants have been added to this version of the catalogue.

- G17.8+16.7, a remnant identified from its non-thermal radio emission by Araya, Hurley-Walker & Quirós-Araya (2022).
- Dokara et al. (2023) confirmed three candidate remnants as SNRs, from radio observations, including polarisation (all three of which had been suggested as possible SNRs by Helfand et al. 2006). Two of these – G28.3+0.2 and G28.7–0.4 – had already been included in the catalogue from the 2022 December version, following observations by Hurley-Walker et al. (2019a). The third, G29.3+0.1, has been added to this version fo the catalogue.
- A large ($\approx 4°$), high latitude SNR, G116.6–26.1, which was first identified as a possible remnant by Churazov et al. (2021) from X-ray observations, and subsequently confirmed from radio and optical observations (Churazov et al. 2022, Palaiologou, Leonidaki & Kopsacheili 2022).

- G189.6+3.3, a faint SNR overlapping G189.1+3.0 (=IC443) – first suggested by Asaoka & Aschenbach (1994) from ROSAT X-ray observations – following improved X-ray eROSITA observations by Camilloni & Becker (2023).
- Gao et al. (2022) presented radio observations of two new large SNRs, G203.1+6.6 and G206.7+5.9. These had previously been reported as possible SNRs by both Reich (2002) and Soberski, Reich & Wielebinski (2005).
- One of the candidate remnants reported by Duncan et al. (1997), G288.8–6.3, from radio observations has been confirmed as a large, faint SNR from improved radio observations by Filipović et al. (2023).

2.3 Possible and probable SNRs not listed in the catalogue

The following are possible or probable SNRs for which further observations are required to confirm their nature or parameters.

These are listed in Table IV, which gives their Galactic coordinate based name, size, and a reference for these possible and probable SNRs reported in the literature. The names and sizes are those given in the literature unless marked with an '?', in which case I have estimated them. For the names taken from the literature, some have been truncated to two decimal places (as three decimal places is not warranted), and it should be noted that others may have been rounded, not truncated. Note that many of these possible and probable SNRs overlap each other to some extent.

2.3.1 Radio

- Gómez-González & del Romero (1983) report a possible SNR G57.1+1.7 (about 40 arcmin in extent), near the pulsar PSR 1930+22. Later Routledge & Vaneldik (1988) instead proposed a possible larger remnant, nearly 2° in diameter, near the same pulsar. See also Kovalenko (1989).
- A possible SNR near the Galactic centre reported by Ho et al. (1985) from radio observations (see also Coil & Ho 2000; Lu, Wang & Lang 2003; Senda, Murakami & Koyama 2003, Johnson, Dong & Wang 2009). More recently Zhang et al. (2014) do not support a SNR identification for this source.
- Gosachinskiĭ (1985) reported evidence for non-thermal radio emission, presumably from SNRs, associated with several bright, thermal Galactic sources. Some of these sources have been included in the catalogue, following improved observations. See also Odegard (1986), who questions the reliability of some of Gosachinskiĭ's results, and also suggest another possible SNR, G7.6–0.6, and Hurley-Walker et al. (2019a) who identify two of Gosachinskiĭ's sources as HII regions.
- G300.1+9.4, a possible SNR nearly 2° in diameter reported by Dubner, Colomb & Giacani (1986).
- Gorham (1990) lists many SNR candidates from the Clark Lake 30.9 MHz survey of the first quadrant, following Kassim (1988a), one of which (G13.1–0.5) is included in the catalogue following improved observations be Hurley-Walker et al. (2019a). Several other have been shown not to be SNRs by Gorham, Kulkarni & Prince (1993). Gorham et al. report a poorly defined possible remnant G41.4+1.2 (previously G41.6+1.2 in Gorham 1990). Aharonian et al. (2008a) note that one of Gorham's candidates, G44.6+0.1, is in the vicinity of an extended region of γ-ray emission HESS J1912+101 (see also Su et al. 2018; H.E.S.S. Collaboration: Abdalla et al. 2018b; Reich & Sun 2019; Zhang et al. 2020b; Sun, Yang & Liang 2022; Duvidovich & Petriella 2023; Li, Liu & He 2023). There are in fact two candidate remnants in Gorham (1990) which overlaps HESS J1912+101, namely G44.6+0.1 and also G44.2+0.5 (although it should be noted that Gorham's absolute positions are uncertain due ionospheric effects, see Kassim 1988b). Plus, there is another candidate SNR overlapping HESS J1912+101, G44.0–0.1 from Trushkin (2001), see below. Another γ-ray source, HESS J1857+026 (see Ackermann et al. 2017) corresponds to Gorham's candidate remnant G36.0–0.2.
- Four possible remnants (G45.9–0.1, G71.6–0.5, G72.2–0.3 and G85.2–1.2) of the eleven reported by Taylor, Wallace & Goss (1992) from a radio survey of part of the Galactic plane (see also Kothes et al. 2006). Six of the other possible SNRs reported by Taylor et al., are included in the catalogue as G55.0+0.3, G59.5+0.1, G63.7+1.1, G67.7+1.8, G76.9+1.0 and G83.0–0.3, following improved observations which have confirmed their nature. The other candidate, G84.9+0.5, was included in earlier versions of the catalogue, but was removed in Version VI, as it has been shown to be an HII region (see above).
- Gray (1994b) identify several possible SNRs from radio observations near the Galactic centre, some of which have been included in the catalogue, following additional observations. See also Roy & Pramesh Rao (2002), Bhatnagar (2002), Cotton et al. (2022) and Heywood et al. (2022) for additional observations.
- Duncan et al. (1995) and Duncan et al. (1997) list several large-scale (1.5 to 10 degree), and smaller, low radio surface-brightness candidate SNRs from the Parkes 2.4-GHz survey of $270^\circ < l < 360^\circ$. Several of these candidates have been confirmed as SNRs by subsequent, improved observations, and are included in the catalogue. See also Camilo et al. (2004), Chang et al. (2012) and Danilenko et al. (2012) for further observations of G309.8–2.6, which is near a young pulsar; Russeil et al. (2005), who detected optical filaments from a third; and Shan et al. (2019).

- Whiteoak & Green (1996), from their radio survey of much of the southern Galactic plane, list many possible SNRs, several of which have been included in the catalogue, following improved observations, while most have not. See also Green, Reeves & Murphy (2014) and Ball et al. (2023) for additional radio observations of some of these. Another of the possible SNRs listed in Whiteoak & Green (1996), G319.9–0.7, has been identified as a pulsar bow-shock by Ng et al. (2010).
- Combi & Romero (1998), Combi, Romero & Arnal (1998), Combi, Romero & Benaglia (1998) and Punsly et al. (2000) report several candidate SNRs from spatially filter radio survey images.
- Possible SNRs, near $l = 313°$, were reported by Roberts et al. (1999), and Roberts, Romani & Johnston (2001). See also Aharonian et al. (2006) γ-ray observations of the region.
- G359.07–0.02, a possible SNR noted by LaRosa et al. (2000), see also Nakashima et al. (2010) and Ponti et al. (2015).
- A possible SNRs near G6.4–0.1 (=W28) noted by Yusef-Zadeh et al. (2000). (A second possible remnant noted by Yusef-Zadeh et al. has been included in the catalogue, as G6.5–0.4, following the improved observations of it by Brogan et al. 2006).
- Gaensler et al. (2000), in a search for pulsar wind nebulae, found a small shell of radio emission near PSR B1356–60 – which they designate G311.28+1.09 – which may be a supernova remnant.
- A possible SNR, G328.6–0.0, noted by McClure-Griffiths et al. (2001) in the test region of the Southern Galactic Plane Survey. See also Ball et al. (2023).
- G346.5–0.1, an arc of radio emission observed by Gaensler et al. (2001), which is potentially part of a SNR, but requires further observations to confirm its nature.
- Several possible SNRs reported by Trushkin (2001), which were identified from Galactic radio surveys (one of which, G6.1+0.5, is included in the catalogue, due to improved subsequent observations). One of these, G5.3+0.1 has been identified as an HII region by Hurley-Walker et al. (2019a).
- Two possibles SNRs (G336.1–0.2 and G352.2–0.1) discussed briefly by Manchester et al. (2002).
- G282.8–1.2, a possible young SNR noted by Misanovic, Cram & Green (2002).
- G43.5+0.6, one of three possible SNRs identified by Kaplan et al. (2002); the other two are included in the catalogue, as G41.5+0.4 and G42.0–0.1, because subsequent observations have shown they have non-thermal radio spectra.
- G107.5–1.5, a probable remnant identified at by Kothes (2003), but the full extent of which is not well defined at present (see also Kothes et al. 2006; Jackson, Safi-Harb & Kothes 2014; Bakış et al. 2023).
- Brogan et al. (2006) identified 35 new SNRs in the region $4.^{\circ}5 < l < 22°$, $|b| < 1.^{\circ}25$, of which the 31 which are classed as ‘I’ or ‘II’ (i.e. those thought to be very or fairly confidently identified as SNRs) were included in the 2006 April version of the catalogue. Several of these – G8.3–0.0, G10.5–0.0 G11.1–1.0, G14.3+0.1, G16.4–0.5, G20.4+0.1 and G21.5–0.1 – have subsequently been removed, as they have been identified as HII regions (see above). Brogan et al. also listed four other possible SNRs which required further observations to confirm their nature and better define their parameters, one of which (G15.5–0.1) has been included from the catalogue from the 2022 December version, following observations by Hurley-Walker et al. (2019a). See also Aharonian et al. (2008b), Hewitt & Yusef-Zadeh (2009), Joubert et al. (2016), Stupar, Parker & Few (2018) and Shan et al. (2018).
- Helfand et al. (2006) list many SNR candidates in the region $5° < l < 32°$, $|b| < 0.^{\circ}8$ from MAGPIS. Many of these correspond to sources in Brogan et al., and several have been included in the catalogue, with the others requiring further observations. Note that the integrated flux densities reported in Helfand et al. are very high compared with those reported in Brogan et al.. One of these candidates, G29.07+0.45, is known planetary nebula (Abell 1955, 1966). See also Todt et al. (2013) and Frew et al. 2014). Many of these candidate SNRs are also discussed by Johanson & Kerton (2009), who conclude that eight of them are HII regions rather than SNRs. Several of these candidates are also associated with ‘bubbles’ from HII regions (Simpson et al. 2012), or with known or candidate HII region in the WISE HII region catalogue (Anderson et al. 2014, Hurley-Walker et al. 2019a). Much of region covered by the MAGPIS has more recently been observed by the THOR and GLOSTAR surveys, see further discussion below (and also Goss, Matthews & Winnberg 1978; Subrahmanyan & Goss 1996; Kargaltsev & Pavlov 2007; Lee et al. 2012; Dokara et al. 2023; Zheng et al. 2023).
- Martí et al. (2007), report extended radio emission near the X-ray source KS 1741–295 near the Galactic centre which may be a SNR (see also Cherepashchuk et al. 1994).
- A poorly defined possible SNR, near $l = 151°$, $b = 3°$ reported by Kerton, Murphy & Patterson (2007).
- Anderson et al. (2012) report extended radio emission, designated G333.9+0.0, near a magnetar, which may be a SNR.
- Five candidate remnants, G108.5+11.0, G128.5+2.6, G149.5+3.2, G150.8+3.8 and G160.1–1.1, are identified from radio surveys by Gerbrandt et al. (2014), see also Gao et al. (20210) and Tung et al. (2017). One of these, G150.8+3.8, is part of SNR G150.3+4.5 (Gao & Han 2014), which was added in Version VIII of the catalogue.

