

Spectral Energy Distribution Reference Tables and Plots

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I conducted an extensive literature search for unresolved, integrated flux densities to include in the spectral energy distribution for each source. It should be noted that Wendker (1995) was a useful reference. High resolution data that were highly discrepant due to flux loss or data with high uncertainties (e.g. 450 μm data from di Francesco et al., 2008) were not included. Spectral energy distributions are shown with the maximum likelihood models from 1 overlaid. The list of archival data used in the spectral energy distributions can be found below. Where uncertainties were not provided, an error of 10% was used in the model fittings and this is indicated by a † . Only data $\nu < 3 \text{ THz}$ ($\lambda > 100 \mu\text{m}$) were included in the fit, but *IRAS* data $\nu > 3 \text{ THz}$ are included in the plots for illustration.

The Markov Chain Monte Carlo based Maximum Likelihood algorithm METRO (Hobson & Baldwin, 2004) was used to fit a combined radio power-law, with spectral index α' , and blackbody model to the larger dataset for each source. This fit utilised data at wavelengths longer than 100 μm and had the form:

$$S_{\text{total}} = S_1 + S_2 = K_1 \left(\frac{\nu}{\nu_1} \right)^{\alpha'} + K_2 \frac{\nu^\beta B_\nu(T_d)}{\nu_2^\beta B_{\nu_2}(T_d)}, \quad (1)$$

where β is the dust opacity index, B_ν is the Planck function for a dust temperature T_d , K_1 is the normalised flux density at $\nu_1 = 16 \text{ GHz}$ and K_2 is the normalised flux density at $\nu_2 = 300 \text{ GHz}$. It can be seen that when $\nu = \nu_1$, S_1 equals K_1 , the normalised flux density at 16 GHz and when $\nu = \nu_2$, S_2 equals K_2 , the normalised flux density at 300 GHz, and we define these parameters as S_{16}^{norm} and S_{300}^{norm} respectively. Uniform and separable priors were used for all parameters, with ranges

$$\Pi = \Pi_\alpha(-2, 2) \Pi_\beta(0, 3) \Pi_{T_d}(5, 45). \quad (2)$$

Table 1: Model results for variable T_d . Column 1 contains the source name; 2 the spectral index; 3 the opacity index; 4 the dust temperature; 5 the normalised flux density at 16 GHz; 6 the normalised flux density at 300 GHz; 7 the predicted greybody contribution at 16 GHz; and 8 the radio luminosity measured at 16 GHz with the predicted thermal dust contribution subtracted. “UC” is used to indicate that the parameter is unconstrained.

Source	α'	β	T_d (K)	S_{16}^{norm} (mJy)	S_{300}^{norm} (Jy)
L1448 IRS 3	0.46 ± 0.09	1.81 ± 0.12	10.77 ± 0.95	2.02 ± 0.09	5.13 ± 0.12
HH 7 – 11	1.28 ± 0.04	3.00 ± 0.08	12.53 ± 0.90	3.24 ± 0.07	6.21 ± 0.27
L1551 IRS 5	0.09 ± 0.03	1.46 ± 0.05	26.74 ± 2.07	3.87 ± 0.09	4.54 ± 0.17
L1527	0.20 ± 0.08	0.81 ± 0.11	44.86 ± 1.57	0.86 ± 0.06	0.44 ± 0.03
HH 1 – 2	0.21 ± 0.04	2.18 ± 0.19	16.93 ± 1.80	1.46 ± 0.07	1.01 ± 0.02
HH 26 IR	UC	0.66 ± 0.16	17.36 ± 5.25	0.04 ± 0.09	0.59 ± 0.04
HH 111	0.84 ± 0.07	1.55 ± 0.17	17.33 ± 3.68	2.11 ± 0.10	0.90 ± 0.02
NGC 2264 G	-0.31 ± 0.11	1.71 ± 0.13	18.30 ± 1.88	0.49 ± 0.06	0.36 ± 0.02
Serpens	-0.07 ± 0.02	1.25 ± 0.04	28.54 ± 1.54	6.74 ± 0.14	4.85 ± 0.18
L723	-0.29 ± 0.09	1.59 ± 0.13	17.56 ± 1.31	0.56 ± 0.04	0.92 ± 0.04
L1251 A	1.70 ± 0.14	2.27 ± 0.41	20.85 ± 4.36	0.86 ± 0.07	0.38 ± 0.06
L1448 C	1.17 ± 0.15	2.22 ± 0.11	12.70 ± 1.25	0.54 ± 0.03	1.69 ± 0.04
NGC 1333 <i>IRAS</i> 2A	2.56 ± 0.03	2.76 ± 0.19	9.85 ± 1.10	0.46 ± 0.02	1.17 ± 0.07
NGC 1333 <i>IRAS</i> 2B	1.40 ± 0.05	2.89 ± 0.26	9.55 ± 1.90	1.06 ± 0.03	0.57 ± 0.06
L1551 NE	UC	0.78 ± 0.05	40.64 ± 3.29	0.17 ± 0.07	1.69 ± 0.02
HH 25 MMS	UC	0.55 ± 0.09	41.27 ± 3.65	0.004 ± 0.18	1.51 ± 0.09

Table 2: L1448 IRS 3

ν (GHz)	S_ν (Jy)	Reference
5	$1.15 \times 10^{-3\dagger}$	Curiel et al. (1990)
8	$1.6 \times 10^{-3\dagger}$	Reipurth et al. (2002)
14.62	$(2.40 \pm 0.25) \times 10^{-3}$	Ainsworth et al. (2012)
15.37	$(2.34 \pm 0.26) \times 10^{-3}$	Ainsworth et al. (2012)
16	$(2.06 \pm 0.12) \times 10^{-3}$	Scaife et al. (2011)
16.12	$(2.41 \pm 0.37) \times 10^{-3}$	Ainsworth et al. (2012)
16.87	$(2.26 \pm 0.24) \times 10^{-3}$	Ainsworth et al. (2012)
17.62	$(2.62 \pm 0.29) \times 10^{-3}$	Ainsworth et al. (2012)
91	0.1 ± 0.01	Shirley et al. (2011)
231	2.6 ± 0.14	Barsony et al. (1998)
231	3^\dagger	Motte & André (2001)
273	4.7 ± 0.05	Enoch et al. (2006)
273	2.3 ± 0.20	Barsony et al. (1998)
349	7.12 ± 0.33	Shirley et al. (2011)
353	10.18^\dagger	di Francesco et al. (2008)
353	16.86^\dagger	Hatchell et al. (2007)
353	8.37 ± 0.91	Chandler & Richer (2000)
353	14.7 ± 0.62	Shirley et al. (2000)
375	7.8 ± 0.64	Barsony et al. (1998)
400	10.9 ± 1.15	Chandler & Richer (2000)
666	56.1 ± 12.28	Chandler & Richer (2000)
666	100.3 ± 12.40	Shirley et al. (2000)
857	91.5 ± 22.78	Chandler & Richer (2000)
857	45 ± 3	Barsony et al. (1998)
3×10^3	112 ± 20.15	Barsony et al. (1998)
5×10^3	32 ± 6.12	Barsony et al. (1998)
1.2×10^4	5.75 ± 1.2	Barsony et al. (1998)
2.5×10^4	0.69 ± 0.15	Barsony et al. (1998)

