# SPIRE Pointing Calibration Sources

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**Contents**

## 1. Introduction

This document summarises the requirements on pointing calibration sources for SPIRE, and provides a list of suitable sources and their relevant properties. Some important aspects of pointing calibration are also discussed in [1].

## 2. Requirements for SPIRE pointing sources

| Property | Requirement |
|---|---|
| Coordinates | Ideally the source coordinates should be known to better than 0.2" [1]; but 0.5" may be tolerable in the early stages of pointing calibration. |
| Angular size | Ideally a point source should be used. However, a small planetary disc is acceptable – Uranus and Neptune are compact with symmetrical and centrally peaked surface brightness distributions |
| Brightness | The source should be bright enough to provide high S/N, but not so bright as to cause significant non-linearity that would distort the beam shape if not corrected. In principle, the uncertainty in the recovered position (normalised to the FWHM) is roughly comparable to the S/N achieved on the peak position. In the absence of any other errors, a target statistical uncertainty of $1/20^{th}$ of a beam thus requires a S/N of order 20 or better. In practice there will be additional sources of uncertainty, and a better statistical S/N should be sought. Ref [1] considers the overall error budget and recommends a target S/N of ~ 100 on the peak. With nominal HSpot sensitivities, this is achievable in a standard 7-point observation with one repeat for a source brighter than about 150 mJy. To avoid complicating the analysis, nothing stronger than Uranus should be used. |
| Knowledge of brightness | No requirement |
| Short-term variability (timescale of an observation) | Adopting a typical requirement of S/N = 100 on the peak position, in order to have a negligible impact on the relative signals measured for different offset positions with respect to the peak, the intrinsic variability of the source must therefore be less than about 0.3% over the course of the measurement (which would result in a minor degradation of the S/N - by a factor of roughly $(1^2 + 0.3^2)^{0.5} = 1.04$. |
| Long-term variability (timescale longer than an observation) | No requirement as long as the brightness criteria are met. |
| Motion | Ideally pointing targets should have fixed coordinates, but there is no fundamental problem with moving targets if the telescope tracking is sufficiently accurate. Therefore no requirement on source motion is assumed in this document (although the utility of planets and asteroids for pointing will need to be considered in the light of the actual performance of the Herschel AOCS at the time of the observation). |
| Distribution on the sky | To ensure that accurate pointing calibration can be done for any allowed Herschel solar aspect angle at any time of year, calibration sources should be available over as wide an area of sky as possible. |
| Environment | Ideally, pointing sources would be seen against perfectly dark sky. In practice, sources have as strong a degree of contrast with respect to the background sky, and sky gradients and non-uniformities should be as low as possible. In considering a highly ambitious target $1/40^{th}$ beam overall accuracy, it is recommended in Ref [1] that the maximum signal that could be generated by an observation of the same part of sky in the absence of the point source must be < 0.2% of the source signal. A less stringent requirement of 0.3% is likely to be adequate for SPIRE purposes, especially in the early stages. A standard SPIRE point source compares the source against two positions 126" distant on each side. Allowing for the fact that the observation is a small map, we adopt a circular region of radius 5 arcminutes |

| | |
|---|---|
| | around the source, and require that the maximum surface brightness contrast over that region be less than 0.3% of the point source brightness. For a 1 Jy source, this corresponds to 3 mJy – this is close to the extragalactic confusion limit. |
| Source multiplicity | To facilitate the accurate calibration of the relative pixel positions on the SPIRE arrays, it is desirable to observe some double or multiple sources such that two or more point sources with known positions are detected simultaneously. |

### 2.1 Suitable pointing sources for SPIRE

**Planets:** When available, planets are routinely used on ground-based submillimetre telescopes for pointing measurements. Uranus and Neptune can be used provided that
(i) their positions are known with sufficient accuracy;
(ii) the can be tracked sufficiently accurately (or are moving sufficiently slowly) to introduce negligible uncertainties in the measurement.

**Asteroids:** Moderately bright asteroids can be used provided that
(i) their positions are known with sufficient accuracy;
(ii) the can be tracked sufficiently accurately to introduce negligible uncertainties in the measurement;
(iii) their FIR/submm rotational variability is either negligible or well-understood.

**QSOs, Blazars and BL Lacs:** Bright point-like extragalactic radio sources are routinely used for pointing calibration at ground-based submillimetre observatories when planets are not available. Although highly variable on timescales of days and longer, there are significant numbers of them which meet the above requirements. Section 3 is based on the JCMT and SEST pointing catalogues, so covering the northern and southern hemispheres. For the most precise pointing calibration observations, the brightest candidates in the least cirrus-contaminated regions of sky should be chosen to minimise the effects of confusion noise.

**Special sources:** Additionally, two double sources have been selected for focal plane spatial calibration.

## 3. Extragalactic pointing sources

A sample of sources has been selected from the JCMT pointing catalogue:

http://www.jach.hawaii.edu/JCMT/telescope/pointing/point_cat.html (also attached as Annex 1)

and the SEST 1.2-mm southern hemisphere pointing catalogue of Adrou et al. (2001) [2], the data from which are available at:

http://cdsarc.u-strasbg.fr/cgi-bin/qcat?/A+A/376/1123

The Adrou et al. table is reproduced in Annex 2.

Position and name references are taken from the NASA/IPAC Extragalactic Database (NED):

http://nedwww.ipac.caltech.edu/index.html

Extrapolated SPIRE flux densities have been derived from the lowest quoted 1.2-mm data for the SEST sources, and from the lowest 850 μm data for the JCMT sources, assuming a spectral index, $\alpha$ (where $S(\nu) \propto \nu^{\alpha}$), determined for each source from the SED information available in the NED database. A typical value for $\alpha$ is -1.

For a pointing calibration observation, we require a 250-μm brightness sufficient to give a good signal-to-noise ratio (S/N) in a short observation. A S/N > 100 in a 256 second (time on-source) point-source observation requires a 250 μm flux density > 150 mJy.

### 3.1 Pointing source list

Annex 3 is a table of potential pointing sources from the JCMT and SEST catalogues. The table is ordered by estimated 250-μm brightness. It lists the source name (with up to three common designations for each source), the J2000 coordinates, a plausible submillimetre spectral index based on SED data from NED, and the corresponding estimated SPIRE flux densities based on the lowest JCMT or SEST measurements. Some sources have both JCMT and SEST data - both are indicated; JCMT data should be taken as more reliable being based on more recent observations and closer in wavelength to SPIRE bands.

Not all of the sources have yet been fully characterised and checked - the ones which have are indicated by a Y in the Ver (Verification) column, and are available for selection as pointing sources. None of the others should be selected until they too have been verified.

The table has a column for Environment (Env). This will contain an indicator of whether there is a potential difficulty in use of a source for pointing calibration arising from background fluctuations in its vicinity. This evaluation has yet to be carried out in detail, but is not expected to be a problem for the initial use of any of the verified sources.

The visibility during Commissioning and PV phases (for the restricted solar aspect angle range) is indicated in the last column.

Based on the extrapolated minimum brightness at 250 μm, source visibilities, and a check of local confusion levels using the HSpot tool, we recommend the following sources as the best ones to be used initially (in order of preference):

1 3C273
2 0537-441
3 0454-463
4 3C279
5 0506-612

### 3.2 Special sources – focal plane geometry calibration

Section TBW

Initial notes:

Two special sources have been identified which have special utility as focal-plane geometry calibrators. These are Cygnus-A (Robson et al., Wright et al.) and DG Tau/DG TauB (ref….). Cygnus-A forms a triple source system, with the central core separated from each of the two radio lobes by approximately 1’. DG Tau/DG TauB is a double source, separated by ~57”.

More sources to be added.

Thomas Mueller has also proposed some asteroid pairs.

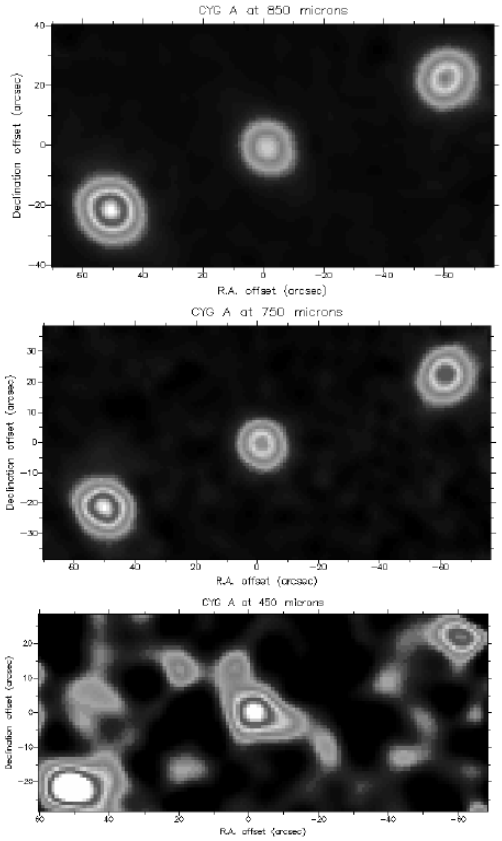


Figure 1 Sub-mm maps of Cyg-A, from Robson et al., 1998

## 4. List of Annexes

### 4.1 JCMT Pointing Catalogue

### 4.2 Adraou et al. table of southern hemisphere pointing sources

### 4.3 List of potential SPIRE pointing sources

## 5. References

1 Griffin, M., *Astrometric Accuracy Achievable with SPIRE*, SPIRE-UCF-NOT-001818, Issue 3.0, 19 July 2006
2 Adraou, A et al., *Pointing sources for southern submm telescopes*, Astron. Astrophys. 376, 1123, 2001.