- Sidorin et al. (2014) note that there is possibly non-thermal radio emission near l = 51°, b = 0°), overlapping GLIMPSE IR bubble N107, which may indicate a SNR. More recently Supan et al. (2018) present radio and IR observations of this region, and suggest part of the non-thermal emission noted by Sidorin et al., as a SNR. See also Anderson et al. (2017), Driessen et al. (2018) and Dokara et al. (2018).
- Kothes et al. (2014) report the discovery of a new PWN, G141.2+5.0, which lies within an HI cavity, which might be an indication of remnant. See also Reynolds & Borkowski (2016).
- Green, Reeves & Murphy (2014) list over twenty candidate SNRs identified in the second epoch Molonglo Galactic Plane Survey. Two of these, G296.7–0.9 and G308.4–1.4 were added in Version VII of the catalogue, and G323.7–1.0 was added in Version VIII, based on other available observations. Several of the others are previously reported candidate SNRs (e.g. Duncan et al. 1995; Whiteoak & Green 1996; Duncan et al. 1997). See also Ball et al. (2023).
- Bihr et al. (2016) present radio observations in the regions l = 14°.0–37°.9 and l = 47°.1–51°.2, $|b| \leq 1°.1$, from the THOR survey (e.g. Beuther et al. 2016). This includes many of the candidates in Helfand et al. (2006), and Bihr et al. identify several of these as HII regions. Anderson et al. (2017) use radio observations from THOR and VGPS, plus mid-IR observations, to identify 76 candidate remnants in $17°.5 < l < 67°.4$, $|b| \leq 1°.5$. Several of which correspond to candidates previously identified by Helfand et al. (2016) from MAGPIS (see above). Several of these candidates are small (less than 2′ in extent), and would be very young SNRs even if at the far side of the Galaxy. For several of these small candidates higher resolution radio observations are available from MAGPIS, which do not support these as being young SNRs. For example, the candidate G38.83–0.01 from Anderson et al. (2017), given as a radius of 0′.6, is resolved into 2 compact sources. See also Castelletti et al. (2017), Dokara et al. (2018), Driessen et al. (2018), Wang et al. (2018), Karpova, Zyuzin & Shibanov (2019), Maxted et al. (2019), Petriella et al. (2019), H.E.S.S. Collaboration: Abdalla et al. (2020) Araya et al. (2021) and Zhong et al. (2023) for further observations of some of the candidates listed by Anderson et al. (2017). See also Ranasinghe, Leahy & Stil (2021), who discuss one of these possible young SNRs, and suggest another small possible remnant from THOR and other observations.
- Sushch et al. (2017) present radio observations that identify a possible SNR, G304.4–0.2. See also Voisin et al. (2019).
- Hurley-Walker et al. (2019b) list many candidate SNRs in the regions $345° < l < 60°$ and $180 < l < 240°$ $|b| < 10°$ from the GaLactic and Extragalactic All-sky MWA (GLEAM) radio survey (Hurley-Walker et al. 2019c). Also, Hurley-Walker et al. (2019a) provide additional GLEAM observations of many previously proposed candidate SNRs.
- G351.7–1.2 a candidate remnant identified by Veena et al. (2019a) from radio and Hα observations (see also Veena et al. 2019b).
- Ingallinera et al. (2019) reported three possible remnants near l = 344°, b = +0° from ATCA observations at 2.1 GHz.
- Sofue (2020) identifies a small diameter hole in CO emission as a possible ‘dark’ SNR (see also Sofue 2021).
- Dokara et al. (2021) present radio observations in the region $358° \leq l \leq 60°$, $|b| \leq 1°$, which includes 157 candidate remnants, including many previously proposed candidates SNRs. See also Heywood et al. (2022).
- G270.4–1.0, a possible ‘filled-centre’ SNR, with a pulsar near its edge, identified at radio wavelengths by Johnston & Lower (2021). (Note: this possible new remnant is sometimes erroneously called G320.4–1.0 by Johnston & Lower.)
- Pol et al. (2021) note a large (≈ 1°.5) faint region of radio emission, which also shows some Hα emission, which may be a SNR. See also Zhang & Xin (2023).
- Arias et al. (2022) report a faint ring of radio emission, with a pulsar, as a possible SNR (G118.4+37.0). See also Xin & Gao (2022) and Araya (2023).
- Radio observations of several possible SNRs near the Galactic Centre are presented by Heywood et al. (2022). These include G358.7+0.7 previously noted as a possible remnant by Gray (1994b).
- Chen et al. (2023) suggest a possible SNR, G124.0+1.4, based on faint, extended radio emission seen in the 6 cm (i.e. 5 GHz) Urumqi radio survey (Sun et al. 2007). This is despite the fact that they show this emission is dominated by three compact sources in other, higher resolution radio surveys. Moreover, there is no obvious extended emission seen in this region in the sensitive Canadian Galactic Plane Radio Survey (Taylor et al. 2003), at either 408 MHz or 1.4 GHz.
- A faint shell of radio emission, G45.24+0.18 – which is near a pulsar with a radio trail – is reported as a possible SNR by Motta et al. (2023).
- Ibrahim et al. (2023) report a faint radio ring, near the magnetar SWIFT J1818.0–1607, as possible indication of a SNR.
- Radio observations of $323° \leq l \leq 330°$, $-4° \leq b \leq 2°$ are presented by Ball et al. (2023). These include several new possible SNRs, plus additional observations of some previously suggested possible remnnnats. Ball et al. also identify the catalogued G323.7–1.0 as three seperate candidate remnants.

2.3.2 Optical/infrared

- Winkler et al. (1989) report a possible small (4 arcmin) SNR within the Puppis A remnant, from optical observations (see also Sutherland & Dopita 1995). This has not been detected at radio wavelengths (see Dubner et al. 1991). See also Ghavamian et al. (2019) who suggest this is due to the supernova shock from one binary member interacting with the other.
- G75.5+2.4, a possible large ($1\overset{\circ}{.}5 \times 1\overset{\circ}{.}8$) old SNR in Cygnus suggested by Nichols-Bohlin & Fesen (1993) from infrared and optical observations (see also Dewdney & Lozinskaya 1994; Marston 1996; Esipov et al. 1996; Kothes et al. 2006).
- Two possible SNRs, G340.5+0.7 and G342.1+0.1, identified by Walker, Zealey & Parker (2001) from filaments seen in Hα survey observations. See also Stupar, Parker & Filipović (2008). The larger of these, G342.1+0.1, overlaps some catalogued SNRs.
- A possible SNR which was identified by Bally & Reipurth (2001) – which they label as G110.3+11.3 – from optical filaments. See also Rector & Schweiker (2013).
- Mavromatakis & Strom (2002) identify a possible remnant from optical observations of filaments near l = 70°, b = +2°. Kothes et al. (2006) do not find any radio counterpart from this source at 408 MHz or 1.4 GHz from the CGPS survey. Subsequently Mavromatakis et al. (2009) proposed the brighter part of these optical filaments, as a possible smaller remnant, G70.5+1.9.
- A possible remnant identified from optical filaments to the NE of the known SNR G116.5+1.1, as observed by Mavromatakis et al. (2005).
- Russell et al. (2007) report a small (about 7 arcmin in extent) optical ring, which is very faint at radio wavelengths, just to the NW of Cygnus X-1 (see also Gallo et al. 2005). This may be a SNR if it is not associated with Cygnus X-1, although Sell et al. (2015) regard this as unlikely.
- Stupar, Parker & Filipović (2008) report several SNR candidates identified from Hα observations, several of which correspond to SNR candidates first suggested by Duncan et al. (1995, 1997) from radio observations. The full extent of most of these are not well defined, but two are currently included in the main catalogue (G315.1+2.7, and G332.5–5.6). See also Stupar, Parker & Filipović (2010).
- Optical filaments indicating a possible new SNR, G304.4–3.1 are presented by Stupar, Parker & Filipović (2010).
- Stupar, Parker & Filipović (2011) report a possible new SNR, G310.5–0.8, identified from optical filaments and associated radio emission.
- Ritter et al. (2021) propose the faint, fast expanding optical nebula Pa 30 as the remnant of the historical supernova of AD1181, rather than G130.7+3.1 (=3C58). See also Fesen, Schaefer & Patchick (2023) and Lykou et al. (2023).

2.3.3 X-ray/γ-ray

- H1538–32 a large X-ray source in Lupus, near $l = 340°$, $b = +18°$ was identified as a possible SNR by Riegler, Agrawal & Gull (1980), see also Colomb, Dubner & Giacani (1984), Gahm et al. (1990). However, more recently Franco (2002) suggest it is instead a local X-ray enhancement.
- G117.7+0.6, a faint shell of soft X-ray emission near G116.9+0.2 (=CTB 1), which contains a pulsar (Hailey & Craig 1995). See also Craig, Hailey & Pisarski (1997), Kothes et al. (2006) and Esposito et al. (2008).
- A possible SNR identified in X-rays around the pulsar B1828–13 suggested by Finley, Srinivasan & Park (1996), see also Braun, Goss & Lyne (1989), Shan et al. (2018) and H.E.S.S. Collaboration: Abdalla et al. (2018a). But Pavlov, Kargaltsev & Brisken (2008) do not find any evidence for a remnant around B1828–13.
- A possible, large SNR, G69.4+1.2, identified as an X-ray shell by Yoshita, Miyata & Tsunemi (1999, 2000). See also Mavromatakis, Boumis & Paleologou (2002) and Kothes et al. (2006).
- Schaudel et al. (2002) report 14 candidate SNRs identified in the ROSAT All-Sky Survey, but provided images and coordinates for only 3 of these (which have been included in the catalogue, as G38.7–1.3, G296.7–0.9 and G308.4–1.4, following improved observations of them).
- Many possible SNRs near the Galactic Centre have been reported by various authors from X-ray observations (e.g. Senda, Murakami & Koyama 2002, 2003; Renaud et al. 2006; Koyama et al. 2007; Mori et al. 2008; Nobukawa et al. 2008; Inui et al. 2009; Tsuru et al. 2009; Heard & Warwick 2013; Ponti et al. 2015), which are reviewed by Koyama (2018). See also Law, Yusef-Zadeh & Cotton (2008), Dexter et al. (2017), Simpson (2018), Terrier et al. (2018), Yamauchi et al. (2018b), Henshaw et al. (2019), Ponti et al. (2019), Zhang et al. (2020a), Wang (2021) and Anastasopoulou et al. (2023).
- Several possible SNRs are reported by Bamba et al. (2003) and Ueno et al. (2005, 2006), two of which have been included in the catalogue (as G28.6–0.1 and G32.4+0.1), as additional observations confirm their nature. One of the proposed remnants is called G11.0+0.0, but is larger than the currently catalogued G11.0–0.0. One of these candidates, G37.0–0.1, has instead been strongly suggested as a cluster of Galaxies by Yamauchi, Bamba & Koyama (2011). The nature of another, G25.5+0.0, has been questioned by Kargaltsev et al. (2012), who also proposed another, smaller possible SNR, G25.25+0.28, which corresponds to one of the candidates listed by Helfand et al. (2006). For a third source, G23.5+0.1, Kargalstev et al. prefer a pulsar wind nebula interpretation. Yamauchi, Sumita & Bamba (2016) also identify G23.5+0.1 and G22.0+0.0 as pulsar wind nebulae. See also H.E.S.S. Collaboration: Abdalla et al. (2018a), MAGIC Collaboration: Acciari et al. (2020), Dokara et al. (2021) and Zhou et al. (2023).
- Brief details a possible new SNR identified from the Swift X-ray Galactic Plane Survey are reported by Reynolds et al. (2012).
- Nobukawa et al. (2015) present Suzaku observations which indicate a likely SNR near $l = 26.°4$, $b = –0.°2$.
- Araya (2018) reports a large (greater than 3°) region of γ-ray emission at $l = 350.°6$, $b = –4.°7$, which may be a SNR.
- A possible SNR, G121.1–1.9, reported by Khabibullin et al. (2023), from X-ray observations which reveal extended X-ray (which is not detected at other wavelengths).