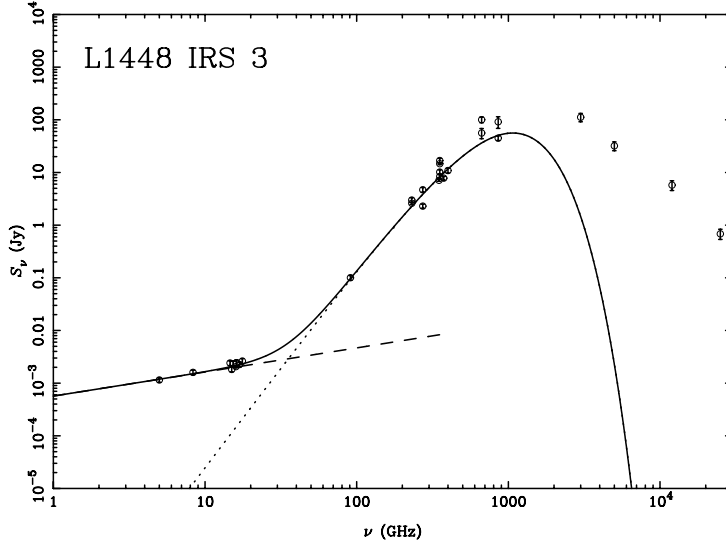


Table 3: HH 7 – 11

ν (GHz)	S_ν (Jy)	Reference
5	$7.3 \times 10^{-4\dagger}$	Rodríguez et al. (1999)
8	$1.01 \times 10^{-3\dagger}$	Rodríguez et al. (1999)
14.62	$(3.43 \pm 0.20) \times 10^{-3}$	Ainsworth et al. (2012)
15.37	$(3.10 \pm 0.18) \times 10^{-3}$	Ainsworth et al. (2012)
16.12	$(3.91 \pm 0.22) \times 10^{-3}$	Ainsworth et al. (2012)
16.87	$(3.43 \pm 0.19) \times 10^{-3}$	Ainsworth et al. (2012)
17.62	$(3.83 \pm 0.24) \times 10^{-3}$	Ainsworth et al. (2012)
43	$(1.08 \pm 0.06) \times 10^{-2}$	Anglada et al. (2004)
100	$(7.89 \pm 0.79) \times 10^{-2}$	Chen et al. (2009)
273	4.46^\dagger	Enoch et al. (2006)
353	10.3^\dagger	di Francesco et al. (2008)
353	12.7^\dagger	Hatchell et al. (2007)
353	14.9 ± 1.2	Chandler & Richer (2000)
400	21.5 ± 2.8	Chandler & Richer (2000)
666	119 ± 24	Chandler & Richer (2000)
666	159.9^\dagger	Hatchell et al. (2007)
857	203 ± 61	Chandler & Richer (2000)
3×10^3	381 ± 23	<i>IRAS</i>
5×10^3	204 ± 20	<i>IRAS</i>
1.2×10^4	46.5 ± 2.8	<i>IRAS</i>
2.5×10^4	13.6 ± 3.7	<i>IRAS</i>

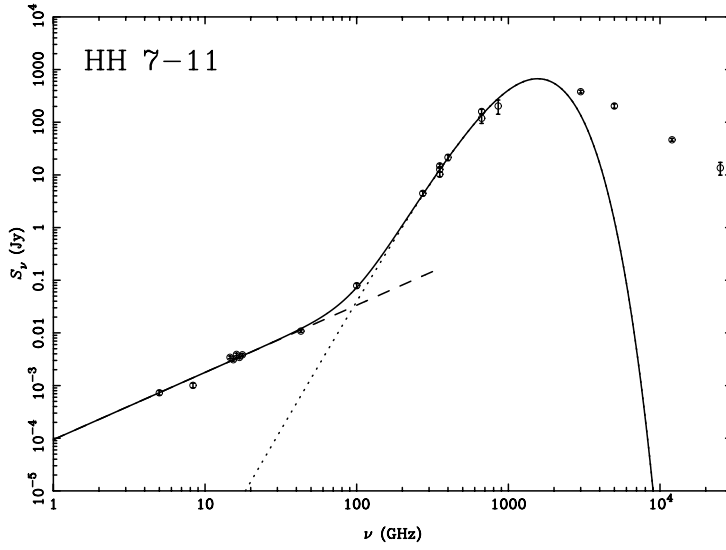


Table 4: L1551 IRS 5

ν (GHz)	S_ν (Jy)	Reference
1.5	$2.28 \times 10^{-3\dagger}$	Bieging & Cohen (1985)
1.5	$(2.8 \pm 0.9) \times 10^{-3}$	Snell et al. (1985)
1.7	$4 \times 10^{-3\dagger}$	Rodríguez et al. (1989a)
5	$4.2 \times 10^{-3\dagger}$	Duncan et al. (1987)
5	$(3.5 \pm 0.5) \times 10^{-3}$	Cohen et al. (1982)
5	$3 \times 10^{-3\dagger}$	Bieging et al. (1984)
5	$4.69 \times 10^{-3\dagger}$	Bieging & Cohen (1985)
5	$(4.3 \pm 0.5) \times 10^{-3}$	Snell et al. (1985)
5	$(5 \pm 0.5) \times 10^{-3}$	Evans et al. (1987)
5	$(4.1 \pm 0.4) \times 10^{-3}$	Keene & Masson (1990)
8	$(4.7 \pm 0.5) \times 10^{-3}$	Keene & Masson (1990)
14.62	$(4.74 \pm 0.25) \times 10^{-3}$	Ainsworth et al. (2012)
15	$2.25 \times 10^{-3\dagger}$	Rodríguez et al. (1986)
15	$4.59 \times 10^{-3\dagger}$	Bieging & Cohen (1985)
15	$(4.9 \pm 0.5) \times 10^{-3}$	Keene & Masson (1990)
15	$(3.6 \pm 0.2) \times 10^{-3}$	Rodríguez et al. (2003)
15	$(2.8 \pm 0.2) \times 10^{-3}$	Rodríguez et al. (2003)
15	$(3.3 \pm 0.2) \times 10^{-3}$	Rodríguez et al. (2003)
15	$(2.7 \pm 0.2) \times 10^{-3}$	Rodríguez et al. (2003)
15.37	$(3.10 \pm 0.18) \times 10^{-3}$	Ainsworth et al. (2012)
16.12	$(3.91 \pm 0.22) \times 10^{-3}$	Ainsworth et al. (2012)
16.87	$(3.43 \pm 0.19) \times 10^{-3}$	Ainsworth et al. (2012)
17.62	$(3.83 \pm 0.24) \times 10^{-3}$	Ainsworth et al. (2012)
22.5	$(1.7 \pm 0.4) \times 10^{-2}$	Torrelles et al. (1985)
22.5	$(7.3 \pm 1.5) \times 10^{-3}$	Keene & Masson (1990)
23.7	$(7 \pm 1.4) \times 10^{-3}$	Gomez et al. (1993)
88	0.09 ± 0.03	Keene & Masson (1990)
90	0.12^\dagger	Altenhoff et al. (1994)
98	0.13 ± 0.004	Ohashi et al. (1991)
110	0.13 ± 0.03	Keene & Masson (1990)
112	0.15^\dagger	Wilking et al. (1989)
113	0.17^\dagger	Keene & Masson (1986)
230	1.5^\dagger	Cabrit & Andre (1991)
230	1.57 ± 0.02	Reipurth et al. (1993)
231	3.4^\dagger	Motte & André (2001)
240	2.37 ± 0.48	Keene & Masson (1990)
250	1.72^\dagger	Altenhoff et al. (1994)
300	5.7 ± 1.3	Keene & Masson (1990)
345	6.36 ± 0.06	Reipurth et al. (1993)
353	19.01^\dagger	di Francesco et al. (2008)
353	12.1 ± 1	Chandler & Richer (2000)
400	18.2 ± 2.4	Chandler & Richer (2000)
666	94 ± 19	Chandler & Richer (2000)
857	164 ± 49	Chandler & Richer (2000)
3×10^3	458^\dagger	Reipurth et al. (1993)
5×10^3	373^\dagger	Reipurth et al. (1993)
1.2×10^4	106^\dagger	Reipurth et al. (1993)
2.5×10^4	10^\dagger	Reipurth et al. (1993)