## Annex 1: JCMT Pointing Catalogue

```
*                              JCMT_CATALOG
*                              ============
* point20081001.cat :
*
*
*  This catalogue is the new unified JCMT source catalogue. It can only be
*  used in software planes 136 or higher.
*
*  SOURCE NAME      (T1, A12)           source name
*  LONGITUDE        (T15,A,2I3,F7.3)    longitude (sign, hms/dms)
*  LATITUDE         (T30,A,2I3,F7.3)    latitude  (sign, dms)
*  COSYS            (T44,A2)            coordinate system code
*  VELOCITY         (T46,G12.2)         velocity (km/sec) (?f10.1)
*  FLUX             (n/a)               Flux [Jy/beam] or Peak antenna temperature [K]
*  VRANGE           (n/a)               velocity range of spectral line
*  VEL_DEF          (T70,A3)               velocity definition: LSR, HEL etc.
*  FRAME            (T75,A6)            velocity frame of reference RADIO, OPTICAL, RELATIVISTIC
*  COMMENTS         (n/a)               range of flux variations, integrated line intensity,
*                                       calibration standard, mode of observing etc.
*
*  NOTE:  The control task expects an entry for each column, even though some entries may never be used
*         (e.g. FLUX, which is informative only). If any of the columns: VELOCITY, FLUX, or VRANGE are
*         not applicable, PLEASE enter n/a in the appropriate column or 0.
*
*  The catalogue is organized in the following way:
*
*      CONTINUUM POINTING SOURCES
*          BLAZARS I - most of those in the previous catalog
*          BLAZARS II - new from the ICRF lists
*          BLAZARS III - bright (>0.3Jy), northern detections from m04bu23 (Ian Browne)
*          COMPACT HII regions, AGB stars, PMS stars
*          Spectral-line 5-point sources also bright enough for continuum work
*      SPECTRAL LINE CALIBRATORS
*      SPECTRAL LINE FIVEPOINT SOURCES
*
*-------------------------------------------------------------------------------
*  Revisions :
*
* 1996 Jul 09 - original verison (?) (GS)
```

```
* 1996 Nov 24 - Modified holography source position (REH)
* 1997 Aug 29 - Modified holography position (RMP/GHLS)
* 1999 Nov 03 - updated coords to J2000, see notes (IMC - until next change)
* 2001 Feb 23 - updated 850um fluxes for 'new' blazars
* 2001 Mar 12 - add need for 120" chop for DG Tau
* 2001 Jul 02 - updated 0.85mm fluxes based on last 1.5years of data, for
*                - 76% of original blazars
*                - 51% of new blazars
*                - all but 5 continuum (non-blazar) sources
* 2002 Jan 04 - Several spectral-fivepoint objects were revealed as having
*               inaccurate coordinates. Previously, SIMBAD coordinates were used.
*               Size and sense of errors supported adoption of coordinates by
*               Loup et al (1993, A&AS 99, 291)
*               (which formed the basis of the 1950.0 version of this catalog).
*               Loup shows good correlation, for late type stars with HD numbers,
*               with the Hipparcos catalog.
*               Particular objects have caught the attention of observing staff
*               in the last couple of months (CIT6, V370Aur, V636Mon, all stars,
*               note) and in each case the Loup et al (1993) coordinates would
*               have provided better service. Previous updates for CIT6, IRC-10502,
*               GL865 superseded without loss of accuracy by Loup's coordinates.
*
* 2002 Apr 10 - updated HOLO position
* 2002 May 02 - 2 candidates from EIR added, 1622-2**
* 2002 Aug 20 - names of 0954+658 and 1739+522 correctly installed
* 2002 Nov 08 - coordinates for VYCMa & oh231.8 consolidated
* 2002 Dec 26 - Dec coords for o Ceti corrected - previousd update erroneous
* 2003 Jan 28 - Observatory program targets & Targets-Of-Opportunity removed
* 2003 Mar 20 - Addition of [c] [s] or [cs] as first characters of Comments field
*               to indicate utitlity as c-ontinuum or s-pectral-fivepoint
*               pointing sources. [cs] is for those suitable for both, with
*               a limiting brightness for normally [s] sources of 0.2Jy
* 2003 Jun 09 - 12 sp-line 5-point sources added (suggested by Thomas Lowe)
*             - 3 sp-line 5-pt sources (WXPsc, oCeti, CIT6) given [c] status also
* 2003 Jun 20 - VCyg coords consolidated
* 2004 Mar 29 - 5 additional CO:2-1 spectral-line sources added (courtesy TBL)
* 2004 May 04 - GL5379 removed - position uncertain by 11" (JW)
* 2004 Dec 13 - updated 850um fluxes
* 2004 Dec 14 - addition of bright (>0.3Jy) detections by m04bu23 (Ian Browne)
* 2004 Dec 19 - o Ceti coords updated to 2005.0 for proper motion
* 2005 Jan 28 - routine update of blazar brightnesses
* 2005 Mar 30 - routine update of blazar brightnesses
* 2005 Apr 19 - add BVP1 (courtesy V.Barnard)
```

```
* 2005 Jul 01 - rationalization of velocities for L1551-IRS1, OH231.8, NGC6334I
* 2005 Jul 12 - W3(OH) : position updated to that by ICRS
* 2005 Sep 12 - offset positions for W3(OH) & L1551-IRS5 corrected
* 2006 Feb 13 - include 1153+495 (thank you J.Hoge)
* 2007 Mar 02 - add possible maser source IRC+20326M
* 2007 May 04 - add comments for G45.1 = G45.07+0.13
* 2007 Jul 09 - update Loup sources for Hipparcos positions
*              - use p.m.s appropriate for 2010
*              - delete IRC+20326M (spurious); add NGC6563; correct VXSgr
* 2007 Jul 10 - add 3 stars from m07ai05
* 2007 Jul 17 - Notes for sp.line pointing sources to include
*               Loup class/quality and Hipparcos update if applicable
*
* 2007 Aug 30 - Add bright (IntInt>20K.km/s) Loup sources somehow not already in this catalog:
*              - NGC6072, & IRC+10401 to 'Loup-2', and V384Cep & IILup to L-3
* 2008 Jan 28 - clarify Int.Int.s for GL230
* 2008 Aug 28 - remove GL230, V1365Aql, V437Sct following analysis by J.Wouterloot
* 2008 Sep 09 - change s-pectral l-ine notation from [s] to [l]
* 2008 Oct 01 - remove GL2374 - duplicate of OH44.1
* -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- --
*  CONTINUUM POINTING SOURCES : BLAZARS
*
* -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- --
*
*  Coordinates for blazars taken from
*     Kuhr et al.         1981 Astr. Ap. Suppl., 45, 367
*     Perley, R.A.        1982 A.J. 87, 859
*     Hewitt & Burbridge  1987 Ap.J. Suppl. 63, 1-246
*     Edelson R.A.        1987 A.J. 94, 1150
*
*  see http://www.jach.hawaii.edu/JACpublic/JCMT/pointing/point2000.html
*  for the contributions of each of these to this catalog, and for
*  the transformations etc leading to this version of the catalog.
```

```
* -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- --
* BLAZARS I
*SOURCE          RA             DEC           EQUI  VEL     FLUX  RANGE  FRAME DEF   Comments
*                                              NOX    -     0.85mm   -                observed range at 850um
* -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- --

0003-066         00 06 13.893 - 06 23 35.33 RJ    n/a      1.0   n/a   LSR  RADIO [c] 1.7 - 1.1 Jy (2005 Jan)
0048-097         00 50 41.318 - 09 29 05.21 RJ    n/a      0.4   n/a   LSR  RADIO [c] 0.4 - 0.5 Jy (2005 Jan)
PKS0106          01 08 38.771 + 01 35 00.32 RJ    n/a      0.2   n/a   LSR  RADIO [c] 0.1 - 0.3 Jy (2004 Aug-Oct)
0133+476         01 36 58.595 + 47 51 29.10 RJ    n/a      1.6   n/a   LSR  RADIO [c] 1.1 - 1.7 Jy (2004 Aug-Dec)
0149+218         01 52 18.059 + 22 07 07.70 RJ    n/a      0.3   n/a   LSR  RADIO [c] 0.3 -     Jy (2001 May)
0202+319         02 05 04.925 + 32 12 30.10 RJ    n/a      0.2   n/a   LSR  RADIO [c] 0.2 -     Jy (2004 Sep)
0212+735         02 17 30.813 + 73 49 32.62 RJ    n/a      0.5   n/a   LSR  RADIO [c] 0.5 -     Jy (2004 Jul)
0215+015         02 17 48.955 + 01 44 49.70 RJ    n/a      0.1   n/a   LSR  RADIO [c] 0.1 -     Jy (2004 Jul)
0219+428         02 22 39.612 + 43 02 07.80 RJ    n/a      0.3   n/a   LSR  RADIO [c] 0.3 -     Jy (2001 Jul)
0221+067         02 24 28.428 + 06 59 23.34 RJ    n/a      0.2   n/a   LSR  RADIO [c] 0.4 - 0.2 Jy (2001 Jul)
0224+671         02 28 50.051 + 67 21 03.03 RJ    n/a      0.3   n/a   LSR  RADIO [c] 0.2 - 0.4 Jy (2004 Aug-Oct)
0234+285         02 37 52.406 + 28 48 08.99 RJ    n/a      1.3   n/a   LSR  RADIO [c] 1.2 - 1.5 Jy (2004 Sep-Dec)
0235+164         02 38 38.930 + 16 36 59.27 RJ    n/a      0.6   n/a   LSR  RADIO [c] 1.1 - 0.6 Jy (2005 Jan)
0300+471         03 03 35.242 + 47 16 16.28 RJ    n/a      0.6   n/a   LSR  RADIO [c]
0306+102         03 09 03.624 + 10 29 16.34 RJ    n/a      0.2   n/a   LSR  RADIO [c] 0.2 -     Jy (2001 Jul)
3C84             03 19 48.160 + 41 30 42.10 RJ    n/a      2.4   n/a   LSR  RADIO [c] 2.2 - 2.6 Jy (2004 Mar-Dec)
0336-019         03 39 30.938 - 01 46 35.80 RJ    n/a      0.4   n/a   LSR  RADIO [c] 0.5 - 0.4 Jy (2004 Sep-Dec)
0355+508         03 59 29.747 + 50 57 50.16 RJ    n/a      1.8   n/a   LSR  RADIO [c] 3.1 - 1.8 Jy (2004 Aug-Dec)
0420-014         04 23 15.801 - 01 20 33.07 RJ    n/a      1.8   n/a   LSR  RADIO [c] 6.1 - 1.8 Jy (2004 Jan-Dec)
0422+004         04 24 46.842 + 00 36 06.33 RJ    n/a      0.7   n/a   LSR  RADIO [c]
3C120            04 33 11.096 + 05 21 15.62 RJ    n/a      0.3   n/a   LSR  RADIO [c] 0.3 -     Jy (2001 Jul)
PKS0438          04 40 17.180 - 43 33 08.60 RJ    n/a      0.4   n/a   LSR  RADIO [c]
0454-234         04 57 03.179 - 23 24 52.02 RJ    n/a      0.7   n/a   LSR  RADIO [c] 0.6 - 0.8 Jy (2004 Mar-Dec)
0458-020         05 01 12.810 - 01 59 14.26 RJ    n/a      0.2   n/a   LSR  RADIO [c] 0.5 - 0.2 Jy (2005 Jan)
0521-365         05 22 57.985 - 36 27 30.85 RJ    n/a      0.5   n/a   LSR  RADIO [c] 2.5 - 0.5 Jy (2001 Jul)
0528+134         05 30 56.417 + 13 31 55.15 RJ    n/a      1.3   n/a   LSR  RADIO [c] 0.8 - 1.3 Jy (2004 Feb-Dec)
0529+075         05 32 38.998 + 07 32 43.35 RJ    n/a      0.4   n/a   LSR  RADIO [c] 0.4 -     Jy (2004 Feb)
PKS0537          05 38 50.362 - 44 05 08.94 RJ    n/a      2.3   n/a   LSR  RADIO [c] 2.3 -     Jy (2004 Mar)
0552+398         05 55 30.806 + 39 48 49.17 RJ    n/a      0.4   n/a   LSR  RADIO [c] 0.3 - 0.4 Jy (2004 Mar-Nov)
0605-085         06 07 59.699 - 08 34 49.98 RJ    n/a      0.4   n/a   LSR  RADIO [c] 0.4 -     Jy (2003 Nov)
0607-157         06 09 40.950 - 15 42 40.67 RJ    n/a      1.0   n/a   LSR  RADIO [c] 1.0 -     Jy (2004 Jan)
0642+449         06 46 32.026 + 44 51 16.59 RJ    n/a      0.3   n/a   LSR  RADIO [c] 0.4 - 0.3 Jy (2004 Mar-Oct)
0716+714         07 21 53.448 + 71 20 36.36 RJ    n/a      1.7   n/a   LSR  RADIO [c] 2.5 - 1.6 Jy (2004 Mar-Dec)
0727-115         07 30 19.112 - 11 41 12.60 RJ    n/a      0.8   n/a   LSR  RADIO [c] 0.8 -     Jy (2004 Mar)
0735+178         07 38 07.394 + 17 42 19.00 RJ    n/a      0.4   n/a   LSR  RADIO [c] 0.5 -     Jy (2004 Jan-Nov)
0736+017         07 39 18.034 + 01 37 04.62 RJ    n/a      0.6   n/a   LSR  RADIO [c] 3.4 - 0.6 Jy (2004 Jan-Nov)
0745+241         07 48 36.109 + 24 00 24.11 RJ    n/a      0.3   n/a   LSR  RADIO [c] 0.3 - 0.4 Jy (2004 Nov)
```