2.3.4 Other

- G287.8–0.5, which is associated with η Carinae, was listed in Version I as a SNR, but was removed from the catalogue in Version II as its parameters are uncertain (see Jones 1973; Retallack 1984; Tateyama, Strauss & Kaufmann 1991; and the discussion in Version II).
- G359.2–0.8 (the 'mouse'), near the Galactic centre, which has been suggested as being analogous to the central region of G69.0+2.7 (=CTB 80) by Predehl & Kulkarni (1995), i.e. a pulsar powered nebula (see also Camilo et al. 2002).

It should also be noted: (a) Some large radio continuum, H I, CO or optical loops in the Galactic plane that may be parts of very large, old SNRs, but they have not been included in the catalogue. See also Berkhuijsen (1973), Grenier et al. (1989), Combi et al. (1995), Duncan et al. (1995, 1997), Maciejewski et al. (1996), Walker & Zealey (1998), Kim & Koo (2000), Normandeau et al. (2000), Combi et al. (2001), Woermann, Gaylard & Otrupcek (2001), Stil & Irwin (2001), Uyanıker & Kothes (2002), Olano, Meschin & Niemela (2006), Borka (2007), Henley & Shelton (2009), Kang, Koo & Salter (2012), Xiao & Zhu (2014), Cichowolski et al. (2014), Sallmen et al. (2015), Bracco et al. (2020), Fesen et al. (2021), Panopoulou et al. (2021), Iwashita, Kataoka & Sofue (2023) and Sofue, Kataoka & Iwashita (2023). Gao & Han (2013) discuss the nature of the Origem Loop – a large radio loop – which has at times been regarded as a remnant. Also Koo, Kang & Salter (2006) and Kang & Koo (2007) identify faint Galactic H I features at forbidden velocities as indicators of old, otherwise undetectable SNRs. (b) Some large ($> 10^\circ$) regions of X-ray emission that are indicative of a SNR are not included in the catalogue; e.g. the Monogem ring, near $l = 203^\circ$, $b = +12^\circ$ (see Nousek et al. 1981, Plucinsky et al. 1996, Thorsett et al. 2003, Amenomori et al. 2005, Plucinsky 2009, and references therein, plus Weinberger, Temporin & Stecklum 2006 and Reich, Reich & Sun 2020); in the Gum Nebula near $l = 250^\circ$, $b = 0^\circ$ (Leahy, Nousek & Garmire 1992), also see Reynolds (1976), Dubner et al. 1992, Duncan et al. 1996, Reynoso & Dubner 1997, Heiles 1998, Pagani et al. 2012, Purcell et al. 2015, Knies, Sasaki & Plucinsky 2018); in Eridanus near $l = 200^\circ$, $b = -40^\circ$ (see Naranan et al. 1976, Burrows et al. 1993, Snowden et al. 1995, Heiles 1998, Boumis et al. 2001, Ryu et al. 2006); a large approximately 24° diameter, X-ray and optical loop in Antlia (see McCullough, Fields & Pavlidou 2002, Shinn et al. 2007). (c) The distinction between filled-centre remnants and pulsar wind nebulae (PWNe) is not clear, and isolated, generally faint, pulsar wind nebulae are also not included in the catalogue. See the catalogue of PWNe by Kaspi, Roberts & Harding (2006) (see also `http://www.physics.mcgill.ca/~pulsar/pwncat.html`), and the high-energy SNR and PWNe catalogue noted at the end of Section 1.

2.4 Questionable SNRs listed in the catalogue

As noted in Versions II and IV of the catalogue, the following sources are listed as SNRs, although, as discussed in each case, the identifications are not certain: G5.4–1.2, G39.7–2.0 (=W50), G69.0+2.7 (=CTB 80), G318.9+0.4 and G357.7–0.1. The nature of G76.9+1.0 (an unusual radio source similar to G65.7+1.2), and of G354.1+0.1 (which may be similar to G357.7–0.1 (=MSH 17–39)) are also uncertain (see Landecker, Higgs & Wendker 1993 and Frail, Goss & Whiteoak 1994). The identification of G6.1+0.5 as a SNR has been questioned, from high frequency radio observations, by Dokara et al. (2021), who propose two other possible SNRs near $l = 6^\circ\!.1$, $b = 0^\circ\!.4$ instead. Also, Dokara et al. (2023) conclude that G31.5–0.6 may not be a SNR, based on radio observations.

There are also some 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, and their identification as SNRs, or at least their parameters remain uncertain.

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l /°	b /°	RA (J2000.0) /(h m s)	Dec /(° ′)	size /arcmin	type	Flux at 1 GHz/Jy	spectral index	other name(s)
0.0	+0.0	17 45 44	–29 00	3.5×2.5	S	100?	0.8?	Sgr A East
0.3	+0.0	17 46 15	–28 38	15×8	S	22	0.6	
0.9	+0.1	17 47 21	–28 09	8	C	18?	varies	
1.0	–0.1	17 48 30	–28 09	8	S	15	0.6?	
1.4	–0.1	17 49 39	–27 46	10	S	2?	?	
1.9	+0.3	17 48 45	–27 10	1.5	S	0.6	0.6	
3.1	–0.6	17 55 30	–26 35	52×28	S	5	0.9?	
3.7	–0.2	17 55 26	–25 50	14×11	S	2.3	0.65	
3.8	+0.3	17 52 55	–25 28	18	S?	3?	0.6	
4.2	–3.5	18 08 55	–27 03	28	S	3.2?	0.6?	
4.5	+6.8	17 30 42	–21 29	3	S	19	0.64	Kepler, SN1604, 3C358
4.8	+6.2	17 33 25	–21 34	18	S	3	0.6	
5.2	–2.6	18 07 30	–25 45	18	S	2.6?	0.6?	
5.4	–1.2	18 02 10	–24 54	35	C?	35?	0.2?	Milne 56
5.5	+0.3	17 57 04	–24 00	15×12	S	5.5	0.7	
5.9	+3.1	17 47 20	–22 16	20	S	3.3?	0.4?	
6.1	+0.5	17 57 29	–23 25	18×12	S	4.5	0.9	
6.1	+1.2	17 54 55	–23 05	30×26	F	4.0?	0.3?	
6.4	–0.1	18 00 30	–23 26	48	C	310	varies	W28
6.4	+4.0	17 45 10	–21 22	31	S	1.3?	0.4?	
6.5	–0.4	18 02 11	–23 34	18	S	27	0.6	
7.0	–0.1	18 01 50	–22 54	15	S	2.5?	0.5?	
7.2	+0.2	18 01 07	–22 38	12	S	2.8	0.6	
7.5	–1.7	18 10 00	–23 10	100	S	18?	0.7?	
7.7	–3.7	18 17 25	–24 04	22	S	11	0.32	1814–24
8.7	–5.0	18 24 10	–23 48	26	S	4.4	0.3	
8.7	–0.1	18 05 30	–21 26	45	S?	80	0.5	(W30)
8.9	+0.4	18 03 58	–21 03	24	S	9	0.6	
9.7	–0.0	18 07 22	–20 35	15×11	S	3.7	0.6	
9.8	+0.6	18 05 08	–20 14	12	S	3.9	0.5	
9.9	–0.8	18 10 41	–20 43	12	S	6.7	0.4	
11.0	–0.0	18 10 04	–19 25	11×9	S	1.3	0.6	
11.1	–0.7	18 12 46	–19 38	11×7	S	1.0	0.7	
11.1	+0.1	18 09 47	–19 12	12×10	S	2.3	0.4	
11.2	–0.3	18 11 27	–19 25	4	C	22	0.5	
11.4	–0.1	18 10 47	–19 05	8	S?	6	0.5	
11.8	–0.2	18 12 25	–18 44	4	S	0.7	0.3	
12.0	–0.1	18 12 11	–18 37	7?	?	3.5	0.7	
12.2	+0.3	18 11 17	–18 10	6×5	S	0.8	0.7	
12.5	+0.2	18 12 14	–17 55	6×5	C?	0.6	0.4	
12.7	–0.0	18 13 19	–17 54	6	S	0.8	0.8	
12.8	–0.0	18 13 37	–17 49	3	C?	0.8	0.5	
13.1	–0.5	18 16 00	–17 49	38×28	S	11?	0.6?	
13.3	–1.3	18 19 20	–18 00	70×40	S?	?	?	
13.5	+0.2	18 14 14	–17 12	5×4	S	3.5?	1.0?	

l /°	b /°	RA (J2000.0) /(h m s)	Dec /(° ′)	size /arcmin	type	Flux at 1 GHz/Jy	spectral index	other name(s)
14.1	–0.1	18 16 40	–16 41	6×5	S	0.5	0.6	
15.1	–1.6	18 24 00	–16 34	30×24	S?	5.5?	0.0?	
15.4	+0.1	18 18 02	–15 27	15×14	C?	5.6	0.62	
15.5	–0.1	18 19 25	–15 32	9×8	?	1.2?	0.55?	
15.9	+0.2	18 18 52	–15 02	7×5	S?	5.0	0.63	
16.0	–0.5	18 21 56	–15 14	15×10	S	2.7	0.6	
16.2	–2.7	18 29 40	–16 08	17	S	2.5	0.4	
16.7	+0.1	18 20 56	–14 20	4	C	3.0	0.6	
17.0	–0.0	18 21 57	–14 08	5	S	0.5	0.5	
17.4	–2.3	18 30 55	–14 52	24?	S	5	0.5?	
17.4	–0.1	18 23 08	–13 46	6	S	0.4	0.7	
17.8	–2.6	18 32 50	–14 39	24	S	5	0.5	
17.8	+16.7	17 24 10	–05 10	51×45	S?	2.7	0.8	
18.1	–0.1	18 24 34	–13 11	8	S	4.6	0.5	
18.6	–0.2	18 25 55	–12 50	6	S	1.4	0.4	
18.8	+0.3	18 23 58	–12 23	17×11	S	33	0.46	Kes 67
18.9	–1.1	18 29 50	–12 58	33	C?	37	0.39	
19.1	+0.2	18 24 56	–12 07	27	S	10	0.5	
20.0	–0.2	18 28 07	–11 35	10	F	10	0.1	
21.0	–0.4	18 31 12	–10 47	9×7	S	1.1	0.6	
21.5	–0.9	18 33 33	–10 35	5	C	7	varies	
21.6	–0.8	18 33 40	–10 25	13	S	1.4	0.5?	
21.8	–3.0	18 41 50	–11 16	60	S	5	0.7	
21.8	–0.6	18 32 45	–10 08	20	S	65	0.56	Kes 69
22.7	–0.2	18 33 15	–09 13	26	S?	33	0.6	
23.3	–0.3	18 34 45	–08 48	27	S	70	0.5	W41
24.7	–0.6	18 38 43	–07 32	15?	S?	8	0.5	
24.7	+0.6	18 34 10	–07 05	30×15	C?	20?	0.2?	
25.1	–2.3	18 45 10	–08 00	80×30?	S	8	0.5?	
27.4	+0.0	18 41 19	–04 56	4	S	6	0.68	4C–04.71
27.8	+0.6	18 39 50	–04 24	50×30	F	30	varies	
28.3	+0.2	18 42 30	–03 58	10	S	1.3?	0.7?	
28.6	–0.1	18 43 55	–03 53	13×9	S	3?	?	
28.7	–0.4	18 45 30	–03 54	9	S	0.9?	0.8?	
28.8	+1.5	18 39 00	–02 55	100?	S?	?	0.4?	
29.3	+0.1	18 44 36	–03 06	10?	C?	2.5?	?	
29.6	+0.1	18 44 52	–02 57	5	S	0.5?	0.5?	
29.7	–0.3	18 46 25	–02 59	3	C	9	0.7	Kes 75
30.7	–2.0	18 54 25	–02 54	16	?	0.5?	0.7?	
30.7	+1.0	18 44 00	–01 32	24×18	S?	6	0.4	
31.5	–0.6	18 51 10	–01 31	18?	S?	2?	?	
31.9	+0.0	18 49 25	–00 55	7×5	S	25	varies	3C391
32.0	–4.9	19 06 00	–03 00	60?	S?	22?	0.5?	3C396.1
32.1	–0.9	18 53 10	–01 08	40?	C?	4?	0.7?	
32.4	+0.1	18 50 05	–00 25	6	S	0.8?	0.2?	