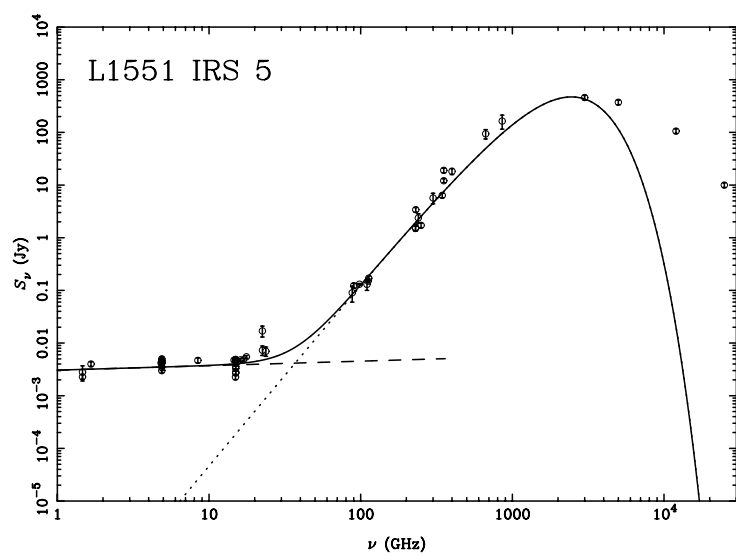


Table 5: L1527

ν (GHz)	S_ν (Jy)	Reference
5	$(6.8 \pm 0.4) \times 10^{-4}$	Melis et al. (2011)
8.5	$(8.10 \pm 0.3) \times 10^{-4}$	Melis et al. (2011)
14.62	$(1.04 \pm 0.11) \times 10^{-3}$	Ainsworth et al. (2012)
15.37	$(1.04 \pm 0.14) \times 10^{-3}$	Ainsworth et al. (2012)
16	$(0.9 \pm 0.03) \times 10^{-3}$	Scaife et al. (2012b)
16.12	$(1.12 \pm 0.13) \times 10^{-3}$	Ainsworth et al. (2012)
16.87	$(1.20 \pm 0.16) \times 10^{-3}$	Ainsworth et al. (2012)
17.62	$(1.38 \pm 0.15) \times 10^{-3}$	Ainsworth et al. (2012)
22.5	$(1.4 \pm 0.1) \times 10^{-3}$	Melis et al. (2011)
43.3	$(4.4 \pm 0.6) \times 10^{-3}$	Melis et al. (2011)
111	$(4.7 \pm 0.56) \times 10^{-2}$	Ohashi et al. (1997)
230	0.35^\dagger	Gramajo et al. (2010)
353	0.90 ± 0.01	Gramajo et al. (2010)
375	0.50^\dagger	Gramajo et al. (2010)
666	2.85 ± 0.22	Gramajo et al. (2010)
666	3.21^\dagger	Gramajo et al. (2010)
857	12^\dagger	Gramajo et al. (2010)
1.87×10^3	68.8^\dagger	Gramajo et al. (2010)
3×10^3	71.3^\dagger	Gramajo et al. (2010)
3×10^3	72^\dagger	Gramajo et al. (2010)
5×10^3	17.4^\dagger	Gramajo et al. (2010)
5×10^3	18^\dagger	Gramajo et al. (2010)

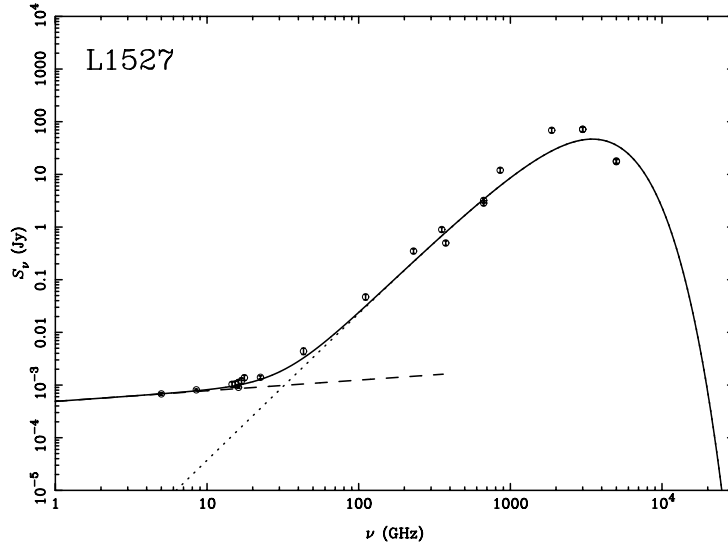


Table 6: HH 1 – 2 MMS 1

ν (GHz)	S_ν (Jy)	Reference
1.5	$(6 \pm 2) \times 10^{-4}$	Pravdo et al. (1985)
1.5	$8.6 \times 10^{-4\dagger}$	Rodríguez et al. (1990)
5	$(1.19 \pm 1.6) \times 10^{-3}$	Morgan et al. (1990)
5	$(1.2 \pm 0.04) \times 10^{-3}$	Pravdo et al. (1985)
5	$1.17 \times 10^{-3\dagger}$	Rodríguez et al. (1990)
14.62	$(1.30 \pm 0.28) \times 10^{-3}$	Ainsworth et al. (2012)
15	$(1.54 \pm 0.18) \times 10^{-3}$	Pravdo et al. (1985)
15	$1.75 \times 10^{-3\dagger}$	Rodríguez et al. (1990)
15.37	$(1.53 \pm 0.30) \times 10^{-3}$	Ainsworth et al. (2012)
16.12	$(1.34 \pm 0.18) \times 10^{-3}$	Ainsworth et al. (2012)
16.87	$(1.33 \pm 0.14) \times 10^{-3}$	Ainsworth et al. (2012)
230	0.65 ± 0.02	Reipurth et al. (1993)
273	0.92 ± 0.03	Dent et al. (1998)
345	1.67 ± 0.02	Reipurth et al. (1993)
353	9.44^\dagger	di Francesco et al. (2008)
354	1.2 ± 0.24	Fischer et al. (2010)
375	2.65 ± 0.03	Dent et al. (1998)
666	18.9 ± 0.35	Dent et al. (1998)
857	33.95 ± 0.29	Dent et al. (1998)
857	28 ± 11.2	Fischer et al. (2010)
1.88×10^3	75.7 ± 15.14	Fischer et al. (2010)
4.29×10^3	26.6 ± 2.66	Fischer et al. (2010)

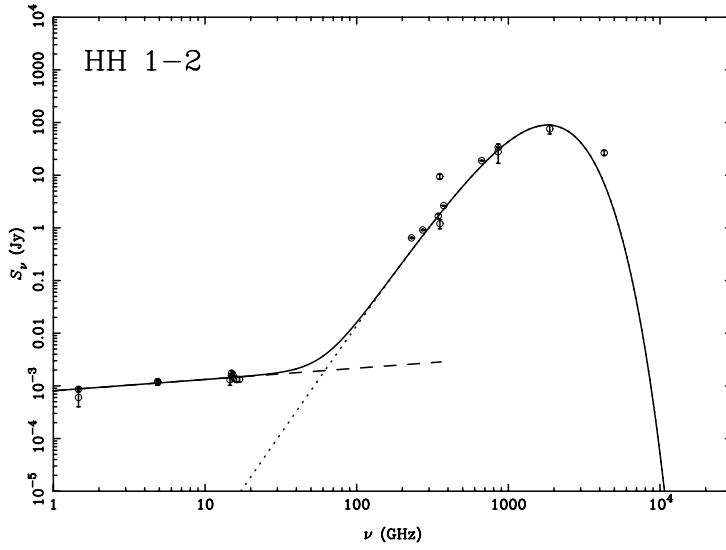


Table 7: HH 26 IR

ν (GHz)	S_ν (Jy)	Reference
8	$(3.8 \pm 0.6) \times 10^{-4}$	Anglada et al. (1998)
8	$(1.4 \pm 0.3) \times 10^{-4}$	Gibb (1999)
16.12	$(3.92 \pm 0.76) \times 10^{-4}$	Ainsworth et al. (2012)
231	0.32^\dagger	Lis et al. (1999)
353	0.97^\dagger	di Francesco et al. (2008)
353	0.9 ± 0.09	Nutter & Ward-Thompson (2007)
666	1.4 ± 0.28	Nutter & Ward-Thompson (2007)
857	6.3^\dagger	Lis et al. (1999)
4.29×10^3	7.9^\dagger	Antoniucci et al. (2008)
5×10^3	20.87^\dagger	Antoniucci et al. (2008)
1.2×10^4	5.13^\dagger	Antoniucci et al. (2008)
1.25×10^3	1.8^\dagger	Antoniucci et al. (2008)
2.5×10^4	1.93^\dagger	Antoniucci et al. (2008)