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0748+126 | 07 | 50 | 52.046 | + | 12 | 31 | 04.83 | RJ | n/a | 0.3 | n/a | LSR | RADIO | [c] | 0.3 | - | Jy (2001 Jul) |
| 0754+100 | 07 | 57 | 06.643 | + | 09 | 56 | 34.85 | RJ | n/a | 1.0 | n/a | LSR | RADIO | [c] | 1.0 | - 1.1 | Jy (2004 Jan) |
| 0829+046 | 08 | 31 | 48.877 | + | 04 | 29 | 39.09 | RJ | n/a | 0.5 | n/a | LSR | RADIO | [c] | 0.2 | - 0.5 | Jy (2004 Jan-Sep) |
| 0836+710 | 08 | 41 | 24.365 | + | 70 | 53 | 42.17 | RJ | n/a | 0.4 | n/a | LSR | RADIO | [c] | 0.7 | - 0.4 | Jy (2004 Mar-Nov) |
| OJ287 | 08 | 54 | 48.875 | + | 20 | 06 | 30.64 | RJ | n/a | 4.0 | n/a | LSR | RADIO | [c] | 3.3 | - 5.1 | Jy (2004 Mar) |
| 0917+449 | 09 | 20 | 58.458 | + | 44 | 41 | 53.99 | RJ | n/a | 0.2 | n/a | LSR | RADIO | [c] | 0.2 | - | Jy (2001 Jul) |
| 0923+392 | 09 | 27 | 03.014 | + | 39 | 02 | 20.85 | RJ | n/a | 1.0 | n/a | LSR | RADIO | [c] | 1.0 | - 1.3 | Jy (2005 Mar) |
| 0954+658 | 09 | 58 | 47.245 | + | 65 | 33 | 54.82 | RJ | n/a | 1.0 | n/a | LSR | RADIO | [c] | 0.5 | - 1.0 | Jy (2005 Mar) |
| 1034-293 | 10 | 37 | 16.080 | - | 29 | 34 | 02.81 | RJ | n/a | 0.5 | n/a | LSR | RADIO | [c] | 0.4 | - 0.5 | Jy (2004 Sep) |
| 1044+719 | 10 | 48 | 27.620 | + | 71 | 43 | 35.94 | RJ | n/a | 0.9 | n/a | LSR | RADIO | [c] | 0.3 | - 1.2 | Jy (2004 Jan-Dec) |
| 1055+018 | 10 | 58 | 29.605 | + | 01 | 33 | 58.82 | RJ | n/a | 0.7 | n/a | LSR | RADIO | [c] | 3.1 | - 0.7 | Jy (2005 Mar) |
| 1147+245 | 11 | 50 | 19.212 | + | 24 | 17 | 53.84 | RJ | n/a | 0.5 | n/a | LSR | RADIO | [c] | 0.4 | - 0.5 | Jy (2004 Jan) |
| 1153+495 | 11 | 53 | 24.467 | + | 49 | 31 | 08.83 | RJ | n/a | 1.5 | n/a | LSR | RADIO | [c] | 1.5 | - | Jy (2005 Dec) |
| 1156+295 | 11 | 59 | 31.834 | + | 29 | 14 | 43.83 | RJ | n/a | 0.3 | n/a | LSR | RADIO | [c] | 0.2 | - 0.4 | Jy (2004 Mar) |
| 1213-172 | 12 | 15 | 46.752 | - | 17 | 31 | 45.40 | RJ | n/a | 0.2 | n/a | LSR | RADIO | [c] | 0.2 | - 0.3 | Jy (2001 Jul) |
| 3C273 | 12 | 29 | 06.700 | + | 02 | 03 | 08.60 | RJ | n/a | 2.1 | n/a | LSR | RADIO | [c] | 2.1 | - 4.2 | Jy (2005 Mar) |
| VirgoA | 12 | 30 | 49.423 | + | 12 | 23 | 28.04 | RJ | n/a | 1.9 | n/a | LSR | RADIO | [c] | 1.8 | - 1.9 | Jy (2004 Jan-Dec) |
| 3C279 | 12 | 56 | 11.167 | - | 05 | 47 | 21.52 | RJ | n/a | 3.4 | n/a | LSR | RADIO | [c] | 3.4 | - 7.6 | Jy (2005 Mar) |
| 1308+326 | 13 | 10 | 28.664 | + | 32 | 20 | 43.78 | RJ | n/a | 0.5 | n/a | LSR | RADIO | [c] | 1.3 | - 0.4 | Jy (2005 Jan) |
| 1313-333 | 13 | 16 | 07.986 | - | 33 | 38 | 59.17 | RJ | n/a | 0.5 | n/a | LSR | RADIO | [c] | 0.5 | - | Jy (2004 Feb) |
| 1334-127 | 13 | 37 | 39.783 | - | 12 | 57 | 24.69 | RJ | n/a | 2.4 | n/a | LSR | RADIO | [c] | 3.8 | - 2.4 | Jy (2004 Sep-Dec) |
| 1413+135 | 14 | 15 | 58.817 | + | 13 | 20 | 23.71 | RJ | n/a | 0.4 | n/a | LSR | RADIO | [c] | 0.4 | - | Jy (2004 Mar) |
| 1418+546 | 14 | 19 | 46.597 | + | 54 | 23 | 14.78 | RJ | n/a | 0.4 | n/a | LSR | RADIO | [c] | 0.8 | - 0.3 | Jy (2004 Jan-Dec) |
| 1510-089 | 15 | 12 | 50.533 | - | 09 | 05 | 59.83 | RJ | n/a | 0.9 | n/a | LSR | RADIO | [c] | 0.4 | - 0.9 | Jy (2004 Mar-Dec) |
| 1514-241 | 15 | 17 | 41.813 | - | 24 | 22 | 19.48 | RJ | n/a | 1.0 | n/a | LSR | RADIO | [c] | 0.9 | - 1.1 | Jy (2003 May-Jul) |
| 1538+149 | 15 | 40 | 49.492 | + | 14 | 47 | 45.88 | RJ | n/a | 0.3 | n/a | LSR | RADIO | [c] | 0.3 | - | Jy (2003 Jun) |
| 1548+056 | 15 | 50 | 35.269 | + | 05 | 27 | 10.45 | RJ | n/a | 0.6 | n/a | LSR | RADIO | [c] | 0.6 | - 0.8 | Jy (2004 Dec) |
| 1606+106 | 16 | 08 | 46.203 | + | 10 | 29 | 07.78 | RJ | n/a | 0.2 | n/a | LSR | RADIO | [c] | 0.2 | - 0.3 | Jy (2004 Mar) |
| 1611+343 | 16 | 13 | 41.064 | + | 34 | 12 | 47.91 | RJ | n/a | 0.6 | n/a | LSR | RADIO | [c] | 0.8 | - 0.6 | Jy (2004 Sep-Dec) |
| 1622-253 | 16 | 25 | 46.892 | - | 25 | 27 | 38.33 | RJ | n/a | 0.5 | n/a | LSR | RADIO | [c] | 0.5 | - | Jy (2002 May) |
| 1622-297 | 16 | 26 | 06.021 | - | 29 | 51 | 26.97 | RJ | n/a | 0.3 | n/a | LSR | RADIO | [c] | 0.3 | - | Jy (2002 May) |
| 1633+382 | 16 | 35 | 15.493 | + | 38 | 08 | 04.50 | RJ | n/a | 0.8 | n/a | LSR | RADIO | [c] | 1.6 | - 0.8 | Jy (2005 Mar) |
| 3C345 | 16 | 42 | 58.810 | + | 39 | 48 | 36.99 | RJ | n/a | 1.5 | n/a | LSR | RADIO | [c] | 2.0 | - 1.5 | Jy (2004 Jan-Sep) |
| 1657-261 | 17 | 00 | 53.154 | - | 26 | 10 | 51.72 | RJ | n/a | 0.2 | n/a | LSR | RADIO | [c] | 0.2 | - | Jy (2001 Apr) |
| 1730-130 | 17 | 33 | 02.706 | - | 13 | 04 | 49.55 | RJ | n/a | 1.1 | n/a | LSR | RADIO | [c] | 1.5 | - 1.1 | Jy (2004 Jan-Sep) |
| 1739+522 | 17 | 40 | 36.978 | + | 52 | 11 | 43.41 | RJ | n/a | 0.1 | n/a | LSR | RADIO | [c] | 0.3 | - 0.1 | Jy (2001 Jul) |
| 1741-038 | 17 | 43 | 58.856 | - | 03 | 50 | 04.62 | RJ | n/a | 1.9 | n/a | LSR | RADIO | [c] | 2.1 | - 1.9 | Jy (2003 May-Jul) |
| 1749+096 | 17 | 51 | 32.819 | + | 09 | 39 | 00.73 | RJ | n/a | 0.3 | n/a | LSR | RADIO | [c] | 1.2 | - 0.3 | Jy (2001 Jul) |
| 1749+701 | 17 | 48 | 32.840 | + | 70 | 05 | 50.77 | RJ | n/a | 0.2 | n/a | LSR | RADIO | [c] | 0.2 | - | (2001 May) |
| 1803+784 | 18 | 00 | 45.684 | + | 78 | 28 | 04.02 | RJ | n/a | 0.7 | n/a | LSR | RADIO | [c] | 0.6 | - 0.8 | Jy (2003 May-Jul) |
| 1807+698 | 18 | 06 | 50.681 | + | 69 | 49 | 28.11 | RJ | n/a | 0.9 | n/a | LSR | RADIO | [c] | 0.9 | - 1.0 | Jy (2003 May-Jul) |
| 1823+568 | 18 | 24 | 07.068 | + | 56 | 51 | 01.49 | RJ | n/a | 1.0 | n/a | LSR | RADIO | [c] | 0.5 | - 1.1 | Jy (2005 Mar) |
| 1908-202 | 19 | 11 | 09.653 | - | 20 | 06 | 55.11 | RJ | n/a | 0.7 | n/a | LSR | RADIO | [c] | 0.7 | - | Jy (2001 May) |