l /°	b /°	RA (J2000.0) /(h m s)	Dec /(° ′)	size /arcmin	type	Flux at 1 GHz/Jy	spectral index	other name(s)
32.8	–0.1	18 51 25	–00 08	22×15	S?	12	0.3	Kes 78
33.2	–0.6	18 53 50	–00 02	18	S	3	0.3	
33.6	+0.1	18 52 48	+00 41	10	S	20	0.51	Kes 79, 4C00.70, HC13
34.7	–0.4	18 56 00	+01 22	35×27	C	240	0.37	W44, 3C392
35.6	–0.4	18 57 55	+02 13	15×11	S?	9	varies	
36.6	–0.7	19 00 35	+02 56	25?	S?	1.0	0.7?	
36.6	+2.6	18 48 49	+04 26	17×13?	S	0.7?	0.5?	
38.7	–1.3	19 06 40	+04 28	32×19?	S	?	?	
39.2	–0.3	19 04 08	+05 28	8×6	C	18	0.34	3C396, HC24, NRAO 593
39.7	–2.0	19 12 20	+04 55	120×60	?	85?	0.7?	W50, SS433
40.5	–0.5	19 07 10	+06 31	22	S	11	0.4	
41.1	–0.3	19 07 34	+07 08	4.5×2.5	S	25	0.50	3C397
41.5	+0.4	19 05 50	+07 46	10	S?	1?	?	
42.0	–0.1	19 08 10	+08 00	8	S?	0.5?	?	
42.8	+0.6	19 07 20	+09 05	24	S	3?	0.5?	
43.3	–0.2	19 11 08	+09 06	4×3	S	38	0.46	W49B
43.9	+1.6	19 05 50	+10 30	60?	S?	9.0	0.5	
45.7	–0.4	19 16 25	+11 09	22	S	4.2?	0.4?	
46.8	–0.3	19 18 10	+12 09	15	S	16	0.54	(HC30)
49.2	–0.7	19 23 50	+14 06	30	S?	160?	0.3?	(W51)
53.4	+0.0	19 29 57	+18 10	10?	S	1.5	0.6?	
53.6	–2.2	19 38 50	+17 14	33×28	S	8	0.50	3C400.2, NRAO 611
54.1	+0.3	19 30 31	+18 52	12?	C?	0.5	0.1	
54.4	–0.3	19 33 20	+18 56	40	S	28	0.5	(HC40)
55.0	+0.3	19 32 00	+19 50	20×15?	S	0.5?	0.5?	
55.7	+3.4	19 21 20	+21 44	23	S	1?	0.3?	
57.2	+0.8	19 34 59	+21 57	12?	S?	1.8	0.35	(4C21.53)
59.5	+0.1	19 42 33	+23 35	15	S	3?	?	
63.7	+1.1	19 47 52	+27 45	8	F	1.8	0.24	
64.5	+0.9	19 50 25	+28 16	8	S?	0.15?	0.5	
65.1	+0.6	19 54 40	+28 35	90×50	S	5.5	0.61	
65.3	+5.7	19 33 00	+31 10	310×240	S?	42	0.6	
65.7	+1.2	19 52 10	+29 26	22	F	5.1	varies	DA 495
66.0	–0.0	19 57 50	+29 03	31×25?	S	?	?	
67.6	+0.9	19 57 45	+30 53	50×45?	S	?	?	
67.7	+1.8	19 54 32	+31 29	15×12	S	1.0	0.61	
67.8	+0.5	20 00 00	+30 51	7×5	?	?	?	
68.6	–1.2	20 08 40	+30 37	23	?	1.1	0.2	
69.0	+2.7	19 53 20	+32 55	80?	?	120?	varies	CTB 80
69.7	+1.0	20 02 40	+32 43	16×14	S	2.0	0.7	
70.0	–21.5	21 24 00	+19 23	330×240	S	?	?	
73.9	+0.9	20 14 15	+36 12	27	S?	9	0.23	
74.0	–8.5	20 51 00	+30 40	230×160	S	210	varies	Cygnus Loop
74.9	+1.2	20 16 02	+37 12	8×6	F	9	0.3	CTB 87
76.9	+1.0	20 22 20	+38 43	9	C	2?	?	

l /°	b /°	RA (J2000.0) /(h m s)	Dec /(° ′)	size /arcmin	type	Flux at 1 GHz/Jy	spectral index	other name(s)
78.2	+2.1	20 20 50	+40 26	60	S	320	0.51	DR4, γ Cygni SNR
82.2	+5.3	20 19 00	+45 30	95×65	S	120?	0.5?	W63
83.0	–0.3	20 46 55	+42 52	9×7	S	1	0.4	
84.2	–0.8	20 53 20	+43 27	20×16	S	11	0.5	
85.4	+0.7	20 50 40	+45 22	24?	S	?	0.2	
85.9	–0.6	20 58 40	+44 53	24	S	?	0.2	
89.0	+4.7	20 45 00	+50 35	120×90	S	220	0.38	HB21
93.3	+6.9	20 52 25	+55 21	27×20	C?	9	0.45	DA 530, 4C(T)55.38.1
93.7	–0.2	21 29 20	+50 50	80	S	65	0.65	CTB 104A, DA 551
94.0	+1.0	21 24 50	+51 53	30×25	S	13	0.45	3C434.1
96.0	+2.0	21 30 30	+53 59	26	S	0.35	0.6	
106.3	+2.7	22 27 30	+60 50	60×24	C?	6	0.6	
107.0	+9.0	22 01 00	+66 30	180?	?	11?	0.9?	
108.2	–0.6	22 53 40	+58 50	70×54	S	8	0.5	
109.1	–1.0	23 01 35	+58 53	28	S	20	0.45	CTB 109
111.7	–2.1	23 23 26	+58 48	5	S	2300	0.77	Cassiopeia A, 3C461
113.0	+0.2	23 26 50	+61 26	40×17?	?	4	0.5?	
114.3	+0.3	23 37 00	+61 55	90×55	S	5.5	0.5	
116.5	+1.1	23 53 40	+63 15	80×60	S	10	0.5	
116.6	–26.1	00 23 00	+36 30	235	S	?	?	
116.9	+0.2	23 59 10	+62 26	34	S	8	0.57	CTB 1
119.5	+10.2	00 06 40	+72 45	90?	S	36	0.6	CTA 1
120.1	+1.4	00 25 18	+64 09	8	S	50	0.58	Tycho, 3C10, SN1572
126.2	+1.6	01 22 00	+64 15	70	S?	6	0.5	
127.1	+0.5	01 28 20	+63 10	45	S	12	0.45	R5
130.7	+3.1	02 05 41	+64 49	9×5	F	33	0.07	3C58, SN1181
132.7	+1.3	02 17 40	+62 45	80	S	45	0.6	HB3
150.3	+4.5	04 27 00	+55 28	180×150	S	?	?	
152.4	–2.1	04 07 50	+49 11	100×95	S	3.5?	0.7?	
156.2	+5.7	04 58 40	+51 50	110	S	5	0.5	
159.6	+7.3	05 20 00	+50 00	240×180?	S	?	?	
160.9	+2.6	05 01 00	+46 40	140×120	S	110	0.64	HB9
166.0	+4.3	05 26 30	+42 56	55×35	S	7	0.37	VRO 42.05.01
178.2	–4.2	05 25 05	+28 11	72×62	S	2	0.5	
179.0	+2.6	05 53 40	+31 05	70	S?	7	0.4	
180.0	–1.7	05 39 00	+27 50	180	S	65	varies	S147
181.1	+9.5	06 26 40	+32 30	74	S	0.4?	0.4?	
182.4	+4.3	06 08 10	+29 00	50	S	0.5	0.4	
184.6	–5.8	05 34 31	+22 01	7×5	F	900	0.30	Crab Nebula, 3C144, SN1054
189.1	+3.0	06 17 00	+22 34	45	C	165	0.36	IC443, 3C157
189.6	+3.3	06 19 40	+22 00	90?	S	?	?	
190.9	–2.2	06 01 55	+18 24	70×60	S	1.3?	0.7?	
203.1	+6.6	06 57 00	+11 40	150	S	?	?	
205.5	+0.5	06 39 00	+06 30	220	S	140	0.4	Monoceros Nebula
206.7	+5.9	07 01 00	+08 10	210	S	?	?	