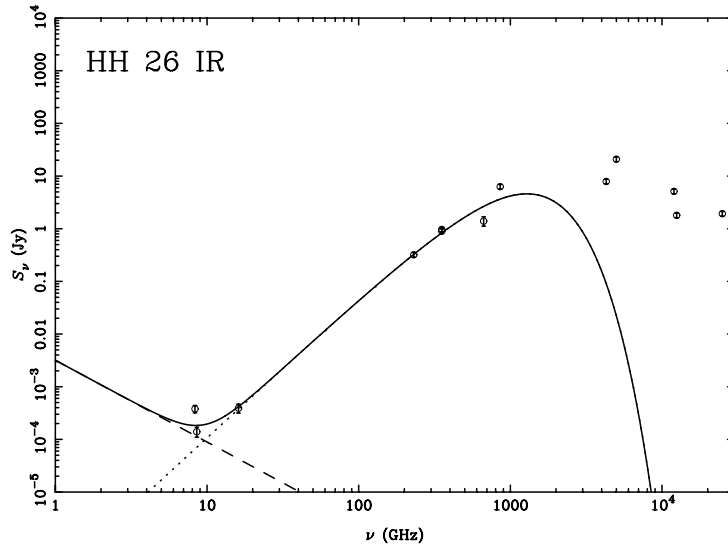


Table 8: HH 111

ν (GHz)	S_ν (Jy)	Reference
5	$(8.3 \pm 0.9) \times 10^{-4}$	Rodríguez et al. (2008)
8	$(9.5 \pm 0.4) \times 10^{-4}$	Rodríguez & Reipurth (1994)
14.62	$(3.11 \pm 0.53) \times 10^{-3}$	Ainsworth et al. (2012)
15	$(2.3 \pm 0.32) \times 10^{-3}$	Rodríguez & Reipurth (1994)
15.37	$(2.68 \pm 0.28) \times 10^{-3}$	Ainsworth et al. (2012)
16.12	$(2.39 \pm 0.26) \times 10^{-3}$	Ainsworth et al. (2012)
16.87	$(2.86 \pm 0.30) \times 10^{-3}$	Ainsworth et al. (2012)
17.62	$(2.51 \pm 0.34) \times 10^{-3}$	Ainsworth et al. (2012)
43	$(5.15 \pm 0.52) \times 10^{-3}$	Rodríguez et al. (2008)
110	$(4.6 \pm 0.46) \times 10^{-2}$	Stapelfeldt & Scoville (1993)
230	0.49 ± 0.02	Reipurth et al. (1993)
230	0.47 ± 0.05	Wilking et al. (1989)
273	0.75 ± 0.01	Dent et al. (1998)
285	0.69^\dagger	Stapelfeldt & Scoville (1993)
345	1.39 ± 0.03	Reipurth et al. (1993)
353	3.09^\dagger	di Francesco et al. (2008)
375	1.8 ± 0.02	Dent et al. (1998)
666	8.22 ± 0.26	Dent et al. (1998)
857	14.2 ± 0.9	Dent et al. (1998)
3×10^3	71.1^\dagger	Reipurth et al. (1993)
5×10^3	43.5^\dagger	Reipurth et al. (1993)
1.2×10^4	6.8^\dagger	Reipurth et al. (1993)
2.5×10^4	0.3^\dagger	Reipurth et al. (1993)

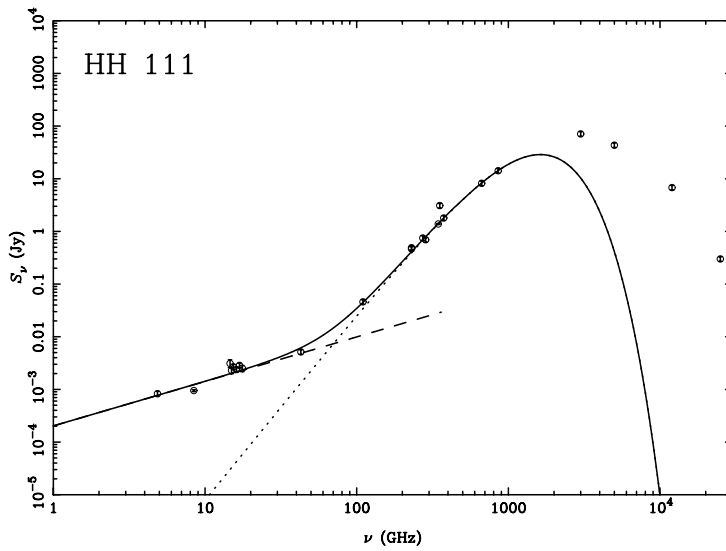


Table 9: NGC 2264 G

ν (GHz)	S_ν (Jy)	Reference
1.5	$(8 \pm 2) \times 10^{-4}$	Rodríguez & Curiel (1989)
5	$(1.9 \pm 0.2) \times 10^{-3}$	Rodríguez & Curiel (1989)
5	$6.7 \times 10^{-4\dagger}$	Gómez et al. (1994)
8	$5.5 \times 10^{-4\dagger}$	Gómez et al. (1994)
16.12	$(2.96 \pm 2.16) \times 10^{-4}$	Ainsworth et al. (2012)
273	0.25 ± 0.04	Ward-Thompson et al. (1995)
353	0.71^\dagger	di Francesco et al. (2008)
375	0.7 ± 0.04	Ward-Thompson et al. (1995)
666	3.9 ± 0.1	Ward-Thompson et al. (1995)
857	7.1 ± 0.28	Ward-Thompson et al. (1995)
3×10^3	17 ± 3	Ward-Thompson et al. (1995)
5×10^3	6 ± 1	Ward-Thompson et al. (1995)

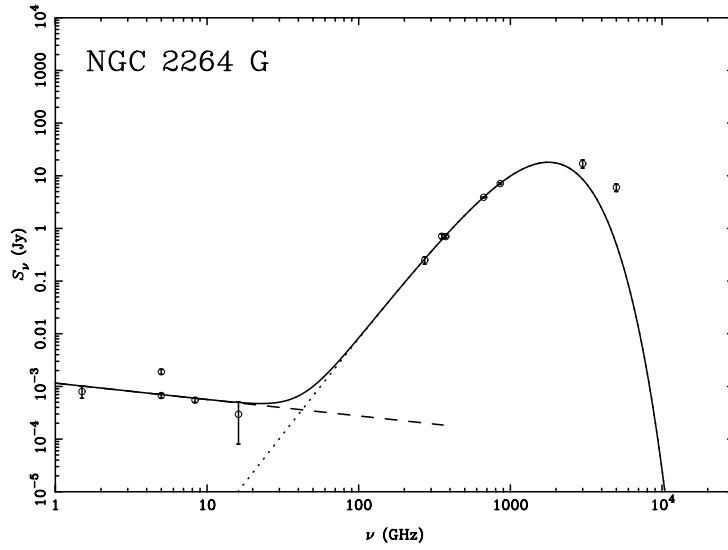


Table 10: Serpens SMM 1

ν (GHz)	S_ν (Jy)	Reference
1.5	$(4.5 \pm 0.5) \times 10^{-3}$	Condon et al. (1998)
1.5	$(9.5 \pm 0.49) \times 10^{-3}$	Curiel et al. (1993)
5	$(9.5 \pm 0.8) \times 10^{-3}$	Snell & Bally (1986)
5	$(7.9 \pm 0.48) \times 10^{-3}$	Rodríguez et al. (1989b)
5	$(7.6 \pm 0.3) \times 10^{-3}$	Curiel et al. (1993)
5	$2.2 \times 10^{-3\dagger}$	McMullin et al. (1994)
8	$(7.5 \pm 0.17) \times 10^{-3}$	Curiel et al. (1993)
8	$7.54 \times 10^{-3\dagger}$	Eiroa et al. (2005)
14.62	$(8.21 \pm 0.77) \times 10^{-3}$	Ainsworth et al. (2012)
15	$(1 \pm 0.3) \times 10^{-2}$	Snell & Bally (1986)
15	$(8.3 \pm 0.3) \times 10^{-3}$	Curiel et al. (1993)
15	$(6.2 \pm 0.044) \times 10^{-3}$	Rodríguez et al. (1989b)
15	$4.8 \times 10^{-3\dagger}$	McMullin et al. (1994)
15.37	$(7.66 \pm 0.55) \times 10^{-3}$	Ainsworth et al. (2012)
16	$(4.74 \pm 0.24) \times 10^{-3}$	Scaife et al. (2012a)
16.12	$(7.04 \pm 0.43) \times 10^{-3}$	Ainsworth et al. (2012)
16.87	$(6.77 \pm 0.44) \times 10^{-3}$	Ainsworth et al. (2012)
17.62	$(7.30 \pm 0.54) \times 10^{-3}$	Ainsworth et al. (2012)
23	$5.3 \times 10^{-3\dagger}$	McMullin et al. (1994)
43	$(1.42 \pm 0.04) \times 10^{-2}$	Choi (2009)
88	0.2^\dagger	Hogerheijde et al. (1999)
94	0.2^\dagger	Hogerheijde et al. (1999)
97	0.14^\dagger	McMullin et al. (1994)
111	0.41^\dagger	Hogerheijde et al. (1999)
214	2.65^\dagger	Hogerheijde et al. (1999)
240	2.3^\dagger	McMullin et al. (1994)
273	3.47 ± 0.1	Casali et al. (1993)
353	15.23^\dagger	di Francesco et al. (2008)
353	6.1^\dagger	Davis et al. (1999)
666	35.7^\dagger	Davis et al. (1999)
1.88×10^3	430^\dagger	McMullin et al. (1994)
3×10^3	380^\dagger	McMullin et al. (1994)
5×10^3	152.92^\dagger	McMullin et al. (1994)
6×10^3	88.6^\dagger	McMullin et al. (1994)
1.2×10^4	3.17^\dagger	McMullin et al. (1994)
1.5×10^4	2.6^\dagger	McMullin et al. (1994)
2.5×10^4	0.25^\dagger	McMullin et al. (1994)