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1921-293        19 24 51.056 - 29 14 30.12 RJ    n/a     4.0   n/a   LSR  RADIO [c] 5.0 - 4.0 Jy (2003 May-Dec)
1923+210        19 25 59.605 + 21 06 26.16 RJ    n/a     0.4   n/a   LSR  RADIO [c] 0.4 -     Jy (2004 Nov)
1928+738        19 27 48.495 + 73 58 01.57 RJ    n/a     0.4   n/a   LSR  RADIO [c] 0.4 -     Jy (2001 Jul)
1958-179        20 00 57.090 - 17 48 57.67 RJ    n/a     0.5   n/a   LSR  RADIO [c] 0.5 - 0.8 Jy (2001 Jul)
2005+403        20 07 44.945 + 40 29 48.60 RJ    n/a     0.7   n/a   LSR  RADIO [c] 0.7 -     Jy (2003 Jul)
2007+776        20 05 30.999 + 77 52 43.25 RJ    n/a     0.3   n/a   LSR  RADIO [c] 0.5 - 0.3 Jy (2001 Jul)
2008-159        20 11 15.711 - 15 46 40.25 RJ    n/a     0.4   n/a   LSR  RADIO [c] 0.4 -     Jy (2004 Oct)
2021+317        20 23 19.017 + 31 53 02.31 RJ    n/a     0.3   n/a   LSR  RADIO [c] 0.3 -     Jy (2001 Jul)
2037+511        20 38 37.035 + 51 19 12.66 RJ    n/a     0.4   n/a   LSR  RADIO [c] 0.4 - 0.5 Jy (2004 Mar-Aug)
2059+034        21 01 38.834 + 03 41 31.32 RJ    n/a     0.5   n/a   LSR  RADIO [c]
2134+004        21 36 38.586 + 00 41 54.21 RJ    n/a     0.7   n/a   LSR  RADIO [c] 0.5 - 0.7 Jy
2145+067        21 48 05.459 + 06 57 38.60 RJ    n/a     0.2   n/a   LSR  RADIO [c] 3.0 - 0.2 Jy (2004 Dec)
2155-304        21 58 52.065 - 30 13 32.12 RJ    n/a     0.1   n/a   LSR  RADIO [c] 0.1 -     Jy (2001 Jul)
2155-152        21 58 06.282 - 15 01 09.33 RJ    n/a     0.5   n/a   LSR  RADIO [c] 0.5 - 0.6 Jy (2004 Nov)
BLLAC           22 02 43.291 + 42 16 39.98 RJ    n/a     4.4   n/a   LSR  RADIO [c] 1.1 - 4.4 Jy (2004 Aug-Dec)
2201+315        22 03 14.976 + 31 45 38.27 RJ    n/a     0.4   n/a   LSR  RADIO [c] 0.4 -     Jy (2004 Oct)
2223-052        22 25 47.259 - 04 57 01.39 RJ    n/a     1.3   n/a   LSR  RADIO [c] 1.1 - 1.3 Jy (2004 Sep-Dec)
2227-088        22 29 40.084 - 08 32 54.44 RJ    n/a     0.5   n/a   LSR  RADIO [c] 0.5 -     Jy (2004 Aug)
2230+114        22 32 36.409 + 11 43 50.90 RJ    n/a     3.3   n/a   LSR  RADIO [c] 3.5 - 3.3 Jy (2004 Dec)
2243-123        22 46 18.232 - 12 06 51.28 RJ    n/a     0.5   n/a   LSR  RADIO [c] 0.4 - 0.5 Jy (2001 Jul)
2251+158        22 53 57.748 + 16 08 53.56 RJ    n/a     7.0   n/a   LSR  RADIO [c] 3.4 - 7.0 Jy (2004 Sep-Dec)
2255-282        22 58 05.963 - 27 58 21.26 RJ    n/a     0.7   n/a   LSR  RADIO [c] 1.0 - 0.7 Jy (2004 Nov)
2318+049        23 20 44.857 + 05 13 49.95 RJ    n/a     0.1   n/a   LSR  RADIO [c] 0.1 - 0.2 Jy (2005 Jan)
2345-167        23 48 02.609 - 16 31 12.02 RJ    n/a     0.5   n/a   LSR  RADIO [c]
*
* The 6 sources below were not carried over from the original (RB) version
* due to inaccuracies in their positions, but they are repeated here in
* case of desperation - 3c111 and CenA in particular are too strong to
* discard completely.
*
3C111           04 15 00.61  + 37 54 19.5  RB    n/a     1.4   n/a   LSR  RADIO [c] 1.4 -     Jy (2004 Aug)
0954+556        09 54 14.355 + 55 37 16.35 RB    n/a     0.2   n/a   LSR  RADIO [c] 2.6 - 0.2 Jy (2005 Jan)
1219+285        12 19 01.12  + 28 30 36.45 RB    n/a     0.3   n/a   LSR  RADIO [c] 0.2 - 0.4 Jy (2001 Jul)
CENA            13 22 31.8   - 42 45 30.0  RB    n/a     9.9   n/a   LSR  RADIO [c] 7.3 - 9.9 Jy (2003 May-Jul)
1716+686        17 16 27.84  + 68 39 48.3  RB    n/a     0.3   n/a   LSR  RADIO [c] 0.3 -     Jy (2004 Oct)
CygA            19 57 44.6   + 40 35 45.9  RB    n/a     0.7   n/a   LSR  RADIO [c]
*
* 76 of the next 78 blazars are new to this version of the catalog
* see http://www.jach.hawaii.edu/JACpublic/JCMT/pointing/point2000.html
* for a description of their inclusion.
* Two (0106+013 and 0430+052) are already listed above by their familiars
*      PKS0106  and   3c120).
* fluxes listed are either :
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*      - the most recent determinations at 850um at JCMT
*        in which case the date of the last measure and the ranges of previous measures
*        are shown in the last column, or
*      - they are (the original) extrapolations from other wavelengths.
*        These proved to be overly optimistic by about x2,
*        so were reduced now by this factor, with a minimum of 0.2 Jy
*        so as to encourage at least one observation.
*
* -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- --
* BLAZARS II
*SOURCE         RA             DEC          EQUI  VEL    FLUX  RANGE  FRAME DEF   Comments
*                                           NOX    -    0.85mm   -                 observed range at 850um
* -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- --
0016+731        00 19 45.786 + 73 27 30.02 RJ    n/a     0.2   n/a   LSR  RADIO [c] 0.2 - 0.4 Jy (2001 Jul)
0035+413        00 38 24.844 + 41 37 06.00 RJ    n/a     0.1   n/a   LSR  RADIO [c] 0.1 -     Jy (2001 Jul)
0106+013        01 08 38.771 + 01 35 00.32 RJ    n/a     0.2   n/a   LSR  RADIO [c] 0.3 - 0.2 Jy (2004 Aug-Oct)
0112-017        01 15 17.100 - 01 27 04.58 RJ    n/a     0.3   n/a   LSR  RADIO [c]
0119+041        01 21 56.862 + 04 22 24.73 RJ    n/a     0.2   n/a   LSR  RADIO [c] 0.2 -     Jy (2000 Aug)
0134+329        01 37 41.299 + 33 09 35.13 RJ    n/a     0.5   n/a   LSR  RADIO [c] 0.1 - 0.5 Jy (2005 Jan)
0135-247        01 37 38.347 - 24 30 53.89 RJ    n/a     0.7   n/a   LSR  RADIO [c] 0.7 -     Jy (2004 Jan)
0138-097        01 41 25.832 - 09 28 43.67 RJ    n/a     0.2   n/a   LSR  RADIO [c] 0.2 -     Jy (2004 Jan)
0229+131        02 31 45.894 + 13 22 54.72 RJ    n/a     0.1   n/a   LSR  RADIO [c] 0.1 -     Jy (2001 Jul)
0239+108        02 42 29.171 + 11 01 00.73 RJ    n/a     0.2   n/a   LSR  RADIO [c]
0333+321        03 36 30.108 + 32 18 29.34 RJ    n/a     0.3   n/a   LSR  RADIO [c] 0.3 -     Jy (1999 Nov)
0338-214        03 40 35.608 - 21 19 31.17 RJ    n/a     0.4   n/a   LSR  RADIO [c] 0.6 - 0.4 Jy (2005 Jan)
0414-189        04 16 36.544 - 18 51 08.34 RJ    n/a     0.2   n/a   LSR  RADIO [c]
0430+052        04 33 11.096 + 05 21 15.62 RJ    n/a     0.3   n/a   LSR  RADIO [c] 0.3 -     Jy (2001 Jul)
0511-220        05 13 49.114 - 21 59 16.09 RJ    n/a     0.2   n/a   LSR  RADIO [c]
0518+165        05 21 09.886 + 16 38 22.05 RJ    n/a     0.2   n/a   LSR  RADIO [c]
0538+498        05 42 36.138 + 49 51 07.23 RJ    n/a     0.2   n/a   LSR  RADIO [c]
0539-057        05 41 38.083 - 05 41 49.43 RJ    n/a     0.1   n/a   LSR  RADIO [c] 0.1 -     Jy (2003 Sep)
0648-165        06 50 24.582 - 16 37 39.73 RJ    n/a     0.2   n/a   LSR  RADIO [c]
0723-008        07 25 50.640 - 00 54 56.54 RJ    n/a     0.5   n/a   LSR  RADIO [c] 0.5 -     Jy (2003 Oct-Dec)
0742+103        07 45 33.060 + 10 11 12.69 RJ    n/a     0.2   n/a   LSR  RADIO [c]
0743-006        07 45 54.082 - 00 44 15.54 RJ    n/a     0.2   n/a   LSR  RADIO [c]
0808+019        08 11 26.707 + 01 46 52.22 RJ    n/a     0.3   n/a   LSR  RADIO [c]
0814+425        08 18 16.000 + 42 22 45.41 RJ    n/a     0.3   n/a   LSR  RADIO [c] 0.3 -     Jy (2004 Oct)
0818-128        08 20 57.448 - 12 58 59.17 RJ    n/a     0.2   n/a   LSR  RADIO [c] 0.2 -     Jy (2000 Sep)
0823+033        08 25 50.338 + 03 09 24.52 RJ    n/a     0.6   n/a   LSR  RADIO [c] 0.6 -     Jy (2004 Jan)
0828+493        08 32 23.217 + 49 13 21.04 RJ    n/a     0.1   n/a   LSR  RADIO [c] 0.3 - 0.1 Jy (2004 Aug-Sep)
0859+470        09 03 03.990 + 46 51 04.14 RJ    n/a     0.2   n/a   LSR  RADIO [c] 0.2 -     Jy (2001 Jul)
0859-140        09 02 16.831 - 14 15 30.88 RJ    n/a     0.2   n/a   LSR  RADIO [c]
0906+015        09 09 10.092 + 01 21 35.62 RJ    n/a     0.2   n/a   LSR  RADIO [c]
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| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0917+624 | 09 21 36.231 | + | 62 15 52.18 | RJ | n/a | 0.2 | n/a | LSR | RADIO | [c] | 0.2 | - | | Jy (2001 Feb) |
| 0919-260 | 09 21 29.354 | - | 26 18 43.39 | RJ | n/a | 0.1 | n/a | LSR | RADIO | [c] | 0.1 | - | | Jy (2001 Jul) |
| 0925-203 | 09 27 51.824 | - | 20 34 51.23 | RJ | n/a | 0.3 | n/a | LSR | RADIO | [c] | 0.3 | - | | Jy (2004 Apr) |
| 0955+326 | 09 58 20.950 | + | 32 24 02.21 | RJ | n/a | 0.2 | n/a | LSR | RADIO | [c] | | | | |
| 1011+250 | 10 13 53.429 | + | 24 49 16.44 | RJ | n/a | 0.2 | n/a | LSR | RADIO | [c] | | | | |
| 1012+232 | 10 14 47.065 | + | 23 01 16.57 | RJ | n/a | 0.3 | n/a | LSR | RADIO | [c] | 0.3 | - | | Jy (2004 Jan) |
| 1053+815 | 10 58 11.535 | + | 81 14 32.68 | RJ | n/a | 0.3 | n/a | LSR | RADIO | [c] | 0.3 | - | | Jy (2001 Feb) |
| 1116+128 | 11 18 57.301 | + | 12 34 41.72 | RJ | n/a | 0.1 | n/a | LSR | RADIO | [c] | 0.3 | - | 0.1 | Jy (2005 Jan) |
| 1124-186 | 11 27 04.392 | - | 18 57 17.44 | RJ | n/a | 0.7 | n/a | LSR | RADIO | [c] | 0.7 | - | | Jy (2003 May) |
| 1127-145 | 11 30 07.053 | - | 14 49 27.39 | RJ | n/a | 0.2 | n/a | LSR | RADIO | [c] | | | | |
| 1128+385 | 11 30 53.283 | + | 38 15 18.55 | RJ | n/a | 0.3 | n/a | LSR | RADIO | [c] | 0.3 | - | | Jy (2004 Jan) |
| 1144+402 | 11 46 58.298 | + | 39 58 34.30 | RJ | n/a | 0.4 | n/a | LSR | RADIO | [c] | 0.4 | - | 0.6 | Jy (2005 Jan) |
| 1148-001 | 11 50 43.871 | - | 00 23 54.20 | RJ | n/a | 0.2 | n/a | LSR | RADIO | [c] | | | | |
| 1216+487 | 12 19 06.415 | + | 48 29 56.16 | RJ | n/a | 0.2 | n/a | LSR | RADIO | [c] | 0.2 | - | | Jy (2003 Dec) |
| 1222+037 | 12 24 52.422 | + | 03 30 50.29 | RJ | n/a | 0.1 | n/a | LSR | RADIO | [c] | 0.1 | - | | Jy (2001 Jul) |
| 1243-072 | 12 46 04.232 | - | 07 30 46.57 | RJ | n/a | 0.3 | n/a | LSR | RADIO | [c] | | | | |
| 1244-255 | 12 46 46.802 | - | 25 47 49.29 | RJ | n/a | 0.6 | n/a | LSR | RADIO | [c] | 0.6 | - | | Jy (2003 Jun) |
| 1252+119 | 12 54 38.256 | + | 11 41 05.90 | RJ | n/a | 0.2 | n/a | LSR | RADIO | [c] | | | | |
| 1302-102 | 13 05 33.015 | - | 10 33 19.43 | RJ | n/a | 0.7 | n/a | LSR | RADIO | [c] | | | | |
| 1328+307 | 13 31 08.288 | + | 30 30 32.96 | RJ | n/a | 0.3 | n/a | LSR | RADIO | [c] | 0.3 | - | | Jy (2000 Feb) |
| 1345+125 | 13 47 33.362 | + | 12 17 24.24 | RJ | n/a | 0.2 | n/a | LSR | RADIO | [c] | | | | |
| 1354-152 | 13 57 11.245 | - | 15 27 28.79 | RJ | n/a | 0.2 | n/a | LSR | RADIO | [c] | | | | |
| 1354+195 | 13 57 04.437 | + | 19 19 07.37 | RJ | n/a | 0.6 | n/a | LSR | RADIO | [c] | 0.6 | - | | Jy (2004 Mar) |
| 1502+106 | 15 04 24.980 | + | 10 29 39.20 | RJ | n/a | 0.2 | n/a | LSR | RADIO | [c] | 0.2 | - | | Jy (2004 Dec) |
| 1504-166 | 15 07 04.787 | - | 16 52 30.27 | RJ | n/a | 0.3 | n/a | LSR | RADIO | [c] | | | | |
| 1511-100 | 15 13 44.893 | - | 10 12 00.26 | RJ | n/a | 0.2 | n/a | LSR | RADIO | [c] | | | | |
| 1519-273 | 15 22 37.676 | - | 27 30 10.79 | RJ | n/a | 0.3 | n/a | LSR | RADIO | [c] | | | | |
| 1600+335 | 16 02 07.263 | + | 33 26 53.07 | RJ | n/a | 0.1 | n/a | LSR | RADIO | [c] | | | | |
| 1637+574 | 16 38 13.456 | + | 57 20 23.98 | RJ | n/a | 0.9 | n/a | LSR | RADIO | [c] | 0.8 | - | 1.0 | Jy (2004 Jan) |
| 1638+398 | 16 40 29.633 | + | 39 46 46.03 | RJ | n/a | 0.1 | n/a | LSR | RADIO | [c] | | | | |
| 1642+690 | 16 42 07.849 | + | 68 56 39.76 | RJ | n/a | 0.6 | n/a | LSR | RADIO | [c] | 0.6 | - | | Jy (2004 Jan) |
| 1655+077 | 16 58 09.011 | + | 07 41 27.54 | RJ | n/a | 0.4 | n/a | LSR | RADIO | [c] | 0.3 | - | 0.4 | Jy (2001 Jul) |
| 1656+477 | 16 58 02.780 | + | 47 37 49.23 | RJ | n/a | 0.2 | n/a | LSR | RADIO | [c] | 0.1 | - | 0.2 | Jy (2001 Jul) |
| 1717+178 | 17 19 13.048 | + | 17 45 06.44 | RJ | n/a | 0.3 | n/a | LSR | RADIO | [c] | 0.3 | - | | Jy (2003 May) |
| 1743+173 | 17 45 35.208 | + | 17 20 01.42 | RJ | n/a | 0.2 | n/a | LSR | RADIO | [c] | | | | |
| 1758+388 | 18 00 24.765 | + | 38 48 30.70 | RJ | n/a | 0.1 | n/a | LSR | RADIO | [c] | 0.2 | - | 0.1 | Jy (2001 Jul) |
| 1800+440 | 18 01 32.315 | + | 44 04 21.90 | RJ | n/a | 1.4 | n/a | LSR | RADIO | [c] | 1.3 | - | 1.4 | Jy (2003 May-Jul) |
| 1842+681 | 18 42 33.642 | + | 68 09 25.23 | RJ | n/a | 0.3 | n/a | LSR | RADIO | [c] | | | | |
| 1954+513 | 19 55 42.738 | + | 51 31 48.55 | RJ | n/a | 0.3 | n/a | LSR | RADIO | [c] | 0.3 | - | 0.2 | Jy (2005 Jan) |
| 2021+614 | 20 22 06.682 | + | 61 36 58.80 | RJ | n/a | 0.2 | n/a | LSR | RADIO | [c] | | | | |
| 2121+053 | 21 23 44.517 | + | 05 35 22.09 | RJ | n/a | 0.4 | n/a | LSR | RADIO | [c] | 0.7 | - | 0.4 | Jy (2001 Jul) |
| 2128-123 | 21 31 35.262 | - | 12 07 04.80 | RJ | n/a | 0.2 | n/a | LSR | RADIO | [c] | | | | |
| 2131-021 | 21 34 10.310 | - | 01 53 17.24 | RJ | n/a | 0.4 | n/a | LSR | RADIO | [c] | | | | |