l /°	*b* /°	RA (J2000.0) /(h m s)	Dec /(° ′)	size /arcmin	type	Flux at 1 GHz/Jy	spectral index	other name(s)
206.9	+2.3	06 48 40	+06 26	60×40	S?	6	0.5	PKS 0646+06
213.0	–0.6	06 50 50	–00 30	160×140?	S	21	0.4	
249.5	+24.5	09 34 00	–17 00	260	S	27	0.7	Hoinga
260.4	–3.4	08 22 10	–43 00	60×50	S	130	0.5	Puppis A, MSH 08–4*4*
261.9	+5.5	09 04 20	–38 42	40×30	S	10?	0.4?	
263.9	–3.3	08 34 00	–45 50	255	C	1750	varies	Vela (XYZ)
266.2	–1.2	08 52 00	–46 20	120	S	50?	0.3?	RX J0852.0–4622
272.2	–3.2	09 06 50	–52 07	15?	S?	0.4	0.6	
279.0	+1.1	09 57 40	–53 15	95	S	30?	0.6?	
284.3	–1.8	10 18 15	–59 00	24?	S	11?	0.3?	MSH 10–5*3*
286.5	–1.2	10 35 40	–59 42	26×6	S?	1.4?	?	
288.8	–6.3	10 30 20	–65 15	108×96	S	11	0.41	
289.7	–0.3	11 01 15	–60 18	18×14	S	6.2	0.2?	
290.1	–0.8	11 03 05	–60 56	19×14	S	42	0.4	MSH 11–6*1*A
291.0	–0.1	11 11 54	–60 38	15×13	C	16	0.29	(MSH 11–6*2*)
292.0	+1.8	11 24 36	–59 16	12×8	C	15	0.4	MSH 11–5*4*
292.2	–0.5	11 19 20	–61 28	20×15	S	7	0.5	
293.8	+0.6	11 35 00	–60 54	20	C	5?	0.6?	
294.1	–0.0	11 36 10	–61 38	40	S	>2?	?	
296.1	–0.5	11 51 10	–62 34	37×25	S	8?	0.6?	
296.5	+10.0	12 09 40	–52 25	90×65	S	48	0.5	PKS 1209–51/52
296.7	–0.9	11 55 30	–63 08	15×8	S	3	0.5	
296.8	–0.3	11 58 30	–62 35	20×14	S	9	0.6	1156–62
298.5	–0.3	12 12 40	–62 52	5?	?	5?	0.4?	
298.6	–0.0	12 13 41	–62 37	12×9	S	5?	0.3	
299.2	–2.9	12 15 13	–65 30	18×11	S	0.5?	?	
299.6	–0.5	12 21 45	–63 09	13	S	1.0?	?	
301.4	–1.0	12 37 55	–63 49	37×23	S	2.1?	?	
302.3	+0.7	12 45 55	–62 08	17	S	5?	0.4?	
304.6	+0.1	13 05 59	–62 42	8	S	14	0.5	Kes 17
306.3	–0.9	13 21 50	–63 34	4	S?	0.16?	0.5?	
308.1	–0.7	13 37 37	–63 04	13	S	1.2?	?	
308.4	–1.4	13 41 30	–63 44	12×6?	S?	0.4?	?	
308.8	–0.1	13 42 30	–62 23	30×20?	C?	15?	0.4?	
309.2	–0.6	13 46 31	–62 54	15×12	S	7?	0.4?	
309.8	+0.0	13 50 30	–62 05	25×19	S	17	0.5	
310.6	–1.6	14 00 45	–63 26	2.5	C?	?	?	
310.6	–0.3	13 58 00	–62 09	8	S	5?	?	Kes 20B
310.8	–0.4	14 00 00	–62 17	12	S	6?	?	Kes 20A
311.5	–0.3	14 05 38	–61 58	5	S	3?	0.5	
312.4	–0.4	14 13 00	–61 44	38	S	45	0.36	
312.5	–3.0	14 21 00	–64 12	20×18	S	3.5?	?	
315.1	+2.7	14 24 30	–57 50	190×150	S	?	?	
315.4	–2.3	14 43 00	–62 30	42	S	49	0.6	RCW 86, MSH 14–6*3*
315.4	–0.3	14 35 55	–60 36	24×13	?	8	0.4	

l /°	b /°	RA (J2000.0) /(h m s)	Dec /(° ′)	size /arcmin	type	Flux at 1 GHz/Jy	spectral index	other name(s)
315.9	–0.0	14 38 25	–60 11	25×14	S	0.8?	?	
316.3	–0.0	14 41 30	–60 00	29×14	S	20?	0.4	(MSH 14–5*7*)
317.3	–0.2	14 49 40	–59 46	11	S	4.7?	?	
318.2	+0.1	14 54 50	–59 04	40×35	S	>3.9?	?	
318.9	+0.4	14 58 30	–58 29	30×14	C	4?	0.2?	
320.4	–1.2	15 14 30	–59 08	35	C	60?	0.4	MSH 15–5*2*, RCW 89
320.6	–1.6	15 17 50	–59 16	60×30	S	?	?	
321.9	–1.1	15 23 45	–58 13	28	S	>3.4?	?	
321.9	–0.3	15 20 40	–57 34	31×23	S	13	0.3	
322.1	+0.0	15 20 49	–57 10	8×4.5?	S?	?	?	
322.5	–0.1	15 23 23	–57 06	15	C	1.5	0.4	
323.5	+0.1	15 28 42	–56 21	13	S	3?	0.4?	
323.7	–1.0	15 34 30	–57 12	51×38	S	?	?	
326.3	–1.8	15 53 00	–56 10	38	C	145	varies	MSH 15–5*6*
327.1	–1.1	15 54 25	–55 09	18	C	7	?	
327.2	–0.1	15 50 55	–54 18	5	S	0.5	?	
327.4	+0.4	15 48 20	–53 49	21	S	26	0.6	Kes 27
327.4	+1.0	15 46 48	–53 20	14	S	1.9	?	
327.6	+14.6	15 02 50	–41 56	30	S	19	0.6	SN1006, PKS 1459–41
328.4	+0.2	15 55 30	–53 17	5	F	15	0.0	(MSH 15–5*7*)
329.7	+0.4	16 01 20	–52 18	40×33	S	>34?	?	
330.0	+15.0	15 10 00	–40 00	180?	S	350?	0.5?	Lupus Loop
330.2	+1.0	16 01 06	–51 34	11	S?	5?	0.3	
332.0	+0.2	16 13 17	–50 53	12	S	8?	0.5	
332.4	–0.4	16 17 33	–51 02	10	S	28	0.5	RCW 103
332.4	+0.1	16 15 20	–50 42	15	S	26	0.5	MSH 16–5*1*, Kes 32
332.5	–5.6	16 43 20	–54 30	35	S	2?	0.7?	
335.2	+0.1	16 27 45	–48 47	21	S	16	0.5	
336.7	+0.5	16 32 11	–47 19	14×10	S	6	0.5	
337.0	–0.1	16 35 57	–47 36	1.5	S	1.5	0.6?	(CTB 33)
337.2	–0.7	16 39 28	–47 51	6	S	1.5	0.4	
337.2	+0.1	16 35 55	–47 20	3×2	?	1.5?	?	
337.3	+1.0	16 32 39	–46 36	15×12	S	16	0.55	Kes 40
337.8	–0.1	16 39 01	–46 59	9×6	S	15	0.5	Kes 41
338.1	+0.4	16 37 59	–46 24	15?	S	4?	0.4	
338.3	–0.0	16 41 00	–46 34	8	C?	7?	?	
338.5	+0.1	16 41 09	–46 19	9	?	12?	?	
340.4	+0.4	16 46 31	–44 39	10×7	S	5	0.4	
340.6	+0.3	16 47 41	–44 34	6	S	5?	0.4?	
341.2	+0.9	16 47 35	–43 47	22×16	C	1.5?	0.6?	
341.9	–0.3	16 55 01	–44 01	7	S	2.5	0.5	
342.0	–0.2	16 54 50	–43 53	12×9	S	3.5?	0.4?	
342.1	+0.9	16 50 43	–43 04	10×9	S	0.5?	?	
343.0	–6.0	17 25 00	–46 30	250	S	?	?	RCW 114
343.1	–2.3	17 08 00	–44 16	32?	C?	8?	0.5?	

l /°	b /°	RA (J2000.0) /(h m s)	Dec /(° ′)	size /arcmin	type	Flux at 1 GHz/Jy	spectral index	other name(s)
343.1	–0.7	17 00 25	–43 14	27×21	S	7.8	0.55	
344.7	–0.1	17 03 51	–41 42	8	C?	2.5?	0.3?	
345.1	–0.2	17 05 21	–41 26	6	S	1.4?	0.7?	
345.1	+0.2	17 03 40	–41 05	10	S	0.6?	0.6?	
345.7	–0.2	17 07 20	–40 53	6	S	0.6?	?	
346.6	–0.2	17 10 19	–40 11	8	S	8?	0.5?	
347.3	–0.5	17 13 50	–39 45	65×55	S?	30?	?	RX J1713.7–3946
348.5	–0.0	17 15 26	–38 28	10?	S?	10?	0.4?	
348.5	+0.1	17 14 06	–38 32	15	S	72	0.3	CTB 37A
348.7	+0.3	17 13 55	–38 11	17?	S	26	0.3	CTB 37B
348.8	+1.1	17 11 29	–37 36	10	S	0.6?	0.7?	
349.2	–0.1	17 17 15	–38 04	9×6	S	1.4?	?	
349.7	+0.2	17 17 59	–37 26	2.5×2	S	20	0.5	
350.0	–2.0	17 27 50	–38 32	45	S	26	0.4	
350.1	–0.3	17 21 05	–37 27	4?	?	6?	0.8?	
351.0	–5.4	17 46 00	–39 25	30	S	?	?	
351.2	+0.1	17 22 27	–36 11	7	C?	5?	0.4	
351.7	+0.8	17 21 00	–35 27	18×14	S	10	0.5?	
351.9	–0.9	17 28 52	–36 16	12×9	S	1.8?	?	
352.7	–0.1	17 27 40	–35 07	8×6	S	4	0.6	
353.3	–1.1	17 33 10	–35 12	60	S	24?	0.85?	
353.6	–0.7	17 32 00	–34 44	30	S	2.5?	?	
353.9	–2.0	17 38 55	–35 11	13	S	1?	0.5?	
354.1	+0.1	17 30 28	–33 46	15×3?	C?	?	varies	
354.8	–0.8	17 36 00	–33 42	19	S	2.8?	?	
355.4	+0.7	17 31 20	–32 26	25	S	5?	?	
355.6	–0.0	17 35 16	–32 38	8×6	S	3?	?	
355.9	–2.5	17 45 53	–33 43	13	S	8	0.5	
356.2	+4.5	17 19 00	–29 40	25	S	4	0.7	
356.3	–1.5	17 42 35	–32 52	20×15	S	3?	?	
356.3	–0.3	17 37 56	–32 16	11×7	S	3?	?	
357.7	–0.1	17 40 29	–30 58	8×3?	?	37	0.4	MSH 17–39
357.7	+0.3	17 38 35	–30 44	24	S	10	0.4?	
358.0	+3.8	17 26 00	–28 36	38	S	1.5?	?	
358.1	+1.0	17 37 00	–29 59	20	S	2?	?	
358.5	–0.9	17 46 10	–30 40	17	S	4?	?	
359.0	–0.9	17 46 50	–30 16	23	S	23	0.5	
359.1	–0.5	17 45 30	–29 57	24	S	14	0.4?	
359.1	+0.9	17 39 36	–29 11	12×11	S	2?	?	
359.2	–1.1	17 48 14	–30 12	5×4	S?	0.4?	1.1?	