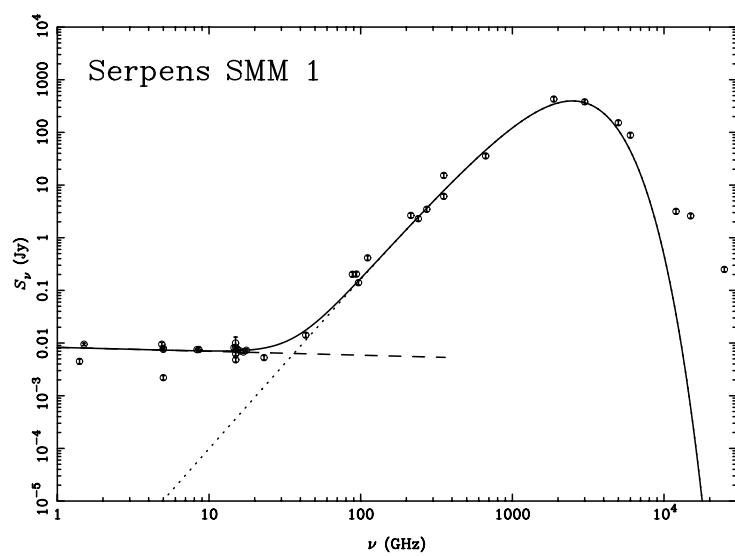


Table 11: L723

ν (GHz)	S_ν (Jy)	Reference
5	$7.5 \times 10^{-4\dagger}$	Anglada et al. (1996)
8	$7.6 \times 10^{-4\dagger}$	Anglada et al. (1996)
14.62	$(5.82 \pm 0.86) \times 10^{-4}$	Ainsworth et al. (2012)
15.37	$(5.16 \pm 0.64) \times 10^{-4}$	Ainsworth et al. (2012)
16.12	$(6.53 \pm 0.78) \times 10^{-4}$	Ainsworth et al. (2012)
16.87	$(6.55 \pm 0.69) \times 10^{-4}$	Ainsworth et al. (2012)
17.62	$(5.22 \pm 1.00) \times 10^{-4}$	Ainsworth et al. (2012)
230	0.37^\dagger	Motte & André (2001)
230	0.36 ± 0.02	Reipurth et al. (1993)
300	1 ± 0.5	Reipurth et al. (1993)
353	1.79 ± 0.11	Shirley et al. (2000)
353	2.24^\dagger	di Francesco et al. (2008)
666	8.5 ± 2.1	Shirley et al. (2000)
750	13 ± 3	Reipurth et al. (1993)
857	11.3 ± 1.8	Wu et al. (2007)
1.54×10^3	35 ± 7	Reipurth et al. (1993)
1.81×10^3	40 ± 12	Reipurth et al. (1993)
2.08×10^3	33 ± 10	Reipurth et al. (1993)
2.14×10^3	23 ± 8	Reipurth et al. (1993)
2.31×10^3	32 ± 11	Reipurth et al. (1993)
3×10^3	20.7 ± 1.7	Shirley et al. (2000)
3.16×10^3	27 ± 6	Shirley et al. (2000)
5×10^3	6.93 ± 0.62	Shirley et al. (2000)
1.2×10^4	0.38 ± 0.05	Shirley et al. (2000)
2.5×10^4	0.28 ± 0.06	Shirley et al. (2000)

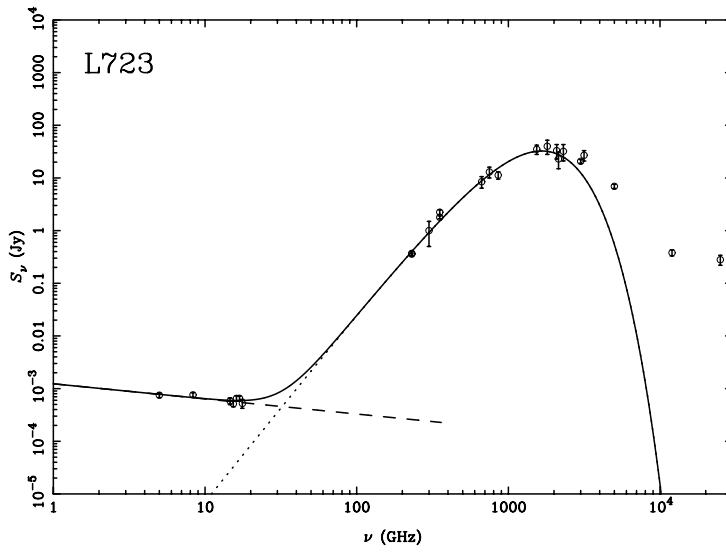


Table 12: L1251 A

ν (GHz)	S_ν (Jy)	Reference
5	$(1.7 \pm 0.03) \times 10^{-4}$	Beltrán et al. (2001)
8	$2.9 \times 10^{-4\dagger}$	Reipurth et al. (2004)
8	$(4.7 \pm 0.03) \times 10^{-4}$	Beltrán et al. (2001)
14.62	$(8.57 \pm 1.77) \times 10^{-4}$	Ainsworth et al. (2012)
15.37	$(9.85 \pm 1.36) \times 10^{-4}$	Ainsworth et al. (2012)
16.12	$(1.00 \pm 0.20) \times 10^{-3}$	Ainsworth et al. (2012)
16.87	$(7.61 \pm 1.58) \times 10^{-4}$	Ainsworth et al. (2012)
17.62	$(1.10 \pm 0.23) \times 10^{-3}$	Ainsworth et al. (2012)
230	0.23 ± 0.02	Rosvick & Davidge (1995)
273	0.38 ± 0.03	Rosvick & Davidge (1995)
353	5.68^\dagger	di Francesco et al. (2008)
375	0.71 ± 0.11	Rosvick & Davidge (1995)
857	20.8 ± 3.2	Wu et al. (2007)
3×10^3	78.5 ± 12.6	Rosvick & Davidge (1995)
3×10^3	79^\dagger	Sato & Fukui (1989)
5×10^3	67.7 ± 6.1	Rosvick & Davidge (1995)
5×10^3	66^\dagger	Sato & Fukui (1989)
1.2×10^4	28.3 ± 1.4	Rosvick & Davidge (1995)
1.2×10^4	26^\dagger	Sato & Fukui (1989)
2.5×10^4	6.2 ± 0.3	Rosvick & Davidge (1995)
2.5×10^4	5^\dagger	Sato & Fukui (1989)