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2210-257        22 13 02.498 - 25 29 30.08 RJ    n/a     0.2   n/a   LSR  RADIO [c]
2216-038        22 18 52.038 - 03 35 36.88 RJ    n/a     0.2   n/a   LSR  RADIO [c]
2229+695        22 30 36.470 + 69 46 28.08 RJ    n/a     0.1   n/a   LSR  RADIO [c] 0.1 -     Jy (2001 Jul)
2234+282        22 36 22.471 + 28 28 57.41 RJ    n/a     0.5   n/a   LSR  RADIO [c] 0.5 -     Jy (2004 Aug)
2344+092        23 46 36.839 + 09 30 45.51 RJ    n/a     0.2   n/a   LSR  RADIO [c]
*
* -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- --
* BLAZARS III  - coordinates from ICRF (Ma et al AJ 116, 516)
*SOURCE         RA            DEC          EQUI  VEL    FLUX  RANGE  FRAME DEF   Comments
*                                          NOX    -    0.85mm   -                observed range at 850um
* -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- --
0010+405        00 13 31.13  + 40 51 37.14 RJ    n/a     0.3   n/a   LSR  RADIO [c] 0.3 -     Jy (2004 Aug)
0110+495        01 13 27.01  + 49 48 24.04 RJ    n/a     0.3   n/a   LSR  RADIO [c] 0.3 -     Jy (2004 Aug)
0218+357        02 21 05.47  + 35 56 13.70 RJ    n/a     0.3   n/a   LSR  RADIO [c] 0.3 -     Jy (2004 Oct)
0227+403        02 30 45.70  + 40 32 53.08 RJ    n/a     0.3   n/a   LSR  RADIO [c] 0.3 -     Jy (2004 Aug)
0309+411        03 13 01.96  + 41 20 01.19 RJ    n/a     0.5   n/a   LSR  RADIO [c] 0.5 -     Jy (2004 Aug)
0444+634        04 49 23.31  + 63 32 09.43 RJ    n/a     0.5   n/a   LSR  RADIO [c] 0.5 -     Jy (2004 Aug)
0707+476        07 10 46.10  + 47 32 11.14 RJ    n/a     0.3   n/a   LSR  RADIO [c] 0.3 -     Jy (2004 Aug)
0714+457        07 17 51.85  + 45 38 03.25 RJ    n/a     0.3   n/a   LSR  RADIO [c] 0.3 -     Jy (2004 Aug)
0749+540        07 53 01.38  + 53 52 59.64 RJ    n/a     0.3   n/a   LSR  RADIO [c] 0.3 -     Jy (2004 Aug)
0804+499        08 08 39.67  + 49 50 36.53 RJ    n/a     0.4   n/a   LSR  RADIO [c] 0.4 -     Jy (2004 Aug)
1030+611        10 33 51.43  + 60 51 07.33 RJ    n/a     0.3   n/a   LSR  RADIO [c] 0.3 -     Jy (2004 Sep)
1053+704        10 56 53.62  + 70 11 45.92 RJ    n/a     0.4   n/a   LSR  RADIO [c] 0.4 -     Jy (2004 Dec)
1636+473        16 37 45.13  + 47 17 33.84 RJ    n/a     0.3   n/a   LSR  RADIO [c] 0.3 -     Jy (2004 Aug)
1700+685        17 00 09.29  + 68 30 06.96 RJ    n/a     0.3   n/a   LSR  RADIO [c] 0.3 -     Jy (2004 Aug)
1732+389        17 34 20.58  + 38 57 51.44 RJ    n/a     0.4   n/a   LSR  RADIO [c] 0.3 -     Jy (2004 Aug)
1849+670        18 49 16.07  + 67 05 41.68 RJ    n/a     0.4   n/a   LSR  RADIO [c] 0.4 -     Jy (2004 Aug)
1926+611        19 27 30.44  + 61 17 32.88 RJ    n/a     0.3   n/a   LSR  RADIO [c] 0.3 -     Jy (2004 Aug)
2023+760        20 22 35.58  + 76 11 26.18 RJ    n/a     0.3   n/a   LSR  RADIO [c] 0.3 -     Jy (2004 Aug)
2351+456        23 54 21.68  + 45 53 04.24 RJ    n/a     0.3   n/a   LSR  RADIO [c] 0.3 -     Jy (2004 Aug)
*
* - -- -- -- -- -- --  -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- --
*  CONTINUUM SOURCES : Compact HII regions, ABG and PMS - stars
* -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- --
*
*  A few of these are secondary calibrators for SCUBA, some also serve as spectral line standards
*  Coordinates are either c - derived by coco (co-ordinate transformation) from 1950.0 FK4
*                                - this is usually the case for non-stellar sources, where
*                                  submm & opt/NIR peaks may not coincide
*                     or s - as listed by Simbad (2000.0 FK5)
*                                - this is usually reserved for stellar sources
* Fluxes - 2001 Jul - changed to 0.85mm fluxes, based on last 18months data.
*                     data for HH1-2VLA, TWHya, M8E, ON-1, V645Cyg are the old 1.1mm values
```