γ Cygni SNR	G78.2+2.1
1156–62	G296.8–0.3
1814–24	G7.7–3.7
3C10	G120.1+1.4
3C58	G130.7+3.1
3C144	G184.6–5.8
3C157	G189.1+3.0
3C358	G4.5+6.8
3C391	G31.9+0.0
3C392	G34.7–0.4
3C396	G39.2–0.3
3C396.1	G32.0–4.9
3C397	G41.1–0.3
3C400.2	G53.6–2.2
3C434.1	G94.0+1.0
3C461	G111.7–2.1
4C–04.71	G27.4+0.0
4C00.70	G33.6+0.1
(4C21.53)	G57.2+0.8
4C(T)55.38.1	G93.3+6.9
CTA 1	G119.5+10.2
CTB 1	G116.9+0.2
(CTB 33)	G337.0–0.1
CTB 37A	G348.5+0.1
CTB 37B	G348.7+0.3
CTB 80	G69.0+2.7
CTB 87	G74.9+1.2
CTB 104A	G93.7–0.2
CTB 109	G109.1–1.0
Cassiopeia A	G111.7–2.1
Crab Nebula	G184.6–5.8
Cygnus Loop	G74.0–8.5
DA 495	G65.7+1.2
DA 530	G93.3+6.9
DA 551	G93.7–0.2
DR4	G78.2+2.1
HB3	G132.7+1.3
HB9	G160.9+2.6
HB21	G89.0+4.7
HC13	G33.6+0.1
HC24	G39.2–0.3
(HC30)	G46.8–0.3
(HC40)	G54.4–0.3
Hoinga	G249.5+24.5
IC443	G189.1+3.0
Kepler	G4.5+6.8
Kes 17	G304.6+0.1
Kes 20A	G310.6–0.3
Kes 20B	G310.8–0.4
Kes 27	G327.4+0.4
Kes 32	G332.4+0.1
Kes 40	G337.3+1.0
Kes 41	G337.8–0.1
Kes 67	G18.8+0.3
Kes 69	G21.8–0.6
Kes 75	G29.7–0.3
Kes 78	G32.8–0.1
Kes 79	G33.6+0.1
Lupus Loop	G330.0+15.0
MSH 08–4*4*	G260.4–3.4
MSH 10–5*3*	G284.3–1.8
MSH 11–5*4*	G292.0+1.8
MSH 11–6*1*A	G290.1–0.8
(MSH 11–6*2*)	G291.0–0.1
(MSH 14–5*7*)	G316.3–0.0
MSH 14–6*3*	G315.4–2.3
MSH 15–5*2*	G320.4–1.2
MSH 15–5*6*	G326.3–1.8
(MSH 15–5*7*)	G328.4+0.2
MSH 16–5*1*	G332.4+0.1
MSH 17–3*9*	G357.7–0.1
Milne 56	G5.4–1.2
Monoceros Nebula	G205.5+0.5
NRAO 593	G39.2–0.3
NRAO 611	G53.6–2.2
PKS 0646+06	G206.9+2.3
PKS 1209–51/52	G296.5+10.0
PKS 1459–41	G327.6+14.6
Puppis A	G260.4–3.4
R5	G127.1+0.5
RCW 86	G315.4–2.3
RCW 89	G320.4–1.2
RCW 103	G332.4–0.4
RCW 114	G343.0–6.0
RX J0852.0–4622	G266.2–1.2
RX J1713.7–3946	G347.3–0.5
S147	G180.0–1.7
SN1006	G327.6+14.6
SN1054	G184.6–5.8
SN1181	G130.7+3.1
SN1572	G120.1+1.4
SN1604	G4.5+6.8
SS433	G39.7–2.0
Sgr A East	G0.0+0.0
Tycho	G120.1+1.4
Vela (XYZ)	G263.9–3.3
VRO 42.05.01	G166.0+4.3
W28	G6.4–0.1
(W30)	G8.7–0.1
W41	G23.3–0.3
W44	G34.7–0.4
W49B	G43.3–0.2
W50	G39.7–2.0
(W51)	G49.2–0.7
W63	G82.2+5.3

Journals

AcASn	Acta Astronomica Sinica
AdSpR	Advances in Space Research
A&A	Astronomy & Astrophysics
A&AS	Astronomy & Astrophysics Supplement
AJ	Astronomical Journal
AN	Astronomische Nachrichten
ApJ	Astrophysical Journal
ApJS	Astrophysical Journal Supplement
Ap&SS	Astrophysics & Space Science
ARep	Astronomy Reports
AstL	Astronomy Letters
ATel	The Astronomer's Telegram
AuJPA	Australian Journal of Physics Astrophysical Supplement
AuJPh	Australian Journal of Physics
BAAA	Boletin de la Asociatión Argentina de Astronomia
BASI	Bulletin of the Astronomical Society of India
BSAO	Bulletin of the Special Astrophysics Observatory
ChJAA	Chinese Journal of Astronomy & Astrophysics
CSci	Current Science
JApA	Journal of Astrophysics & Astronomy
JHEAp	Journal of High Energy Astrophysics
JKAS	Journal of Korean Astronomical Society
JPhCS	Journal of Physics Conference Series
MNRAS	Monthly Notices of the Royal Astronomical Society
NatAs	Nature Astronomy
NuPhS	Nuclear Physics B Proceedings Supplements
PASA	Proceedings of the Astronomical Society of Australia
PASJ	Publications of the Astronomical Society of Japan
PASP	Publications of the Astronomical Society of the Pacific
P&SS	Planetary and Space Science
RAA	Research in Astronomy & Astrophysics
RMxAA	Revista Mexicana de Astronomía y Astrofísica
SCPMA	Science China Physics, Mechanics & Astronomy
SerAJ	Serbian Astronomical Journal
SvA	Soviet Astronomy
SvAL	Soviet Astronomy Letters

Proceedings etc.

ASPC Astronomical Society of the Pacific (ASP) Conference Series

EFXU is *'Suzaku-MAXI 2014: Expanding the Frontiers of the X-ray Universe'*, eds Ishida M., Petre R. & Mitsuda K., 2014.

IAUCo International Astronomical Union (IAU) Colloquium

IAUS International Astronomical Union (IAU) Symposium

LNP Lecture Notes in Physics

MIM is *'The Magnetized Interstellar Medium'*, eds Uyanıker B., Reich W. & Wielebinski R., (Copernicus GmbH, Katlenburg-Lindau), 2004.

NSPS is *'Neutron Stars, Pulsars, and Supernova Remnants'*, (MPE Report 278), eds Becker W., Lesch H. & Trümper J., (Max-Plank-Institut für extraterrestrische Physik, Garching bei München), 2002.

XRRC is *'X-Ray and Radio Connections'*, eds Sjouwerman L. O. & Dyer K. K., (available at `http://www.aoc.nrao.edu/events/xraydio/`), 2005.

Radio Telescopes/Surveys

ALMA	Atacama Large Millimeter Array
ASKAP	Australian Square Kilometre Array Pathfinder
ATCA	Australia Telescope Compact Array
BIMA	Berkeley–Illinois–Maryland Array
CGPS	Canadian Galactic Plane Survey
CLFST	Cambridge Low-Frequency Synthesis Telescope
DRAO	Dominion Radio Astrophysical Observatory
FAST	Five-hundred-meter Aperture Spherical Telescope
FIRST	Fleurs Synthesis Telescope
GBT	Green Bank Telescope
LOFAR	Low-Frequency Array
MOST	Molonglo Observatory Synthesis Telescope
MWA	Murchison Widefield Array
NRAO	National Radio Astronomy Observatory
NRO	Nobeyama Radio Observatory
SGPS	Southern Galactic Plane Survey
SRT	Sardinia Radio Telescope
TPT	Clark Lake Teepee-Tee telescope
VGPS	VLA Galactic Plane Survey
VLA	Very Large Array
WSRT	Westerbork Synthesis Radio Telescope

Satellites

Optical/IR: Akari, Gaia, Herschel (also sub-mm), HST (Hubble Space Telescope), ISO (Infrared Space Observatory), IRAS (Infrared Astronomical Satellite), SOFIA (Stratospheric Observatory for Infrared Astronomy), Spitzer, WISE (Wide-field Infrared Survey Explorer).

X-/γ-ray: ASCA (Advanced Satellite for Cosmology and Astrophysics), BeppoSAX, Chandra, Einstein, eROSITA, EXOSAT (European X-ray Observatory Satellite), Fermi, Ginga, H.E.S.S. (High Energy Stereoscopic System), Hitomi, INTEGRAL (International Gamma-Ray Astrophysics Laboratory), IPXE (Imaging X-ray Polarimetry Explorer), MAGIC (Major Atmospheric Gamma Imaging Cherenkov), NuSTAR (Nuclear Spectroscopic Telescope Array), ROSAT (Röntgensatellit), RXTE (Rossi X-ray Timing Explorer), Suzaku, Swift, XMM-Newton (X-ray Multi-Mirror).

See Section 2.3 of the documentation for further details (including some additional references).