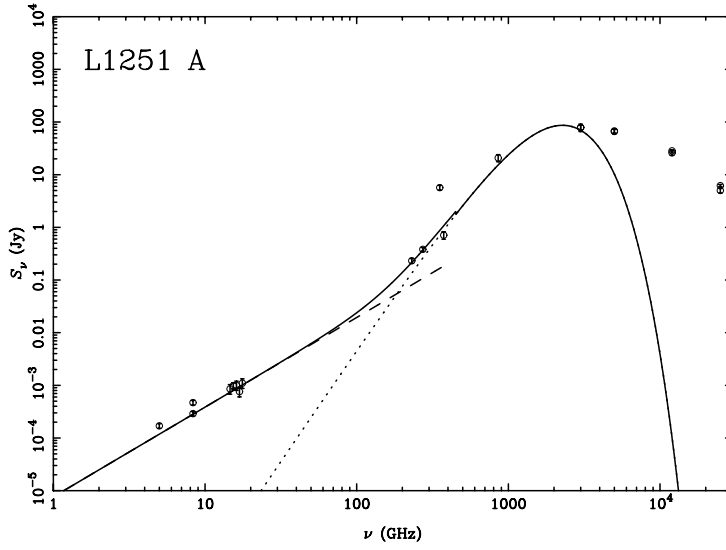


Table 13: L1448 C

ν (GHz)	S_ν (Jy)	Reference
8	$2.3 \times 10^{-4\dagger}$	Reipurth et al. (2002)
15	$(5.6 \pm 0.5) \times 10^{-4}$	Curiel et al. (1990)
16	$(5.37 \pm 0.33) \times 10^{-4}$	Scaife et al. (2011)
16.12	$(7.58 \pm 0.94) \times 10^{-4}$	Ainsworth et al. (2012)
86	$(2.6 \pm 0.2) \times 10^{-2}$	Shirley et al. (2000)
87	$1.2 \times 10^{-2\dagger}$	Bachiller et al. (1991)
87	$1.6 \times 10^{-2\dagger}$	Guilloteau et al. (1992)
91	$(3.92 \pm 0.39) \times 10^{-2}$	Shirley et al. (2011)
115	$(9.1 \pm 0.2) \times 10^{-2}$	Shirley et al. (2000)
230	1 ± 0.1	Barsony et al. (1998)
230	0.74 ± 0.11	Shirley et al. (2000)
230	0.91^\dagger	Motte & André (2001)
230	0.58^\dagger	Bachiller et al. (1991)
273	2.04^\dagger	Enoch et al. (2006)
273	1 ± 0.1	Barsony et al. (1998)
349	1.97 ± 0.13	Shirley et al. (2011)
353	2.98^\dagger	di Francesco et al. (2008)
353	6.51^\dagger	Hatchell et al. (2007)
353	3.95 ± 0.24	Shirley et al. (2000)
353	5.34 ± 0.43	Chandler & Richer (2000)
375	3 ± 0.3	Barsony et al. (1998)
400	6.91 ± 0.91	Chandler & Richer (2000)
666	68.4^\dagger	Hatchell et al. (2007)
666	21 ± 2	Barsony et al. (1998)
666	31.8 ± 5.5	Shirley et al. (2000)
666	34.2 ± 6.9	Chandler & Richer (2000)
857	58 ± 18	Chandler & Richer (2000)
857	30 ± 3	Barsony et al. (1998)
3×10^3	70.3 ± 14.8	Barsony et al. (1998)
5×10^3	31.2 ± 6.5	Barsony et al. (1998)
1.2×10^4	2.9 ± 0.6	Barsony et al. (1998)
2.5×10^4	0.33 ± 0.07	Barsony et al. (1998)

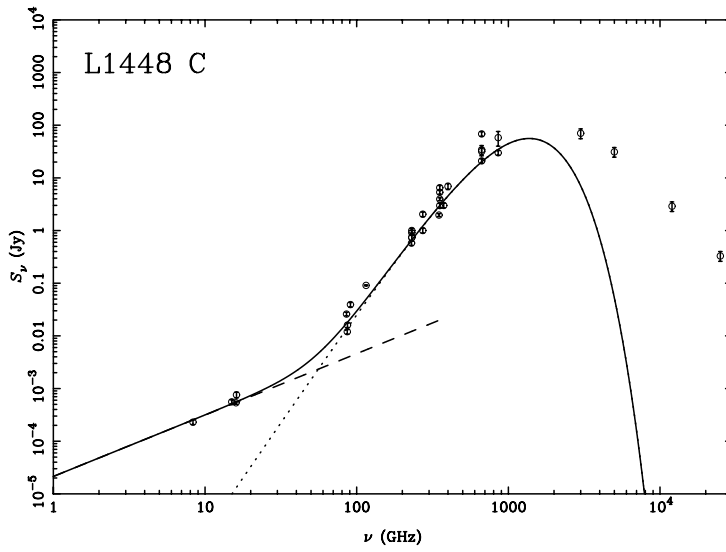


Table 14: NGC 1333 *IRAS* 2A

ν (GHz)	S_ν (Jy)	Reference
5	$(6 \pm 1) \times 10^{-5}$	Rodríguez et al. (1999)
8	$2.2 \times 10^{-4\dagger}$	Reipurth et al. (2002)
8	$(2.5 \pm 0.4) \times 10^{-4}$	Rodríguez et al. (1999)
16	$(3.2 \pm 0.25) \times 10^{-4}$	Scaife et al. (2011)
16.12	$(3.92 \pm 0.96) \times 10^{-4}$	Ainsworth et al. (2012)
43	$(1 \pm 0.5) \times 10^{-2}$	Anglada et al. (2004)
86	$3.5 \times 10^{-2\dagger}$	Jørgensen et al. (2004)
89	$4 \times 10^{-2\dagger}$	Jørgensen et al. (2004)
111	$(8.28 \pm 0.4) \times 10^{-2}$	Looney et al. (2000)
150	0.32 ± 0.07	Sandell et al. (1994)
230	0.88^\dagger	Motte & André (2001)
230	0.88 ± 0.12	Sandell et al. (1994)
273	1.46 ± 0.12	Sandell et al. (1994)
353	7.78^\dagger	Kirk et al. (2007)
353	4.79 ± 0.39	Chandler & Richer (2000)
375	4.08 ± 0.05	Sandell et al. (1994)
375	3.75 ± 0.15	Sandell et al. (1994)
400	5.54 ± 0.21	Sandell et al. (1994)
400	6.61 ± 0.86	Chandler & Richer (2000)
666	43 ± 11	Chandler & Richer (2000)
666	23.7 ± 0.9	Sandell et al. (1994)
857	37.2 ± 1.2	Sandell et al. (1994)
857	74 ± 22	Chandler & Richer (2000)
3×10^3	300^\dagger	Jennings et al. (1987)
6×10^3	104^\dagger	Jennings et al. (1987)

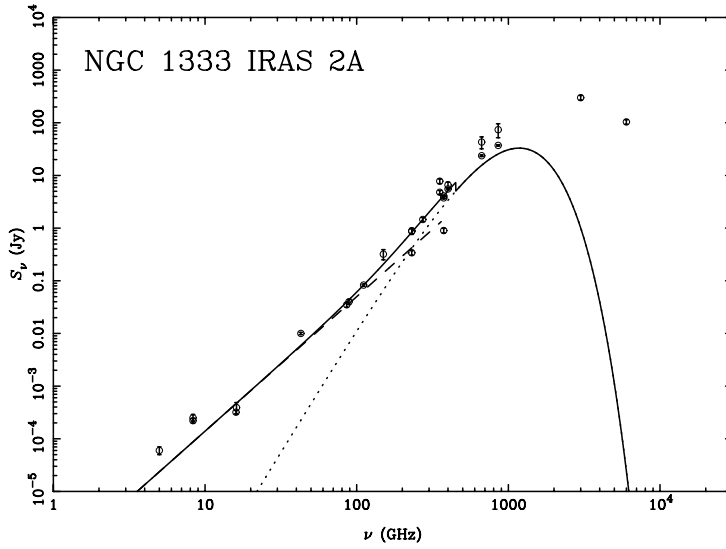


Table 15: NGC 1333 *IRAS* 2B

ν (GHz)	S_ν (Jy)	Reference
5	$(2.3 \pm 0.1) \times 10^{-4}$	Rodríguez et al. (1999)
8	$(4 \pm 0.2) \times 10^{-4}$	Rodríguez et al. (1999)
8	$(3.7 \pm 0.37) \times 10^{-4}$	Reipurth et al. (2002)
16	$(1.21 \pm 0.05) \times 10^{-3}$	Scaife et al. (2011)
16.12	$(5.05 \pm 1.01) \times 10^{-4}$	Ainsworth et al. (2012)
43	$(5.2 \pm 0.3) \times 10^{-3}$	Anglada et al. (2004)
86	$1.2 \times 10^{-2\dagger}$	Jørgensen et al. (2004)
89	$1.4 \times 10^{-2\dagger}$	Jørgensen et al. (2004)
111	$(2.77 \pm 0.32) \times 10^{-2}$	Looney et al. (2000)
353	1.19 ± 0.1	Chandler & Richer (2000)
400	1.53 ± 0.21	Chandler & Richer (2000)
666	7.7 ± 1.6	Chandler & Richer (2000)
857	13.4 ± 1.3	Chandler & Richer (2000)