```
* -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- --
*SOURCE         RA             DEC           EQUI  VEL     FLUX  RANGE  FRAME DEF   Comments
*                                             NOX    -      0.85mm   -                c = coco  s = simbad
* - -- -- -- -- -- -- --  -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- --
W3(OH)          02 27 04.1   + 61 52 22.   RJ  -   45.0 35.0   n/a   LSR  RADIO [c] c
GL490           03 27 38.842 + 58 47 00.51 RJ  -   12.5  5.0   n/a   LSR  RADIO [c] c
TTau            04 21 59.43  + 19 32 06.4  RJ  +    7.5  1.3   n/a   LSR  RADIO [c] s T Tauri star
DGTau           04 27 04.7   + 26 06 17.   RJ  +    5.0  0.9   n/a   LSR  RADIO [c] s T Tauri star; use 120" chop
L1551-IRS5      04 31 34.140 + 18 08 05.13 RJ  +    6.0  6.0   n/a   LSR  RADIO [c] c
HLTau           04 31 38.4   + 18 13 59.   RJ  +    6.4  2.3   n/a   LSR  RADIO [c] s TTau-star - 2nd-ary flux calibrator
CRL618          04 42 53.672 + 36 06 53.17 RJ  -   21.7  4.5   90.0  LSR  RADIO [c] c Secondary flux calibrator
OMC1            05 35 14.373 - 05 22 32.35 RJ  +   10.0 99.9   n/a   LSR  RADIO [c] c use 150" chop for pointi
HH1-2VLA        05 36 22.837 - 06 46 06.57 RJ  +    8.0  0.8   n/a   LSR  RADIO [c] c
N2071IR         05 47 04.851 + 00 21 47.10 RJ  +    9.5 16.0   n/a   LSR  RADIO [c] c
VYCMa           07 22 58.33  - 25 46 03.2  RJ  +   19.0  1.7   70.0  LSR  RADIO [c] s
OH231.8         07 42 16.83  - 14 42 52.1  RJ  +   30.0  2.5  140.0  LSR  RADIO [c] c Secondary flux calibrator
IRC+10216       09 47 57.382 + 13 16 43.66 RJ  -   25.6  6.1   35.0  LSR  RADIO [c] c Secondary flux calibrator, var.
TWHya           11 01 51.91  - 34 42 17.0  RJ  +    0.0  0.8   n/a   LSR  RADIO [c] s T Tauri star
16293-2422      16 32 22.909 - 24 28 35.60 RJ  +    4.0 16.3   n/a   LSR  RADIO [c] c Secondary flux calibrator
G343.0          16 58 17.136 - 42 52 06.61 RJ  -   31.0 35.0   n/a   LSR  RADIO [c] c
NGC6334I        17 20 53.445 - 35 47 01.67 RJ  -    6.9 60.0   n/a   LSR  RADIO [c] c
BVP1            17 43 10.32  - 29 51 43.5  RJ  -   20.0  1.5   n/a   LSR  RADIO [c] c
G5.89           18 00 30.376 - 24 04 00.48 RJ  +   10.0 48.0   n/a   LSR  RADIO [c] c
M8E             18 04 52.957 - 24 26 39.36 RJ  +   11.0  2.8   n/a   LSR  RADIO [c] c
G10.62          18 10 28.661 - 19 55 49.76 RJ  -    3.5 50.0   n/a   LSR  RADIO [c] c
G34.3           18 53 18.569 + 01 14 58.26 RJ  +   58.1 70.0   n/a   LSR  RADIO [c] c
G45.1           19 13 22.079 + 10 50 53.42 RJ  +   48.0 11.0   n/a   LSR  RADIO [c] c G45.07+0.13 needs chop EW >60". ApJ
478, 283
K3-50           20 01 45.689 + 33 32 43.52 RJ  -   23.7 20.0   n/a   LSR  RADIO [c] c
ON-1            20 10 09.146 + 31 31 37.67 RJ  +   11.8  4.7   n/a   LSR  RADIO [c] c
GL2591          20 29 24.719 + 40 11 18.87 RJ  -    5.8  3.0   n/a   LSR  RADIO [c] c
W75N            20 38 36.433 + 42 37 34.49 RJ  +   12.5 35.0   n/a   LSR  RADIO [c] c
MWC349          20 32 45.6   + 40 39 37.   RJ  -    6.6  1.9   n/a   LSR  RADIO [c] s True point source
PVCep           20 45 54.39  + 67 57 38.8  RJ  +    3.0  1.2   n/a   LSR  RADIO [c] s
CRL2688         21 02 18.75  + 36 41 37.80 RJ  -   35.4  5.9   80.0  LSR  RADIO [c] c Secondary flux calibrator
NGC7027         21 07 01.598 + 42 14 10.02 RJ  +   26.0  5.0   50.0  LSR  RADIO [c] c
V645Cyg         21 39 58.2   + 50 14 22.   RJ  -   43.7  0.9   n/a   LSR  RADIO [c] s
LKHA234         21 43 06.170 + 66 06 56.09 RJ  -   10.0  5.0   n/a   LSR  RADIO [c] c Herbig Be star
N7538IRS1       23 13 45.346 + 61 28 10.32 RJ  -   58.0 33.0   n/a   LSR  RADIO [c] c
N7538IRS9       23 14 01.682 + 61 27 19.96 RJ  -   58.0  6.5   n/a   LSR  RADIO [c] c
*
* -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- --
*
```

```
*   Sources for use in continuum mode originally intended only
*   for use in spectral-line 5-pointing mode. They have proven sufficiently
*   bright at 850um to qualify as 'continuum' sources.
*
WXPsc           01 06 25.96  + 12 35 53.5  RJ  +    8.5  0.2   35.0  LSR  RADIO [c]2-1 41.0 J3-2 51.2 4-3 23.2
oCeti           02 19 20.80  - 02 58 40.7  RJ  +   46.5  0.5   28.0  LSR  RADIO [c]2-1 34.6 J3-2 48.2 4-3 46.2 J2005
CIT6            10 16 02.27  + 30 34 18.6  RJ  -    1.9  0.7   45.0  LSR  RADIO [c]2-1 111.3 3-2 194.9 4-3 1
*
* -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- --
*
*   SPECTRAL LINE STANDARDS
*
*   all 2000.0 FK5 coords derived by coco - see previous section
*   2001 10 19 - offsets updated for crl618, omc1, oh231.8, w75n, ngc7027
*                                                                          PS offset is for CO and isotopes
* -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- --
W3(OH)          02 27 04.1   + 61 52 22.   RJ  -   45.0 35.0   n/a   LSR  RADIO [c] PS -600,0 RJ
L1551-IRS5      04 31 34.140 + 18 08 05.13 RJ  +    6.0  2.4   n/a   LSR  RADIO [l] PS +1200,0 RJ
CRL618          04 42 53.672 + 36 06 53.17 RJ  -   21.7  3.2   90.0  LSR  RADIO [l] BMSW 180" AZ
OMC1            05 35 14.373 - 05 22 32.35 RJ  +    10.0  72.  n/a   LSR  RADIO [l] PS 0, 2100 RJ
N2071IR         05 47 04.851 + 00 21 47.10 RJ  +    9.5  4.8   n/a   LSR  RADIO [l] PS 2400,0 RJ
OH231.8         07 42 16.83  - 14 42 52.1  RJ  +   30.0  1.3  140.0  LSR  RADIO [l] BMSW 300" AZ
IRC+10216       09 47 57.382 + 13 16 43.66 RJ  -   25.6  2.3   35.0  LSR  RADIO [l] PS 300,0 AZ
16293-2422      16 32 22.909 - 24 28 35.60 RJ  +    4.0  8.3   n/a   LSR  RADIO [l] PS -800,0 RJ
NGC6334I        17 20 53.445 - 35 47 01.67 RJ  -    6.9 30.0   n/a   LSR  RADIO [l] PS 2400,0 RJ
G34.3           18 53 18.569 + 01 14 58.26 RJ  +   58.1 31.2   n/a   LSR  RADIO [l] PS -3120,1800 RJ
W75N            20 38 36.433 + 42 37 34.49 RJ  +   12.5 11.6   n/a   LSR  RADIO [l] PS -1800,0 RJ
CRL2688         21 02 18.75  + 36 41 37.80 RJ  -   35.4  2.7   80.0  LSR  RADIO [l] BMSW 180" AZ
NGC7027         21 07 01.598 + 42 14 10.02 RJ  +   26.0  3.7   50.0  LSR  RADIO [l] BMSW 180" AZ
N7538IRS1       23 13 45.346 + 61 28 10.32 RJ  -   58.0  9.9   n/a   LSR  RADIO [l] PS 1200,0 RJ
*
* -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- --
*   SOURCELIST for SPECTRAL LINE FIVEPOINTS
*   Positions taken from Loup et al. A&A Suppl. Ser 99, 291 (1993).
*   This section sub-divided according to positional accuracy flags by Loup et al.
*   except that
*     - 9 stars with HD numbers and flag=2 that differ by < approx 1"
*       from Hipparcos positions are in section 1.
*     - 6 weak or v.southern objects with Loup flags=1 appear in section 2,
*       since, in the cases where comparison with Hipparcos is possible -
*       the first two - differences of >1" are seen.
*       (R Hor, R Dor, V1362Aql, V1366Aql, GL2374, GL2885). (20020107)
*   VXSgr & RRAql added 20020107.
```