Radio

name	size /arcmin	reference	name	size /arcmin	reference
G57.1+1.7	40	Goméz-González & del Romero (1983)	G57.3+1.2	100	Routledge & Vaneldik (1988)
G359.9–0.1?	10?	Ho et al. (1985)	G35.40–1.80	7	Gosachinskiĭ (1985)
G38.05–0.05	8	Gosachinskiĭ (1985)	G7.6–0.6	16	Odegard (1986)
G300.1+9.4	100	Dubner, Colomb & Giacani (1986)	G10.5+0.5	46×33	Gorham (1990)
G14.2–0.9	65×49	Gorham (1990)	G14.5+1.2	41	Gorham (1990)
G25.8+0.9	30×20	Gorham (1990)	G27.9–1.2	45×25	Gorham (1990)
G29.4+1.4	41×25	Gorham (1990)	G34.8+1.0	49×38	Gorham (1990)
G36.0–0.2	57×46	Gorham (1990)	G41.3–1.3	35×25	Gorham (1990)
G44.2+0.5	30×14	Gorham (1990)	G44.6+0.1	41×32	Gorham (1990)
G51.7–0.8	41×27	Gorham (1990)	G41.4+1.2	30×20	Gorham, Kulkarni & Prince (1993)
G45.9–0.1	35×20	Taylor, Wallace & Goss (1992)	G71.6–0.5	6×3	Taylor, Wallace & Goss (1992)
G72.2–0.3	16×5	Taylor, Wallace & Goss (1992)	G85.2–1.2	6	Taylor, Wallace & Goss (1992)
G356.6+0.1	8×7	Gray (1994b)	G357.1–0.2	8×7	Gray (1994b)
G358.7+0.7	18	Gray (1994b)	G4.2+0.0	3.5	Gray (1994b)
G338.5+2.9	150	Duncan et al. (1995)	G280.3–0.9	60	Duncan et al. (1995)
G281.2+0.0	40	Duncan et al. (1995)	G283.7+4.7	14	Duncan et al. (1995)
G287.2+2.7	120	Duncan et al. (1995)	G289.4–2.5	25	Duncan et al. (1995)
G290.4+1.7	18	Duncan et al. (1995)	G291.1+1.7	20	Duncan et al. (1995)
G292.7–1.6	25	Duncan et al. (1995)	G294.3–3.5	45	Duncan et al. (1995)
G298.5+2.2	45	Duncan et al. (1995)	G299.2–1.5	35	Duncan et al. (1995)
G309.6+4.0	60	Duncan et al. (1995)	G309.8–2.6	35×20	Duncan et al. (1995)
G310.6–2.0	60	Duncan et al. (1995)	G337.5+1.5	30	Duncan et al. (1995)
G352.6+2.2	30	Duncan et al. (1995)	G304+2	180	Duncan et al. (1997)
G310.5–3.5	210×160	Duncan et al. (1997)	G312.7+3.5	100×80	Duncan et al. (1997)
G319.3+3.5	180×120	Duncan et al. (1997)	G321.3–3.8	110×80	Duncan et al. (1997)
G332.0–3.2	150	Duncan et al. (1997)	G317.5+0.9	30×25	Whiteoak & Green (1996)
G319.9–0.7	6×2	Whiteoak & Green (1996)	G320.6–0.9	3	Whiteoak & Green (1996)
G322.7+0.1	12×11	Whiteoak & Green (1996)	G322.9–0.0	14×11	Whiteoak & Green (1996)
G323.2–1.0	6×4	Whiteoak & Green (1996)	G324.1+0.1	14×6	Whiteoak & Green (1996)
G325.0–0.3	4	Whiteoak & Green (1996)	G331.8–0.0	2×1	Whiteoak & Green (1996)
G339.6–0.6	3×2	Whiteoak & Green (1996)	G8.5–6.7	60?	Combi & Romero (1998)
G10.2–3.5	90?	Combi & Romero (1998)	G10.7–5.4	120?	Combi & Romero (1998)
G11.9–3.6	45?	Combi & Romero (1998)	G12.7–3.9	60?	Combi & Romero (1998)
G313.2+16.4	120?	Combi, Romero & Arnal (1998)	G314.9+9.8	120?	Combi, Romero & Arnal (1998)
G315.4+12.9	120?	Combi, Romero & Arnal (1998)	G316.2+6.4	120?	Combi, Romero & Arnal (1998)
G318.9+6.4	120?	Combi, Romero & Arnal (1998)	G327.0–12.0?	430×180	Combi, Romero & Benaglia (1998)
G32.6+7.3	240	Punsly et al. (2000)	G313.0–0.1	10	Roberts et al. (1999)
G313.6+0.3	10?	Roberts, Romani & Johnston (2001)	G359.07–0.02	17×10	LaRosa et al. (2000)
G6.83–0.21	15	Yusef-Zadeh et al. (2000)	G311.2+1.0	9	Gaensler et al. (2000)
G328.6–0.0	30	McClure-Griffiths et al. (2001)	G346.5–0.1	12	Gaensler et al. (2001)
G4.2–0.3	15×13	Trushkin (2001)	G5.7–0.2	2.5×2	Trushkin (2001)
G29.8+2.1	10×7.4	Trushkin (2001)	G39.7+0.5	12×11	Trushkin (2001)
G40.4+0.7	10×8	Trushkin (2001)	G44.0–0.1	26×17.5	Trushkin (2001)
G44.5–1.3	35×20	Trushkin (2001)	G54.5+1.2	25×20	Trushkin (2001)
G55.1+0.1	5×4	Trushkin (2001)	G55.6+0.6	14×13	Trushkin (2001)
G67.8+0.8	8×6	Trushkin (2001)	G72.1–0.4	25×15	Trushkin (2001)
G353.0+2.2	6×3	Trushkin (2001)	G336.1–0.2	30?	Manchester et al. (2002)
G352.2–0.1	6?	Manchester et al. (2002)	G282.8–1.2	1.5?	Misanovic, Cram & Green (2002)
G43.5+0.6	17	Kaplan et al. (2002)	G107.5–1.5	36	Kothes (2003)
G5.71–0.08	12×9	Brogan et al. (2006)	G6.31+0.54	9×3	Brogan et al. (2006)
G19.13+0.90	24×18	Brogan et al. (2006)	G6.45–0.55	3.3	Helfand et al. (2006)
G6.53–0.60	5.0	Helfand et al. (2006)	G8.85–0.25	4.0	Helfand et al. (2006)
G10.87+0.08	2.8	Helfand et al. (2006)	G11.55+0.33	4.5	Helfand et al. (2006)
G12.91–0.28	1.5	Helfand et al. (2006)	G13.18+0.03	2.5	Helfand et al. (2006)
G16.35–0.18	2.8	Helfand et al. (2006)	G17.33–0.13	1.8	Helfand et al. (2006)
G18.25–0.30	3.5	Helfand et al. (2006)	G18.75–0.07	1.6	Helfand et al. (2006)
G19.46+0.14	6.0	Helfand et al. (2006)	G19.58–0.24	3.2	Helfand et al. (2006)
G19.59+0.02	0.8	Helfand et al. (2006)	G19.61–0.12	4.5	Helfand et al. (2006)
G19.66–0.22	4.5	Helfand et al. (2006)	G21.64+0.00	2.8	Helfand et al. (2006)
G22.38+0.10	7.0	Helfand et al. (2006)	G22.75–0.49	3.8	Helfand et al. (2006)
G22.99–0.35	3.8	Helfand et al. (2006)	G23.56–0.03	9.0	Helfand et al. (2006)
G24.18+0.21	5.2	Helfand et al. (2006)	G25.22+0.29	2.0	Helfand et al. (2006)
G27.13+0.03	11.0	Helfand et al. (2006)	G28.51+0.13	14.0	Helfand et al. (2006)
G28.55–0.00	3.0	Helfand et al. (2006)	G29.06–0.67	8.0	Helfand et al. (2006)
G29.07+0.45	0.7	Helfand et al. (2006)	G29.36+0.10	9.0	Helfand et al. (2006)
G30.84+0.13	2.2	Helfand et al. (2006)	G31.05+0.48	4.5	Helfand et al. (2006)
G31.60+0.33	3.1	Helfand et al. (2006)	G31.82–0.12	1.8	Helfand et al. (2006)
G359.5–0.0?	2?	Martí et al. (2007)	G151.2+2.85	60	Kerton, Murphy & Patterson (2007)

name	size /arcmin	reference
G333.9+0.0	14	Anderson et al. (2012)
G128.5+2.6	40×22	Gerbrandt et al. (2014)
G160.1–1.1	64×19	Gerbrandt et al. (2014)
G141.2+5.0	12	Kothes et al. (2014)
G291.0+0.1	22×20	Green, Reeves & Murphy (2014)
G310.7–5.4	31×29	Green, Reeves & Murphy (2014)
G330.7+0.1	10×8	Green, Reeves & Murphy (2014)
G336.7–0.3	5×3	Green, Reeves & Murphy (2014)
G346.2–1.0	7	Green, Reeves & Murphy (2014)
G17.80–0.02	8.8	Anderson et al. (2017)
G18.53–0.86	17.2	Anderson et al. (2017)
G19.75–0.69	26.4	Anderson et al. (2017)
G20.26–0.86	15.0	Anderson et al. (2017)
G21.66–0.21	10.2	Anderson et al. (2017)
G23.11+0.19	24.2	Anderson et al. (2017)
G25.49+0.01	14.8	Anderson et al. (2017)
G26.13+0.13	22.6	Anderson et al. (2017)
G26.75+0.73	10.6	Anderson et al. (2017)
G27.18+0.30	1.8	Anderson et al. (2017)
G27.39+0.24	4.8	Anderson et al. (2017)
G27.78–0.33	7.4	Anderson et al. (2017)
G28.22–0.09	3.4	Anderson et al. (2017)
G28.56+0.00	3.0	Anderson et al. (2017)
G28.88+0.41	17.8	Anderson et al. (2017)
G29.38+0.10	10.2	Anderson et al. (2017)
G29.92+0.21	4.2	Anderson et al. (2017)
G31.44+0.36	7.8	Anderson et al. (2017)
G32.22–0.21	6.2	Anderson et al. (2017)
G32.73+0.15	5.2	Anderson et al. (2017)
G33.85+0.06	1.2	Anderson et al. (2017)
G36.66–0.50	16.4	Anderson et al. (2017)
G36.90+0.49	7.6	Anderson et al. (2017)
G37.88+0.32	22.8	Anderson et al. (2017)
G38.62–0.24	5.0	Anderson et al. (2017)
G38.72–0.87	17.0	Anderson et al. (2017)
G39.19+0.52	11.0	Anderson et al. (2017)
G41.95–0.18	14.0	Anderson et al. (2017)
G45.35–0.37	12.6	Anderson et al. (2017)
G46.18–0.02	11.0	Anderson et al. (2017)
G47.15+0.73	1.6	Anderson et al. (2017)
G51.21+0.11	29.8	Anderson et al. (2017)
G53.07+0.49	2.0	Anderson et al. (2017)
G56.56–0.75	23.2	Anderson et al. (2017)
G58.70–0.31	8.8	Anderson et al. (2017)
G59.68+1.25	11.4	Anderson et al. (2017)
G31.29–0.49	0.33	Ranasinghe, Leahy & Stil (2021)
G0.1–9.7	66	Hurley-Walker et al. (2019b)
G7.4+0.3	18×14	Hurley-Walker et al. (2019b)
G19.1–3.1	32	Hurley-Walker et al. (2019b)
G21.8+0.2	64×42	Hurley-Walker et al. (2019b)
G25.3–1.8	94×76	Hurley-Walker et al. (2019b)
G230.4+1.2	54×40	Hurley-Walker et al. (2019b)
G349.1–0.8	14	Hurley-Walker et al. (2019b)
G350.8+5.0	72×52	Hurley-Walker et al. (2019b)
G351.4+0.4	9	Hurley-Walker et al. (2019b)
G351.9+0.1	20×16	Hurley-Walker et al. (2019b)
G355.4+2.7	22	Hurley-Walker et al. (2019b)
G358.3–0.7	42×34	Hurley-Walker et al. (2019b)
G343.9+0.1?	7.3	Ingallinera et al. (2019)
G344.0+0.0?	13.4	Ingallinera et al. (2019)
G1.94–0.10	16.6	Dokara et al. (2021)
G2.22+0.05	2.2	Dokara et al. (2021)
G2.91–0.18	25.8	Dokara et al. (2021)
G3.10+0.11	2.8	Dokara et al. (2021)
G4.57–0.24	8.4	Dokara et al. (2021)
G5.16–0.32	11.2	Dokara et al. (2021)
G5.37–0.28	4.4	Dokara et al. (2021)
G5.67–0.11	10.2	Dokara et al. (2021)
G5.98+0.01	11.8	Dokara et al. (2021)
G6.11+0.38	19.4	Dokara et al. (2021)
G13.50+0.07	3.8	Dokara et al. (2021)
G108.5+11.0	64×39	Gerbrandt et al. (2014)
G149.5+3.2	56×49	Gerbrandt et al. (2014)
G51.0+0.1?	17×10?	Sidorin et al. (2014)
G269.7+0.0	33×27	Green, Reeves & Murphy (2014)
G296.6–0.4	14×10	Green, Reeves & Murphy (2014)
G310.9–0.3	17×11	Green, Reeves & Murphy (2014)
G334.0–0.8	14×11	Green, Reeves & Murphy (2014)
G336.9–0.5	15×12	Green, Reeves & Murphy (2014)
G354.1+0.3	11	Green, Reeves & Murphy (2014)
G18.45–0.42	15.2	Anderson et al. (2017)
G18.76–0.07	1.6	Anderson et al. (2017)
G19.96–0.33	11.8	Anderson et al. (2017)
G20.30–0.06	6.2	Anderson et al. (2017)
G22.32+0.11	11.0	Anderson et al. (2017)
G23.85–0.18	5.4	Anderson et al. (2017)
G26.04–0.42	27.0	Anderson et al. (2017)
G26.53+0.07	22.4	Anderson et al. (2017)
G27.06+0.04	15.0	Anderson et al. (2017)
G27.24–0.14	12.2	Anderson et al. (2017)
G27.47+0.25	3.4	Anderson et al. (2017)
G28.21+0.02	5.0	Anderson et al. (2017)
G28.33+0.06	6.4	Anderson et al. (2017)
G28.64+0.20	22.8	Anderson et al. (2017)
G28.92+0.26	6.4	Anderson et al. (2017)
G29.41–0.18	15.0	Anderson et al. (2017)
G31.22–0.02	6.2	Anderson et al. (2017)
G31.93+0.16	4.8	Anderson et al. (2017)
G32.37–0.51	24.0	Anderson et al. (2017)
G33.62–0.23	5.4	Anderson et al. (2017)
G34.93–0.24	16.2	Anderson et al. (2017)
G36.68–0.14	20.0	Anderson et al. (2017)
G37.62–0.22	3.8	Anderson et al. (2017)
G38.17+0.09	29.4	Anderson et al. (2017)
G38.68–0.43	8.6	Anderson et al. (2017)
G38.83–0.01	1.2	Anderson et al. (2017)
G39.56–0.32	17.0	Anderson et al. (2017)
G42.62+0.14	4.4	Anderson et al. (2017)
G45.51–0.03	8.2	Anderson et al. (2017)
G46.54–0.03	12.4	Anderson et al. (2017)
G47.36–0.09	49.2	Anderson et al. (2017)
G52.37–0.70	35.4	Anderson et al. (2017)
G53.84–0.75	37.4	Anderson et al. (2017)
G57.12+0.35	28.2	Anderson et al. (2017)
G59.46+0.83	9.0	Anderson et al. (2017)
G67.25–0.36	5.4	Anderson et al. (2017)
G304.4+0.2	16	Sushch et al. (2017)
G2.1+2.7	72×62	Hurley-Walker et al. (2019b)
G18.9–1.2	68×60	Hurley-Walker et al. (2019b)
G20.1–0.2	38	Hurley-Walker et al. (2019b)
G24.0–0.3	48	Hurley-Walker et al. (2019b)
G35.3–0.0	26×22	Hurley-Walker et al. (2019b)
G232.1+2.0	76×56	Hurley-Walker et al. (2019b)
G350.7+0.6	80×56	Hurley-Walker et al. (2019b)
G351.0–0.6	12	Hurley-Walker et al. (2019b)
G351.4+0.2	18×14	Hurley-Walker et al. (2019b)
G353.0+0.8	96×46	Hurley-Walker et al. (2019b)
G356.5–1.9	48×36	Hurley-Walker et al. (2019b)
G351.7–1.2	14	Veena et al. (2019a)
G343.8+0.0?	4.0	Ingallinera et al. (2019)
G35.75–0.25	7	Sofue (2020)
G1.97–0.46	9.8	Dokara et al. (2021)
G2.27+0.39	12.6	Dokara et al. (2021)
G3.10–0.09	5.0	Dokara et al. (2021)
G4.49–0.39	13.8	Dokara et al. (2021)
G5.10+0.33	9.0	Dokara et al. (2021)
G5.36–0.70	20.0	Dokara et al. (2021)
G5.37+0.34	12.4	Dokara et al. (2021)
G5.76+0.51	11.6	Dokara et al. (2021)
G6.05+0.49	12.2	Dokara et al. (2021)
G8.04+0.56	12.0	Dokara et al. (2021)
G13.54+0.35	8.0	Dokara et al. (2021)