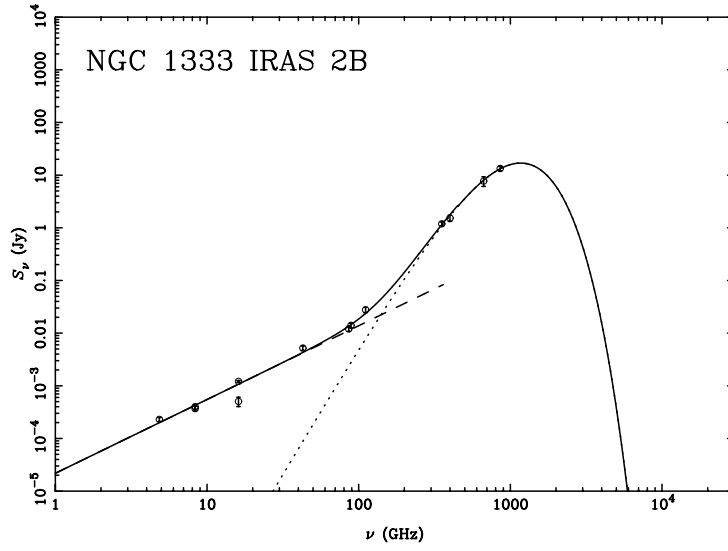


Table 16: L1551 NE

ν (GHz)	S_ν (Jy)	Reference
8	$6.6 \times 10^{-4\dagger}$	Reipurth et al. (2002)
16.12	$(7.43 \pm 0.92) \times 10^{-4}$	Ainsworth et al. (2012)
230	1.5^\dagger	Motte & André (2001)
230	0.85 ± 0.01	Andrews & Williams (2005)
230	0.85 ± 0.08	Moriarty-Schieven et al. (2000)
238	0.8 ± 0.12	Barsony & Chandler (1993)
272	1.07 ± 0.11	Barsony & Chandler (1993)
353	2.78^\dagger	Moriarty-Schieven et al. (2006)
353	10.5^\dagger	di Francesco et al. (2008)
379	2.22 ± 0.37	Barsony & Chandler (1993)
666	8.33^\dagger	Moriarty-Schieven et al. (2006)
677	16.2 ± 4.6	Barsony & Chandler (1993)
857	22.83 ± 0.72	Andrews & Williams (2005)
3×10^3	130^\dagger	Emerson et al. (1984)
5×10^3	80^\dagger	Emerson et al. (1984)
1.2×10^4	16^\dagger	Emerson et al. (1984)
2.5×10^4	1.2^\dagger	Emerson et al. (1984)

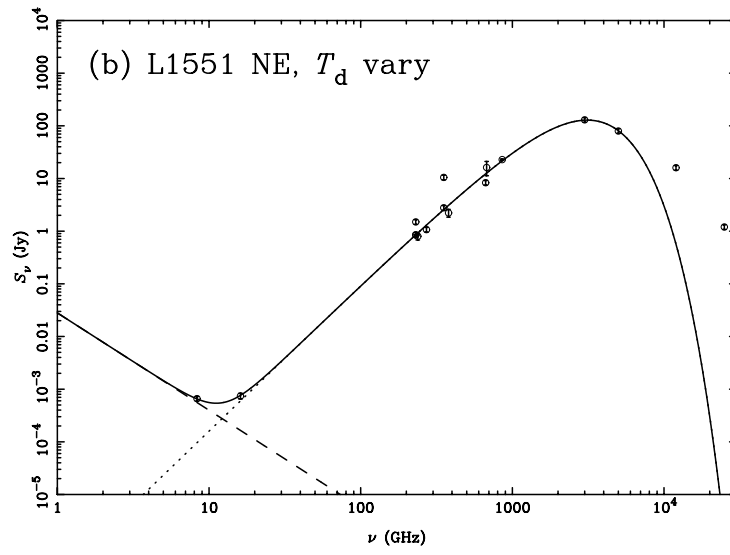
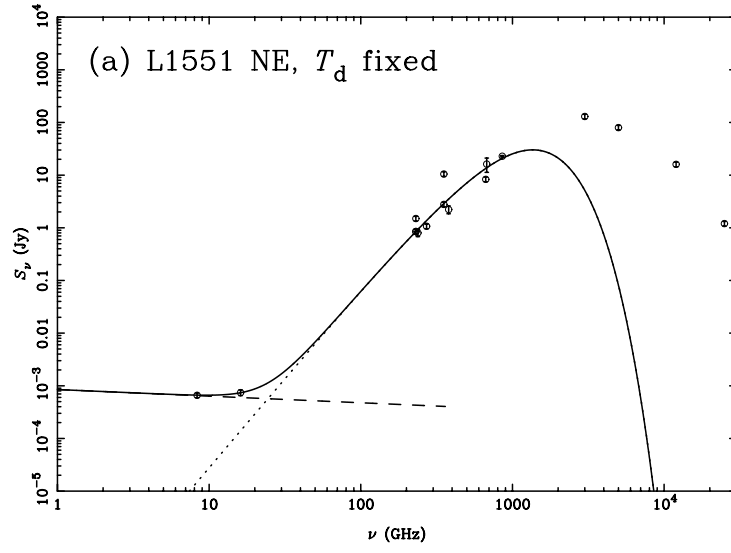
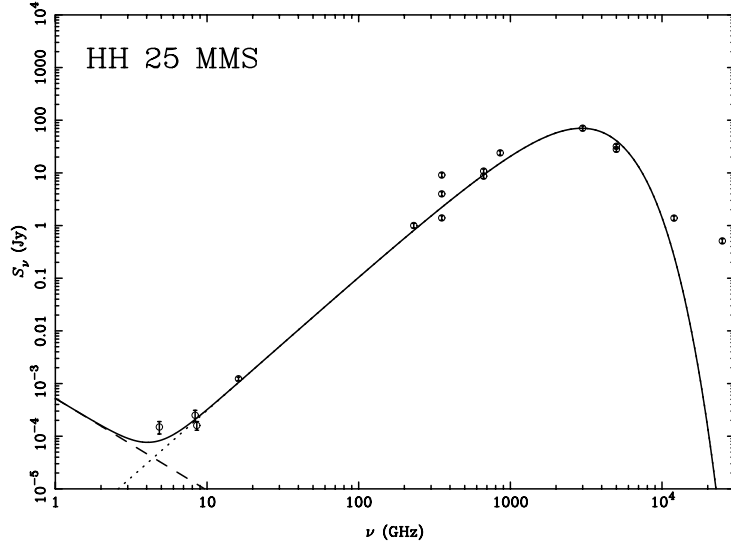


Table 17: HH 25 MMS

ν (GHz)	S_ν (Jy)	Reference
5	$(1.5 \pm 0.4) \times 10^{-4}$	Bontemps et al. (1995)
8	$(2.5 \pm 0.6) \times 10^{-4}$	Bontemps et al. (1995)
8	$(1.6 \pm 0.3) \times 10^{-4}$	Gibb (1999)
16.12	$(1.23 \pm 0.10) \times 10^{-3}$	Ainsworth et al. (2012)
231	1^\dagger	Lis et al. (1999)
353	9.11^\dagger	di Francesco et al. (2008)
353	4^\dagger	Nutter & Ward-Thompson (2007)
666	10.8^\dagger	Nutter & Ward-Thompson (2007)
666	8.7^\dagger	Phillips et al. (2001)
353	1.4^\dagger	Phillips et al. (2001)
857	24^\dagger	Lis et al. (1999)
3×10^3	70.66^\dagger	<i>IRAS</i>
5×10^3	28.04^\dagger	<i>IRAS</i>
5×10^3	32^\dagger	<i>IRAS</i>
1.2×10^4	1.39^\dagger	Gezari et al. (1999)
2.5×10^4	0.51^\dagger	Gezari et al. (1999)