```
*   Note CRL2688 is in section 2 (?!).
*   See also K. Young (1995, ApJ 445, 872).
*   Other (flux) data often courtesy H. Matthews and J. Greaves.
*   Positions for objects in common with spectral line standards (CRL618,
*   CRL2688, NGC7027, section above) are left unchanged, but these are not
*   inconsistent with Loup.
*   Note that we still have not gone through all the sources in the list.!!
*
*   The catalogue gives T_A* (peak) for the 2-1 line. More informative, however, are the integrated line intensities
*   in the comment line (in K km/s), which largely determine how easy it is to detect a line. Note that JCMT 2-1
*   data followed by J are typically low by about a factor of 1.3 - 1.5 (telescope heavily deformed due to conebar
*   welding.
*
* 20070717 Notes reflect new positional accuracies : L1 L2 L3 original Loup qualities (<1", 1-5", >5");
*                                                  : /H and /T reflect updates by Hipparcos & Tycho
*
*               RA & DEC                    Eq  Vlsr     Tpeak  Vrange           JCMT   comments
*- -- -- -- -- -- --  -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- --
*- -- -- -- -- -- --  -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- --
* Loup et al position quality flag = 1 (~1")
*
TCas            00 23 14.297 + 55 47 33.11 RJ  -    7.0  1.0   22.0  LSR  RADIO [l] L1/H 3-2 12.8  4-3 int 5.5
WXPsc           01 06 25.98  + 12 35 53.0  RJ  +    8.5  1.4   35.0  LSR  RADIO [l] L1   2-1 41.0 J 3-2 51.2 4-3 23.2
RScl            01 26 58.087 - 32 32 35.79 RJ  -   18.4  1.5   37.0  LSR  RADIO [l] L1/H 2-1 42.3 J 3-2 48.2
oCeti           02 19 20.905 - 02 58 41.69 RJ  +   46.5  6.8   28.0  LSR  RADIO [l] L1/H 2-1 34.6 J 3-2 48.2 4-3 46.2
J2005
UCam            03 41 48.173 + 62 38 54.33 RJ  +    7.1  0.55  64.0  LSR  RADIO [l] L1/H 2-1 20.3 J
NMLTau          03 53 28.84  + 11 24 22.6  RJ  +   35.1  1.6   43.0  LSR  RADIO [l] L1   2-1 49.1 4-3 92
CRL618          04 42 53.672 + 36 06 53.17 RJ  -   21.7  3.2   90.0  LSR  RADIO [l] L1   2-1 118 3-2 95
RLep            04 59 36.354 - 14 48 22.54 RJ  +   16.0  0.6   38.0  LSR  RADIO [l] L1/H 2-1 1
NVAur           05 11 19.43  + 52 52 33.7  RJ  +    3.0  0.57  36.0  LSR  RADIO [l] L1   1-0 OSO 19
RAur            05 17 17.694 + 53 35 09.89 RJ  -    3.0  1.2   20.0  LSR  RADIO [l] L1/H 3-2 CSO 16 4-3 11.4
UUAur           06 36 32.834 + 38 26 43.59 RJ  +    7.0  0.6   25.0  LSR  RADIO [l] L1/H 2-1 10.5 1-0 IRAM 15.9
VYCMa           07 22 58.339 - 25 46 03.16 RJ  +   19.0  1.0   92.0  LSR  RADIO [l] L1/H 2-1 50.1
M1-16           07 37 18.955 - 09 38 49.67 RJ  +   49.0  0.85  50.0  LSR  RADIO [l] L1+  2-1 48.9 2-1 SEST 26.0
M1-17           07 40 22.206 - 11 32 29.81 RJ  +   28.0  1.80  78.0  LSR  RADIO [l] L1+  2-1 31.7 2-1 IRAM 66.2
OH231.8         07 42 16.83  - 14 42 52.1  RJ  +   30.0  1.3  160.0  LSR  RADIO [l] L1+  2-1 71.8 1-0 IRAM 92.5
RLMi            09 45 34.286 + 34 30 42.70 RJ  +    2.0  0.4   18.0  LSR  RADIO [l] L1/H 2-1 5.8  2-1 IRAM 15.0
RLeo            09 47 33.490 + 11 25 43.22 RJ  -    0.4  1.0   22.0  LSR  RADIO [l] L1/H 2-1 13.0  3-2 CSO 37 4-3
IRC+10216       09 47 57.382 + 13 16 43.66 RJ  -   25.6 32.    35.0  LSR  RADIO [l] L1   2-1 427  3-2 687  4-3 720
CIT6            10 16 02.27  + 30 34 18.6  RJ  -    1.9  8.5   45.0  LSR  RADIO [l] L1   2-1 111.3 3-2 194.9 4-3 1
RTVir           13 02 38.007 + 05 11 08.20 RJ  +   18.0  0.7   18.0  LSR  RADIO [l] L1/H 2-1 13.5 3-2 12.6 4-3 8.8
WHya            13 49 01.961 - 28 22 04.08 RJ  +   41.3  0.7   20.0  LSR  RADIO [l] L1/H 2-1 10.9 3-2 29.0 4-3 21.
```

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RXBoo           14 24 11.643 + 25 42 12.90 RJ  +    1.1  1.4   22.0  LSR  RADIO [l] L1/H 2-1 19.3 3-2 32.3 4-3 14.9
SCrB            15 21 23.950 + 31 22 02.46 RJ  +    2.0  0.6   18.0  LSR  RADIO [l] L1/H 3-2 5.6
NGC6302         17 13 44.211 - 37 06 15.94 RJ  -   40.0  2.6   52.0  LSR  RADIO [l] L1+  2-1 73.0 2-1 NRAO 19.9
V814Her         17 44 55.467 + 50 02 39.36 RJ  -   35.0  0.4   25.0  LSR  RADIO [l] L1/H 2-1 5.9  2-1 IRAM 36.1
VXSgr           18 08 04.051 - 22 13 26.66 RJ  +    6.0  0.4   60.0  LSR  RADIO [l] L1/H
NGC6563         18 12 02.753 - 33 52 07.14 RJ  -   31.0  0.4   60.0  LSR  RADIO [l] L1
OH17.7-2        18 30 30.64  - 14 28 57.0  RJ  +   62.0  0.3   25.0  LSR  RADIO [l] L1   3-2 5.0  2-1 IRAM 19.4
V1111Oph        18 37 19.31  + 10 25 42.4  RJ  -   30.0  0.8   40.0  LSR  RADIO [l] L1   2-1 23.4  1-0 OSO 29.4
RAql            19 06 22.256 + 08 13 47.34 RJ  +   46.0  1.1   20.0  LSR  RADIO [l] L1/H 2-1 15.5  3-2 CSO  45 4-3 36.9
HD179821        19 13 58.610 + 00 07 31.89 RJ  +  100.0  1.1   76.0  LSR  RADIO [l] L1/H 3-2 57.5
V1302Aql        19 26 48.03  + 11 21 16.7  RJ  +   73.0  1.0   90.0  LSR  RADIO [l] L1   2-1 57.0 3-2 114.7 4-3 101.5
GYAql           19 50 06.334 - 07 36 52.30 RJ  +   34.0  1.08  23.0  LSR  RADIO [l] L1/H 2-1 NRAO 24.4
KiCyg           19 50 33.903 + 32 54 50.23 RJ  +   10.0  3.5   21.0  LSR  RADIO [l] L1/H 3-2 58.9 4-3 70.2
RRAql           19 57 36.044 - 01 53 11.81 RJ  +   28.0  0.5   15.0  LSR  RADIO [l] L1/H
VCyg            20 41 18.264 + 48 08 28.71 RJ  +   14.0  2.7   24.0  LSR  RADIO [l] L1/H 2-1 47.9
NMLCyg          20 46 25.46  + 40 06 59.6  RJ  +    1.0  2.0   65.0  LSR  RADIO [l] L1   3-2 85.9  4-3 96.5
NGC7027         21 07 01.598 + 42 14 10.02 RJ  +   26.0  8.5   50.0  LSR  RADIO [l] L1   2-1 193 J 3-2 280  4-3 238.0
SCep            21 35 12.863 + 78 37 28.20 RJ  -   16.0  1.6   63.0  LSR  RADIO [l] L1/H 2-1 40.9 3-2 50.4
RCas            23 58 24.963 + 51 23 19.88 RJ  +   25.0  1.6   31.0  LSR  RADIO [l] L1/H 2-1 29.0 J 3-2 73.5 4-3 47.6
*
* Loup et al position quality flag = 2 (~1"-5")
*
RAnd            00 24 01.933 + 38 34 36.98 RJ  -   16.0  1.1   22.0  LSR  RADIO [l] L2/H 2-1 14.5 J
GL67            00 27 41.15  + 69 38 51.7  RJ  -   28.6  1.5   43.0  LSR  RADIO [l] L2   2-1 32.7
IRC+60041       01 13 44.31  + 62 57 36.0  RJ  -   25.0  0.1   47.0  LSR  RADIO [l] L2
RHor            02 53 52.909 - 49 53 22.37 RJ  +   38.0  0.8   13.0  LSR  RADIO [l] L2/H
V384Per         03 26 29.53  + 47 31 50.2  RJ  -   16.3  1.3   33.0  LSR  RADIO [l] L2   2-1 28.1  1-0 OSO 25.0
IRC+60144       04 35 17.45  + 62 16 23.3  RJ  -   45.0  0.8   30.0  LSR  RADIO [l] L2   1-0 OSO 18.7
RDor            04 36 45.495 - 62 04 38.47 RJ  +    7.0  2.5   13.0  LSR  RADIO [l] L2/H
V370Aur         05 43 49.78  + 32 42 06.8  RJ  -   31.0  0.65  52.0  LSR  RADIO [l] L2
GL865           06 03 59.84  + 07 25 54.4  RJ  +   42.5  1.8   33.0  LSR  RADIO [l] L2   2-1 36.0 1-0 OSO 17.0
V636Mon         06 25 01.37  - 09 07 16.0  RJ  +   13.0  0.39  50.0  LSR  RADIO [l] L2   2-1 21.5
APLyn           06 34 33.92  + 60 56 26.2  RJ  -   23.0  0.49  35.0  LSR  RADIO [l] L2   1-0 OSO 13.0
M1-7            06 37 20.955 + 24 00 35.38 RJ  -   11.0  0.46  50.0  LSR  RADIO [l] L2+  2-1 44.1
GMCMa           06 41 15.09  - 22 16 43.8  RJ  +   48.0  0.5   40.0  LSR  RADIO [l] L2   2-1 11.0
GXMon           06 52 46.91  + 08 25 19.0  RJ  -    7.0  1.7   40.0  LSR  RADIO [l] L2+  2-1 48.0 1-0 OSO 30.5
HD56126         07 16 10.257 + 09 59 48.03 RJ  +   73.0  2.0   24.0  LSR  RADIO [l] L2/T 2-1 23.1 3-2 22.4
GL5254          09 13 54.09  - 24 51 21.1  RJ  +    0.1  3.5   32.0  LSR  RADIO [l] L2   2-1 55.3 3-2 49.6
VHya            10 51 37.245 - 21 15 00.29 RJ  -   15.6  5.0   52.0  LSR  RADIO [l] L2/H 2-1 73.7 3-2 97.8
XHer            16 02 39.108 + 47 14 25.92 RJ  -   73.0  1.3   23.0  LSR  RADIO [l] L2/H 2-1 12.0
NGC6072         16 12 58.079 - 36 13 46.06 RJ  +    7.0  1.8   24.0  LSR  RADIO [l] L2   2-1 28.9
GL1922          17 07 58.24  - 24 44 31.1  RJ  -    3.0  1.73  40.0  LSR  RADIO [l] L2   2-1 45.0 3-2 56.3
GL2135          18 22 34.50  - 27 06 30.2  RJ  +   48.0  1.31  45.0  LSR  RADIO [l] L2   2-1 45.8 3-2 59.7
```

```
GL2143          18 24 31.84  - 16 16 04.2  RJ  -   27.0  0.9   34.0  LSR  RADIO [l] L2   2-1 IRAM 19.4
GL2199          18 35 46.48  + 05 35 46.5  RJ  +   30.0  0.67  40.0  LSR  RADIO [l] L2   1-0 OSO 16.7
V821Her         18 41 54.39  + 17 41 08.5  RJ  +    0.0  2.0   31.0  LSR  RADIO [l] L2   2-1 39.6 3-2 54.5
IRC+00365       18 42 24.68  - 02 17 25.2  RJ  +    3.0  0.7   73.0  LSR  RADIO [l] L2   2-1 35.3 3-2 57.7
RSct            18 47 28.921 - 05 42 18.84 RJ  +   56.0  0.8   10.0  LSR  RADIO [l] L2/H 2-1 4.2
V1362Aql        18 48 41.91  - 02 50 28.3  RJ  +  101.0  1.1   35.0  LSR  RADIO [l] L2
V1366Aql        18 58 30.02  + 06 42 57.7  RJ  +   21.0  0.6   31.0  LSR  RADIO [l] L2
IRC+10401       19 03 18.28  + 07 30 47.2  RL  +    7.0  0.3   17.0  LSR  RADIO [l] L2
GL2316          19 05 22.69  + 08 13 05.0  RJ  +    2.0  1.0   34.0  LSR  RADIO [l] L2   2-1 IRAM 23.3
WAql            19 15 23.442 - 07 02 49.84 RJ  -   25.0  0.8   42.0  LSR  RADIO [l] L2   2-1 CSO  22
IRC-10502       19 20 17.96  - 08 02 10.6  RJ  +   21.0  0.67  57.0  LSR  RADIO [l] L2   2-1 27.9  3-2 40.0
OH44.8          19 21 36.52  + 09 27 56.5  RJ  -   72.0  0.5   30.0  LSR  RADIO [l] L2
V1965Cyg        19 34 09.87  + 28 04 06.3  RJ  -   12.0  0.77  54.0  LSR  RADIO [l] L2   3-2 44.8
HD187885        19 52 52.697 - 17 01 50.33 RJ  +   24.0  0.7   75.0  LSR  RADIO [l] L2/T 2-1 12.6   3-2 25.8
CRL2688         21 02 18.75  + 36 41 37.80 RJ  -   35.4  5.0   80.0  LSR  RADIO [l] L2   2-1 120 J 3-2 197
OH104.9         22 19 27.40  + 59 51 22.7  RJ  -   27.0  0.5   34.0  LSR  RADIO [l] L2
Pi1Gru          22 22 44.232 - 45 56 52.71 RJ  -   12.0  2.1   40.0  LSR  RADIO [l] L2/H 3-2 74.3 4-3 38.8
HD235858        22 29 10.375 + 54 51 06.33 RJ  -   28.0  2.1   22.0  LSR  RADIO [l] L2/T 3-2 34.5
LPAnd           23 34 27.66  + 43 33 02.4  RJ  -   17.0  2.7   29.0  LSR  RADIO [l] L2   2-1 52.8 J 3-2 70.0 4-3 3
*
* Loup et al position quality flag = 3 (?>5")
*
01142+6306      01 17 33.31  + 63 22 05.8  RJ  -   20.0  0.7   38.0  LSR  RADIO [l] L3   2-1 28.3
GL190           01 17 51.62  + 67 13 55.4  RJ  -   39.0  3.1   37.0  LSR  RADIO [l] L3
GL482           03 23 36.57  + 70 27 07.5  RJ  -   16.4  0.9   20.0  LSR  RADIO [l] L3   2-1 11.3 J 1-0 OSO 9.0
03313+6058      03 35 30.69  + 61 08 47.2  RJ  -   39.0  0.6   30.0  LSR  RADIO [l] L3   2-1 IRAM 13.2
GL5102          03 48 18.01  + 44 42 02.1  RJ  -   25.0  0.4   32.0  LSR  RADIO [l] L3   1-0 OSO 11
TXCam           05 00 50.39  + 56 10 52.6  RJ  +    9.2  2.9   50.0  LSR  RADIO [l] L3   2-1 75.8
BXCam           05 46 44.10  + 69 58 25.2  RJ  +    0.0  0.54  45.0  LSR  RADIO [l] L3   1-0 OSO 15.4
GL1235          08 10 48.40  - 32 52 03.9  RJ  -   20.3  0.9   42.0  LSR  RADIO [l] L3+  2-1 29.0 3-2 37.5
CRL4211         15 11 41.89  - 48 20 01.3  RJ  -    3.7  2.5   42.0  LSR  RADIO [l] L3   2-1 72.6
IILup           15 23 04.91  - 51 25 59.0  RJ  -   15.0  1.9   23.0  LSR  RADIO [l] L3   2-1 58.5
IRC+20326       17 31 54.98  + 17 45 19.7  RJ  -    4.0  1.5   34.0  LSR  RADIO [l] L3   2-1 31.3  1-0 OSO 20
GL2155          18 26 05.84  + 23 28 46.7  RJ  +   60.0  1.12  34.0  LSR  RADIO [l] L3+  1-0 OSO 23.2
19454+2920      19 47 24.25  + 29 28 11.8  RJ  +   21.0  0.73  29.0  LSR  RADIO [l] L3   2-1 IRAM 14.3
GL2477          19 56 48.45  + 30 44 02.6  RJ  +    5.0  1.7   50.0  LSR  RADIO [l] L3+  3-2 26.6
GL2494          20 01 08.51  + 40 55 40.2  RJ  +   30.0  1.3   48.0  LSR  RADIO [l] L3   2-1 38.2 3-2 53.5 4-3 49
V1300Aql        20 10 27.41  - 06 16 15.7  RJ  -   18.0  1.2   34.0  LSR  RADIO [l] L3   2-1 37.0 3-2 40.4 4-3 33.7
OH63.3-10.2     20 28 57.10  + 21 15 37.0  RJ  -   72.0  0.76  37.0  LSR  RADIO [l] L3+  2-1 IRAM 1
GL2686          20 59 08.88  + 27 26 41.7  RJ  +    1.0  0.32  48.0  LSR  RADIO [l] L3   2-1 28.7
21282+5050      21 29 58.42  + 51 03 59.8  RJ  +   18.0  4.2   37.0  LSR  RADIO [l] L3   3-2 74 2-1 IRAM 279
21318+5631      21 33 22.98  + 56 44 35.0  RJ  +    0.0  0.95  37.0  LSR  RADIO [l] L3   3-2 19.7
21554+6204      21 56 58.18  + 62 18 43.6  RJ  -   17.0  0.75  37.0  LSR  RADIO [l] L3   2-1 10.9
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V384Cep         22 25 54.81  + 60 20 42.4  RJ  -    6.0  0.2   34.0  LSR  RADIO [l] L3
GL3068          23 19 12.39  + 17 11 35.4  RJ  -   31.0  6.1   31.0  LSR  RADIO [l] L3   3-2 49.6 4-3 37.4
23304+6147      23 32 44.94  + 62 03 49.6  RJ  -   17.0  0.4   31.0  LSR  RADIO [l] L3   3-2 6.7 2-1 IRAM 25.0
23321+6545      23 34 22.63  + 66 01 50.4  RJ  -   56.0  0.24  40.0  LSR  RADIO [l] L3   3-2 6.2 2-1 IRAM 28
*
* -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- --
*
* Further sources useful for spectral-line fivepointing
* at CO:2-1  ( and at CO:3-2 where noted).
* Sources identified by Thomas Lowe (2003).
* STCam thru WCMa added 29 Mar 2004
*
RFor            02 29 15.315 - 26 05 55.74 RJ  -    2.0  0.5   35.0  LSR  RADIO [l] Hip 2-1 14.2
STCam           04 51 13.339 + 68 10 07.57 RJ  -   10.9  0.4   25.0  LSR  RADIO [l] Hip 2-1 4.1
WOri            05 05 23.720 + 01 10 39.42 RJ  +    7.5  0.5   25.0  LSR  RADIO [l] Hip 2-1 6.7
YTau            05 45 39.409 + 20 41 42.07 RJ  +   15.0  0.5   30.0  LSR  RADIO [l] Hip 2-1 7.6
RYMon           07 06 56.477 - 07 33 26.58 RJ  -    8.8  0.3   30.0  LSR  RADIO [l] Hip 2-1 3.8
WCMa            07 08 03.432 - 11 55 23.77 RJ  +    0.0  0.5   25.0  LSR  RADIO [l] Hip 2-1 5.1
XCnc            08 55 22.879 + 17 13 52.65 RJ  -   13.0  0.4   17.0  LSR  RADIO [l] Hip 2-1 4.2
YHya            09 51 03.723 - 23 01 02.39 RJ  -    7.0  0.4   20.0  LSR  RADIO [l] Hip 2-1 5.4
UHya            10 37 33.302 - 13 23 04.73 RJ  -   31.0  1.3   16.0  LSR  RADIO [l] Hip 2-1 14.6
YCVn            12 45 07.827 + 45 26 24.92 RJ  +   21.0  0.9   17.0  LSR  RADIO [l] Hip 2-1 10.7
RYDra           12 56 25.931 + 65 59 39.71 RJ  -    5.0  0.5   20.0  LSR  RADIO [l] Hip 2-1  7.1
VCrB            15 49 31.317 + 39 34 17.74 RJ  -  100.0  0.5   19.0  LSR  RADIO [l] Hip 2-1 5.4
TDra            17 56 23.289 + 58 13 05.61 RJ  -   14.0  0.8   28.0  LSR  RADIO [l] Hip 2-1 16.6
UCyg            20 19 36.595 + 47 53 39.09 RJ  +   25.0  0.3   26.0  LSR  RADIO [l] Hip 2-1 7.2
RVCyg           21 43 16.328 + 38 01 02.88 RJ  +   15.0  0.5   30.0  LSR  RADIO [l] Hip 2-1 10.1
TXPsc           23 46 23.494 + 03 29 12.27 RJ  +   13.0  0.7   20.0  LSR  RADIO [l] Hip 2-1 6.2
*
* and 3 candidates observed at CO:3-2 by S.Ramstedt (m07ai05)
*
RCyg            19 36 49.381 + 50 11 59.46 RJ  -   17.0  1.0   30.0  LSR  RADIO [l]  3-2 15.0
SLyr            19 13 11.79  + 26 00 28.3  RJ  +   51.0  0.3   40.0  LSR  RADIO [l]  3-2 6.0
WYCas           23 58 01.30  + 56 29 13.5  RJ  +    8.0  0.4   40.0  LSR  RADIO [l]  3-2 8.0
*
* -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- --
*           MISCELLANEOUS SOURCES
*
* -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- --
HOLO            92 54 40.0   + 08 35 07.00 AZ    n/a     n/a   n/a   LSR  RADIO [c] Position for holography
* -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- --
```