name	size /arcmin	reference
G13.62+0.29	7.0	Dokara et al. (2021)
G13.65–0.24	8.4	Dokara et al. (2021)
G15.86+0.52	3.8	Dokara et al. (2021)
G16.12+0.69	54.0	Dokara et al. (2021)
G17.43+0.27	4.2	Dokara et al. (2021)
G17.62+0.08	6.0	Dokara et al. (2021)
G19.48–0.10	14.8	Dokara et al. (2021)
G20.19+0.02	7.2	Dokara et al. (2021)
G21.59–0.17	20.8	Dokara et al. (2021)
G21.86+0.16	5.4	Dokara et al. (2021)
G22.17+0.31	22.2	Dokara et al. (2021)
G23.97+0.51	9.8	Dokara et al. (2021)
G24.19+0.28	4.2	Dokara et al. (2021)
G28.87+0.61	4.0	Dokara et al. (2021)
G28.92+0.25	4.4	Dokara et al. (2021)
G30.30+0.12	2.0	Dokara et al. (2021)
G30.37+0.42	4.6	Dokara et al. (2021)
G31.25–0.04	6.6	Dokara et al. (2021)
G34.52–0.76	5.4	Dokara et al. (2021)
G35.12–0.34	3.6	Dokara et al. (2021)
G36.85–0.24	3.0	Dokara et al. (2021)
G37.50+0.77	2.6	Dokara et al. (2021)
G39.20+0.81	3.2	Dokara et al. (2021)
G41.51–0.53	35.6	Dokara et al. (2021)
G42.71–0.27	18.2	Dokara et al. (2021)
G43.07+0.55	4.2	Dokara et al. (2021)
G47.74–0.97	19.6	Dokara et al. (2021)
G51.06+0.56	9.4	Dokara et al. (2021)
G358.71–0.38	4.8	Dokara et al. (2021)
G270.4–1.0	28×16?	Johnston & Lower (2021)
G118.4+37.0	57	Arias et al. (2022)
G124.0+1.4	60×55	Chen et al. (2023)
G12.7+3.6?	4?	Ibrahim et al. (2023)
G323.6–1.1	34×20	Ball et al. (2023)
G323.7+0.0	3	Ball et al. (2023)
G324.1–0.2	10×9	Ball et al. (2023)
G324.3+0.2	4	Ball et al. (2023)
G324.4–0.2	3×2	Ball et al. (2023)
G324.8–0.1	25×20	Ball et al. (2023)
G325.0–0.3	4	Ball et al. (2023)
G325.8–2.1	36×30	Ball et al. (2023)
G327.1+0.9	2	Ball et al. (2023)
G328.6+0.0	34×19	Ball et al. (2023)
G13.65+0.25	5.0	Dokara et al. (2021)
G14.52+0.14	29.0	Dokara et al. (2021)
G16.02+0.74	12.6	Dokara et al. (2021)
G16.95–0.93	14.8	Dokara et al. (2021)
G17.59+0.23	3.0	Dokara et al. (2021)
G18.39–0.81	5.2	Dokara et al. (2021)
G19.75+0.20	18.0	Dokara et al. (2021)
G21.49–0.01	7.0	Dokara et al. (2021)
G21.68+0.12	7.6	Dokara et al. (2021)
G22.04–0.02	15.4	Dokara et al. (2021)
G22.95–0.31	4.8	Dokara et al. (2021)
G24.06–0.80	4.0	Dokara et al. (2021)
G28.52+0.26	6.2	Dokara et al. (2021)
G28.87+0.24	2.6	Dokara et al. (2021)
G29.32+0.28	5.0	Dokara et al. (2021)
G30.36+0.62	14.8	Dokara et al. (2021)
G30.50+0.57	12.0	Dokara et al. (2021)
G32.45–0.11	3.6	Dokara et al. (2021)
G34.61+0.24	6.0	Dokara et al. (2021)
G36.83–0.43	5.2	Dokara et al. (2021)
G37.33+0.42	6.6	Dokara et al. (2021)
G37.67–0.50	5.6	Dokara et al. (2021)
G39.53+0.36	9.0	Dokara et al. (2021)
G41.62+0.26	9.4	Dokara et al. (2021)
G43.02+0.72	13.0	Dokara et al. (2021)
G44.07+0.12	16.0	Dokara et al. (2021)
G48.87+0.17	13.2	Dokara et al. (2021)
G59.83–0.40	21.0	Dokara et al. (2021)
G359.17+0.26	3.6	Dokara et al. (2021)
G247.5+9.7?	90	Pol et al. (2021)
G0.8–0.4	12	Heywood et al. (2022)
G45.24+0.18	11.4	Motta et al. (2023)
G323.2–1.0	7	Ball et al. (2023)
G323.6–0.8	28×23	Ball et al. (2023)
G323.9–1.1	29×18	Ball et al. (2023)
G324.1+0.0	11×7	Ball et al. (2023)
G324.4–0.4	18×13	Ball et al. (2023)
G324.7+0.0	4	Ball et al. (2023)
G325.0–0.5	34×28	Ball et al. (2023)
G325.0+0.2	5	Ball et al. (2023)
G325.8+0.3	28	Ball et al. (2023)
G328.0+0.7	8	Ball et al. (2023)
G330.2–1.6	9	Ball et al. (2023)

Optical/Infrared

name	size /arcmin	reference	name	size /arcmin	reference
G260.4–3.3?	4	Winkler et al. (1989)	G75.5+2.4	108×90	Nichols-Bohlin & Fesen (1993)
G340.5+0.7	20	Walker, Zealey & Parker (2001)	G342.1+0.1	90	Walker, Zealey & Parker (2001)
G110.3+11.3	80?	Bally & Reipurth (2001)	G70.1+2.3	84	Mavromatakis & Strom (2002)
G70.5+1.9	4×2?	Mavromatakis et al. (2009)	G117.4+1.5	72	Mavromatakis et al. (2005)
G71.3+3.1?	8?	Russell et al. (2007)	G253.0+2.6	6	Stupar, Parker & Filipović (2008)
G243.9+9.8	16	Stupar, Parker & Filipović (2008)	G283.7–3.8	120	Stupar, Parker & Filipović (2008)
G288.7–6.3	2.5	Stupar, Parker & Filipović (2008)	G281.9+8.7	150	Stupar, Parker & Filipović (2008)
G288.3+4.8	15?	Stupar, Parker & Filipović (2008)	G289.7+5.1	22?	Stupar, Parker & Filipović (2008)
G289.2+7.1	30	Stupar, Parker & Filipović (2008)	G292.9+4.4	100	Stupar, Parker & Filipović (2008)
G303.6+5.3	240	Stupar, Parker & Filipović (2008)	G306.7+0.5	25	Stupar, Parker & Filipović (2008)
G332.4+0.6	30	Stupar, Parker & Filipović (2008)	G343.4+3.6	7?	Stupar, Parker & Filipović (2008)
G329.9–7.8	7	Stupar, Parker & Filipović (2008)	G348.2–1.8	10	Stupar, Parker & Filipović (2008)
G18.7–2.2	30?	Stupar, Parker & Filipović (2008)	G304.4–3.1	40?	Stupar, Parker & Filipović (2010)
G310.5+0.8	20	Stupar, Parker & Filipović (2011)	G123.1+4.6?	3.3?	Ritter et al. (2021)

X-ray/γ-ray

name	size /arcmin	reference	name	size /arcmin	reference
G340+18?	180?	Riegler, Agrawal & Gull (1980)	G117.7+0.6	90?	Hailey & Craig (1995)
G18.0–0.6	4	Finley, Srinivasan & Park (1996)	G69.4+1.2	60	Yoshita, Miyata & Tsunemi (1999)
G0.61+0.01	4.8×2.2	Koyama et al. (2007)	G0.570–0.018	0.5	Senda, Murakami & Koyama (2002)
G0.570–0.001	2.1?	Ponti et al. (2015)	G0.40–0.02	5.9?	Ponti et al. (2015)
G0.13–0.12	3?	Heard & Warwick (2013)	G359.79–0.26	10?	Senda, Murakami & Koyama (2003)
G359.77–0.09	10?	Senda, Murakami & Koyama (2003)	G359.41–0.12	4?	Tsuru et al. (2009)
G0.52–0.046	3.5?	Ponti et al. (2015)	G0.224+0.032	3.3?	Ponti et al. (2015)
G25.5+0.0	12?	Bamba et al. (2003)	G26.6–0.1	12?	Bamba et al. (2003)
G22.0+0.0	5?	Ueno et al. (2006)	G23.5+0.1	4?	Uneo et al. (2006)
G25.0+0.0	5?	Uneo et al. (2006)	G26.0+0.0	5?	Uneo et al. (2006)
G35.5+0.0	5?	Uneo et al. (2006)	G36.0+0.0	5?	Uneo et al. (2006)
G37.0–0.1	5?	Uneo et al. (2006)	G318.6+0.0	5	Uneo et al. (2006)
G309.43–0.07?	3.3	Reynolds et al. (2012)	G26.4–0.1?	10?	Nobukawa et al. (2015)
G350.6–4.7	220	Araya (2018)	G121.1–1.9	36	Khabibullin et al. (2023)