References

- Ainsworth, R. E., Scaife, A. M. M., Ray, T. P., et al. 2012, *MNRAS*, 423, 1089
- Altenhoff, W. J., Thum, C., & Wendker, H. J. 1994, *A&A*, 281, 161
- Andrews, S. M., & Williams, J. P. 2005, *ApJ*, 631, 1134
- Anglada, G., Rodríguez, L. F., Osorio, M., et al. 2004, *ApJ*, 605, L137
- Anglada, G., Rodríguez, L. F., & Torrelles, J. M. 1996, *ApJ*, 473, L123
- Anglada, G., Villuendas, E., Estalella, R., et al. 1998, *AJ*, 116, 2953
- Antoniucci, S., Nisini, B., Giannini, T., & Lorenzetti, D. 2008, *A&A*, 479, 503
- Bachiller, R., Andre, P., & Cabrit, S. 1991, *A&A*, 241, L43
- Barsony, M., & Chandler, C. J. 1993, *ApJ*, 406, L71
- Barsony, M., Ward-Thompson, D., André, P., & O’Linger, J. 1998, *ApJ*, 509, 733
- Beltrán, M. T., Estalella, R., Anglada, G., Rodríguez, L. F., & Torrelles, J. M. 2001, *AJ*, 121, 1556
- Bieging, J. H., & Cohen, M. 1985, *ApJ*, 289, L5
- Bieging, J. H., Cohen, M., & Schwartz, P. R. 1984, *ApJ*, 282, 699
- Bontemps, S., Andre, P., & Ward-Thompson, D. 1995, *A&A*, 297, 98
- Cabrit, S., & Andre, P. 1991, *ApJ*, 379, L25
- Casali, M. M., Eiroa, C., & Duncan, W. D. 1993, *A&A*, 275, 195
- Chandler, C. J., & Richer, J. S. 2000, *ApJ*, 530, 851
- Chen, X., Launhardt, R., & Henning, T. 2009, *ApJ*, 691, 1729
- Choi, M. 2009, *ApJ*, 705, 1730
- Cohen, M., Bieging, J. H., & Schwartz, P. R. 1982, *ApJ*, 253, 707
- Condon, J. J., Cotton, W. D., Greisen, E. W., et al. 1998, *AJ*, 115, 1693
- Curiel, S., Raymond, J. C., Moran, J. M., Rodríguez, L. F., & Canto, J. 1990, *ApJ*, 365, L85
- Curiel, S., Rodríguez, L. F., Moran, J. M., & Canto, J. 1993, *ApJ*, 415, 191
- Davis, C. J., Matthews, H. E., Ray, T. P., Dent, W. R. F., & Richer, J. S. 1999, *MNRAS*, 309, 141
- Dent, W. R. F., Matthews, H. E., & Ward-Thompson, D. 1998, *MNRAS*, 301, 1049
- di Francesco, J., Johnstone, D., Kirk, H., MacKenzie, T., & Ledwosinska, E. 2008, *ApJS*, 175, 277
- Duncan, R. A., Forster, J. R., Gardner, F. F., & Whiteoak, J. B. 1987, *MNRAS*, 224, 721
- Eiroa, C., Torrelles, J. M., Curiel, S., & Djupvik, A. A. 2005, *AJ*, 130, 643
- Emerson, J. P., Harris, S., Jennings, R. E., et al. 1984, *ApJ*, 278, L49
- Enoch, M. L., Young, K. E., Glenn, J., et al. 2006, *ApJ*, 638, 293
- Evans, II, N. J., Levreault, R. M., Beckwith, S., & Skrutskie, M. 1987, *ApJ*, 320, 364
- Fischer, W. J., Megeath, S. T., Ali, B., et al. 2010, *A&A*, 518, L122+
- Gezari, D. Y., Pitts, P. S., & Schmitz, M. 1999, *VizieR Online Data Catalog*, 2225, 0
- Gibb, A. G. 1999, *MNRAS*, 304, 1
- Gómez, J. F., Curiel, S., Torrelles, J. M., et al. 1994, *ApJ*, 436, 749
- Gomez, J. F., Torrelles, J. M., Ho, P. T. P., Rodríguez, L. F., & Canto, J. 1993, *ApJ*, 414, 333
- Gramajo, L. V., Whitney, B. A., Gómez, M., & Robitaille, T. P. 2010, *AJ*, 139, 2504
- Guilloteau, S., Bachiller, R., Fuente, A., & Lucas, R. 1992, *A&A*, 265, L49

- Hatchell, J., Fuller, G. A., Richer, J. S., Harries, T. J., & Ladd, E. F. 2007, *A&A*, 468, 1009
- Hobson, M. P., & Baldwin, J. E. 2004, *Appl.Optics*, 43, 2651
- Hogerheijde, M. R., van Dishoeck, E. F., Salverda, J. M., & Blake, G. A. 1999, *ApJ*, 513, 350
- Jennings, R. E., Cameron, D. H. M., Cudlip, W., & Hirst, C. J. 1987, *MNRAS*, 226, 461
- Jørgensen, J. K., Hogerheijde, M. R., van Dishoeck, E. F., Blake, G. A., & Schöier, F. L. 2004, *A&A*, 413, 993
- Keene, J., & Masson, C. R. 1990, *ApJ*, 355, 635
- Keene, J. B., & Masson, C. R. 1986, in *Bulletin of the American Astronomical Society*, Vol. 18, *Bulletin of the American Astronomical Society*, 973
- Kirk, H., Johnstone, D., & Tafalla, M. 2007, *ApJ*, 668, 1042
- Lis, D. C., Menten, K. M., & Zylka, R. 1999, *ApJ*, 527, 856
- Looney, L. W., Mundy, L. G., & Welch, W. J. 2000, *ApJ*, 529, 477
- McMullin, J. P., Mundy, L. G., Wilking, B. A., Hezel, T., & Blake, G. A. 1994, *ApJ*, 424, 222
- Melis, C., Duchêne, G., Chomiuk, L., et al. 2011, *ApJ*, 739, L7
- Morgan, J. A., Snell, R. L., & Strom, K. M. 1990, *ApJ*, 362, 274
- Moriarty-Schieven, G. H., Johnstone, D., Bally, J., & Jenness, T. 2006, *ApJ*, 645, 357
- Moriarty-Schieven, G. H., Powers, J. A., Butner, H. M., Wannier, P. G., & Keene, J. 2000, *ApJ*, 533, L143
- Motte, F., & André, P. 2001, *A&A*, 365, 440
- Nutter, D., & Ward-Thompson, D. 2007, *MNRAS*, 374, 1413
- Ohashi, N., Hayashi, M., Ho, P. T. P., & Momose, M. 1997, *ApJ*, 475, 211
- Ohashi, N., Kawabe, R., Ishiguro, M., & Hayashi, M. 1991, *AJ*, 102, 2054
- Phillips, R. R., Gibb, A. G., & Little, L. T. 2001, *MNRAS*, 326, 927
- Pravdo, S. H., Rodríguez, L. F., Curiel, S., et al. 1985, *ApJ*, 293, L35
- Reipurth, B., Chini, R., Krugel, E., Kreysa, E., & Sievers, A. 1993, *A&A*, 273, 221
- Reipurth, B., Rodríguez, L. F., Anglada, G., & Bally, J. 2002, *AJ*, 124, 1045
- . 2004, *AJ*, 127, 1736
- Rodríguez, L. F., Anglada, G., & Curiel, S. 1999, *ApJS*, 125, 427
- Rodríguez, L. F., Canto, J., Mirabel, I. F., & Ruiz, A. 1989a, *ApJ*, 337, 712
- Rodríguez, L. F., Canto, J., Torrelles, J. M., & Ho, P. T. P. 1986, *ApJ*, 301, L25
- Rodríguez, L. F., & Curiel, S. 1989, *RMxAA*, 17, 115
- Rodríguez, L. F., Curiel, S., Cantó, J., et al. 2003, *ApJ*, 583, 330
- Rodríguez, L. F., Curiel, S., Moran, J. M., et al. 1989b, *ApJ*, 346, L85
- Rodríguez, L. F., Ho, P. T. P., Torrelles, J. M., Curiel, S., & Canto, J. 1990, *ApJ*, 352, 645
- Rodríguez, L. F., & Reipurth, B. 1994, *A&A*, 281, 882
- Rodríguez, L. F., Torrelles, J. M., Anglada, G., & Reipurth, B. 2008, *AJ*, 136, 1852
- Rosvick, J. M., & Davidge, T. J. 1995, *PASP*, 107, 49
- Sandell, G., Knee, L. B. G., Aspin, C., Robson, I. E., & Russell, A. P. G. 1994, *A&A*, 285, L1
- Sato, F., & Fukui, Y. 1989, *ApJ*, 343, 773
- Scaife, A. M. M., Hatchell, J., Davies, M., et al. 2011, *MNRAS*, 415, 893
- . 2012a, *MNRAS*, 420, 1019
- Scaife, A. M. M., Buckle, J. V., Ainsworth, R. E., et al. 2012b, *MNRAS*, 420, 3334

Shirley, Y. L., Evans, II, N. J., Rawlings, J. M. C., & Gregersen, E. M. 2000, *ApJS*, 131, 249

Shirley, Y. L., Mason, B. S., Mangum, J. G., et al. 2011, *AJ*, 141, 39

Snell, R. L., & Bally, J. 1986, *ApJ*, 303, 683

Snell, R. L., Bally, J., Strom, S. E., & Strom, K. M. 1985, *ApJ*, 290, 587

Stapelfeldt, K. R., & Scoville, N. Z. 1993, *ApJ*, 408, 239

Torrelles, J. M., Ho, P. T. P., Rodríguez, L. F., & Canto, J. 1985, *ApJ*, 288, 595

Ward-Thompson, D., Eiroa, C., & Casali, M. M. 1995, *MNRAS*, 273, L25

Wendker, H. J. 1995, *A&AS*, 109, 177

Wilking, B. A., Blackwell, J. H., Mundy, L. G., & Howe, J. E. 1989, *ApJ*, 345, 257

Wu, J., Dunham, M. M., Evans, II, N. J., Bourke, T. L., & Young, C. H. 2007, *AJ*, 133, 1560