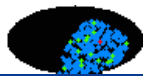
Access to Astronomical Catalogues



J/MNRAS/384/775 Bright Source Sample of AT20G Survey (Massardi+, 2008)

The Australia Telescope 20-GHz (AT20G) Survey: the Bright Source Sample.
Massardi M., Ekers R.D., Murphy T., Ricci R., Sadler E.M., Burke S.,
De Zotti G., Edwards P.G., Hancock P.J., Jackson C.A., Kesteven M.J.,
Mahony E., Phillips C.J., Staveley-Smith L., Subrahmanyan R., Walker M.A.,
Wilson W.E.
<Mon. Not. R. Astron. Soc., 384, 775-802 (2008)>
=2008MNRAS.384..775M

ADC_Keywords: Surveys ; Radio sources ; Polarization

Keywords: surveys - galaxies: active - cosmic microwave background -
radio continuum: general

Abstract:
The Australia Telescope 20-GHz (AT20G) Survey is a blind survey of the whole southern sky at 20GHz (with follow-up observations at 4.8 and 8.6GHz) carried out with the Australia Telescope Compact Array from 2004 to 2007.

The Bright Source Sample (BSS) is a complete flux-limited subsample of the AT20G Survey catalogue comprising 320 extragalactic (|b|>1.5°) radio sources south of DE=-15° with S_{20GHz}>0/50Jy. Of these, 218 have near simultaneous observations at 8 and 5GHz.

In this paper we present an analysis of radio spectral properties in total intensity and polarization, size, optical identifications and redshift distribution of the BSS sources.

File Summary:

FileName	Lrecl	Records	Explanations
ReadMe	80	.	This file
table1.dat	79	11	Follow-up observations
table2.dat	141	320	The AT20G BSS
table3.dat	91	320	The AT20G BSS: polarization data
notes.dat	80	107	Individual notes
refs.dat	79	67	References

See also:
J/MNRAS/371/898 : Extragalactic radio sources selected at 20GHz (Sadler+, 2006)

Byte-by-byte Description of file: table1.dat

Bytes	Format	Units	Label	Explanations
1	A1	---	Ep	Epoch reference number
3- 5	I3	deg	DEl	Lower value of declination range
7- 9	I3	deg	DEu	upper value of declination range
11- 15	I5	MHz	Freq1	First central frequency
17- 21	I5	MHz	Freq2	Second central frequency
24- 27	A4	---	Conf	Array configuration
30- 32	I3	m	sspa	shortest spacing
35- 43	A9	arcsec	Beam1	Beam size (arcsec)
46- 54	A9	arcsec	Beam2	Beam size (arcsec)
56- 75	A20	---	Dates	Dates of observation
77- 79	A3	---	Reason	[CORM,] Reasons of observation (1)

Note (1): Reasons as follows:
C = to confirm candidate source
O = to observe source at 5 and 8 GHz
R = to repeat previous bad-quality observations

M = observation in which we observed the very extended sources
in mosaic mode

Byte-by-byte Description of file: table2.dat

Bytes	Format	Units	Label	Explanations
1- 3	I3	---	[MEM2008]	Sequential number
4	A1	---	n_[MEM2008]	[*] indicates a note in notes.dat
6- 7	I2	h	RAh	Right ascension (J2000)
9- 10	I2	min	RAm	Right ascension (J2000)
12- 16	F5.2	s	RAs	Right ascension (J2000)
18	A1	---	DE-	Declination sign (J2000)
19- 20	I2	deg	DEd	Declination (J2000)
22- 23	I2	arcmin	DEm	Declination (J2000)
25- 28	F4.1	arcsec	DEs	[0/60] Declination (J2000)
30	A1	---	l_S20	Limit flag on S20
31- 35	F5.2	Jy	S20	Flux density at 20GHz
37- 40	F4.2	Jy	e_S20	? rms uncertainty on S20
42- 45	F4.2	Jy	S8.6	? Flux density at 8GHz
47- 50	F4.2	Jy	e_S8.6	? rms uncertainty in S8.6
52- 56	F5.2	Jy	S4.8	? Flux density at 5GHz
58- 61	F4.2	Jy	e_S4.8	? rms uncertainty on S4.8
63- 68	F6.3	Jy	S1.4	? NVSS flux density at 1.4GHz
70- 74	F5.3	Jy	e_S1.4	? rms uncertainty on S1.4
76- 82	F7.3	Jy	S0.843	? SUMSS flux density at 843MHz
84- 88	F5.3	Jy	e_S0.843	? rms uncertainty on S0.843
90- 94	F5.3	---	z	?=- Redshift
96- 99	A4	---	r_z	Redshift references, detailed in refs.dat
101-105	F5.2	mag	Bjmag	? Bj magnitude
107	A1	---	OptID	[GQ] Optical ID as Galaxy (G) or QSO (Q)
109	A1	---	Ep1	[1-6.] Epoch of the 20-GHz observations (2)
110	A1	---	Ep2	[1-6.] Second epoch of the 20-GHz, 8GHz and 5GHz observations (2)
111	A1	---	SpS	[FIPSU.] Spectral shape flag (3)
112	A1	---	G	[G.] Galactic position (|b|<10°)
113	A1	---	Ep8	[1-5.] Epoch of observation at 8GHz (2)
114	A1	---	Ep5	[1-5.] Epoch of observation at 5GHz (2)
115	A1	---	Ex	[EM.] extendedness flag (5)
116	A1	---	AT	[C.] C: source listed in the AT calibrator manual
119-137	A19	---	AName	Altermative name (PMN, PKS, NVSS, ...)
139-141	I3	---	WMAP	? WMAP (Bennett et al., 2003 J/ApJS/148/97) identification number

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Note (2): Detailed in table1.dat

Note (3): Spectral shape flag as follows:
F = flat
I = inverted
P = peaked
S = steep
U = upturning
Note (5): Extendedness flag as follows:
E = the source is extended at 20 GHz,
M = it has been observed in the mosaic mode. The flux density for the M sources corresponds to the integrated flux density of the source in the mosaic area

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Byte-by-byte Description of file: table3.dat

Bytes	Format	Units	Label	Explanations
1- 3	I3	---	[MEM2008]	Sosurce sequential number
5- 6	I2	h	RAh	Right ascension (J2000)
8- 9	I2	min	RAm	Right ascension (J2000)
11- 15	F5.2	s	RAs	Right ascension (J2000)
17	A1	---	DE-	Declination sign (J2000)
18- 19	I2	deg	DEd	Declination (J2000)
21- 22	I2	arcmin	DEm	Declination (J2000)
24- 27	F4.1	arcsec	DEs	[0/60] Declination (J2000)
29	A1	---	l_P20	Limit flag on P20
30- 34	F5.3	Jy	P20	? Integrated polarized flux at 20GHz
36- 40	F5.3	Jy	e_P20	? rms uncertainty on P20
42- 45	F4.1	%	m20	? Fractional polarization at 20 GHz

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  47- 49  I3    deg     PA20      [-90/90]? Polarization angle at 20 GHz
      51  A1    ---     l_P8.6    Limit flag on P8.6
  52- 56  F5.3  Jy      P8.6      ? Integrated polarized flux at 8.6GHz
  58- 62  F5.3  Jy      e_P8.6    ? rms uncertainty on P8.6
  64- 66  F3.1  %       m8.6      ? Fractional polarization at 8 GHz
  68- 70  I3    deg     PA8.6     [-90/90]? Polarization angle at 8 GHz
      72  A1    ---     l_P4.8    Limit flag on P4.8
  73- 77  F5.3  Jy      P4.8      ? Integrated polarized flux at 5GHz
  79- 83  F5.3  Jy      e_P4.8    ? rms uncertainty on P4.8
  85- 87  F3.1  %       m4.8      ? Fractional polarization at 5 GHz
  89- 91  I3    deg     PA4.8     [-90/90]? Polarization angle at 5 GHz
```

Byte-by-byte Description of file: notes.dat

```
   Bytes Format Units   Label     Explanations
   1-  3  I3    ---    [MEM2008]  Source sequential number
   5- 80  A76   ---     Text      Text of the note
```

Byte-by-byte Description of file: refs.dat

```
   Bytes Format Units   Label     Explanations
   1-  4  A4    ---     Ref       Reference code
   6- 24  A19   ---     bibCode   BibCode
  26- 51  A26   ---     Aut       Author's name
  53- 79  A27   ---     Com       Comments
```

History:
From electronic version of the journal

(End) Patricia Vannier [CDS] 16-Jun-2008

*The document above follows the rules of the Standard Description for Astronomical Catalogues.From this documentation it is possible to generate **f77** program to load files into arrays or line by line*