**Annex 2: Adraou et al. Southern Hemisphere Pointing Catalogue**

| No. | _RAJ2000 | _DEJ2000 | Name | RAB1950 | DEB1950 | Type | Sc | Smin | Smax |
|---|---|---|---|---|---|---|---|---|---|
| | "h:m:s" | "d:m:s" | | "h:m:s" | "d:m:s" | | mJy | mJy | mJy |
| 1 | 00 06 13.89 | -06 23 35.3 | B0003-066 | 00 03 40.29 | -06 40 17.4 | BL | 890 | 650 | 1131 |
| 2 | 00 50 41.32 | -09 29 05.2 | B0048-097 | 00 48 09.98 | -09 45 24.3 | BL | 890 | 250 | 1530 |
| 3 | 00 51 09.49 | -42 26 33.3 | B0048-427 | 00 48 49.02 | -42 42 52.1 | Q | 854 | 567 | 1140 |
| 4 | 00 58 46.58 | -56 59 11.4 | B0056-572 | 00 56 38.58 | -57 15 22.4 | Q | 505 | 475 | 536 |
| 5 | 01 06 45.11 | -40 34 20.0 | B0104-408 | 01 04 27.58 | -40 50 21.7 | Q | 737 | | |
| 6 | 01 08 38.75 | +01 34 58.9 | B0106+013 | 01 06 04.50 | +01 18 59.6 | Q | 1172 | 800 | 1544 |
| 7 | 01 15 17.10 | -01 27 04.6 | B0112-017 | 01 12 43.93 | -01 42 55.1 | Q | 389 | 171 | 608 |
| 8 | 01 16 12.52 | -11 36 15.5 | B0113-118 | 01 13 43.22 | -11 52 04.7 | Q | 433 | 297 | 569 |
| 9 | 01 20 31.67 | -27 01 24.6 | B0118-272 | 01 18 09.54 | -27 17 07.6 | BL | 380 | 160 | 600 |
| 10 | 01 32 43.48 | -16 54 48.5 | B0130-171 | 01 30 17.69 | -17 10 12.0 | Q | 969 | | |
| 11 | 01 37 38.35 | -24 30 53.9 | B0135-247 | 01 35 17.12 | -24 46 08.8 | Q | 708 | 346 | 1070 |
| 12 | 01 41 25.83 | -09 28 43.7 | B0138-097 | 01 38 56.86 | -09 43 51.8 | BL | 420 | 210 | 630 |
| 13 | 02 04 50.41 | +15 14 11.0 | B0202+149 | 02 02 07.40 | +14 59 50.8 | Q | 1286 | 971 | 1601 |
| 14 | 02 10 46.20 | -51 01 01.9 | B0208-512 | 02 08 56.96 | -51 15 07.8 | Q | 2619 | 1000 | 4238 |
| 15 | 02 17 48.96 | +01 44 49.6 | B0215+015 | 02 15 14.14 | +01 31 00.0 | BL | 707 | 310 | 1105 |
| 16 | 02 24 28.42 | +06 59 23.4 | B0221+067 | 02 21 49.96 | +06 45 50.4 | Q | 1165 | 930 | 1400 |
| 17 | 02 38 38.93 | +16 36 59.3 | B0235+164 | 02 35 52.63 | +16 24 03.9 | BL | 2377 | 694 | 4060 |
| 18 | 02 42 29.17 | +11 01 00.7 | B0239+108 | 02 39 47.09 | +10 48 16.2 | Q | 670 | | |
| 19 | 02 53 29.18 | -54 41 51.5 | B0252-549 | 02 52 00.26 | -54 54 02.5 | Q | 536 | 495 | 578 |
| 20 | 03 03 50.63 | -62 11 25.6 | B0302-623 | 03 02 48.14 | -62 23 04.2 | Q | 526 | 340 | 713 |
| 21 | 03 34 13.65 | -40 08 25.1 | B0332-403 | 03 32 25.24 | -40 18 23.8 | Q | 844 | 388 | 1300 |
| 22 | 03 39 30.94 | -01 46 35.8 | B0336-019 | 03 36 58.96 | -01 56 17.0 | Q | 1500 | 610 | 2391 |
| 23 | 03 40 35.61 | -21 19 31.2 | B0338-214 | 03 38 23.29 | -21 29 08.0 | BL | 383 | 270 | 497 |
| 24 | 04 03 53.77 | -36 05 01.5 | B0402-362 | 04 02 02.62 | -36 13 11.5 | Q | 1720 | 940 | 2500 |
| 25 | 04 05 34.01 | -13 08 13.7 | B0403-132 | 04 03 13.99 | -13 16 18.2 | Q | 459 | 443 | 475 |
| 26 | 04 23 15.81 | -01 20 33.1 | B0420-014 | 04 20 43.55 | -01 27 28.8 | Q | 2560 | 1050 | 4070 |
| 27 | 04 24 42.36 | -37 56 21.4 | B0422-380 | 04 22 56.29 | -38 03 09.9 | Q | 569 | 530 | 608 |
| 28 | 04 28 40.38 | -37 56 19.7 | B0426-380 | 04 26 54.67 | -38 02 52.3 | BL | 570 | 540 | 600 |
| 29 | 04 33 11.09 | +05 21 15.6 | B0430+052 | 04 30 31.60 | +05 14 59.6 | Q | 790 | 700 | 880 |
| 30 | 04 40 17.18 | -43 33 08.6 | B0438-436 | 04 38 43.19 | -43 38 53.6 | Q | 415 | 280 | 550 |
| 31 | 04 53 14.65 | -28 07 37.3 | B0451-282 | 04 51 15.14 | -28 12 29.4 | Q | 490 | | |
| 32 | 04 50 05.47 | -81 01 02.2 | B0454-810 | 04 54 18.05 | -81 05 54.6 | Q | 515 | 500 | 530 |
| 33 | 04 55 50.77 | -46 15 58.7 | B0454-463 | 04 54 24.19 | -46 20 38.8 | Q | 3644 | 3565 | 3723 |
| 34 | 04 57 03.18 | -23 24 52.1 | B0454-234 | 04 54 57.31 | -23 29 28.4 | Q | 674 | 640 | 708 |
| 35 | 05 01 12.81 | -01 59 14.3 | B0458-020 | 04 58 41.35 | -02 03 33.9 | Q | 740 | 295 | 1186 |
| 36 | 05 06 44.00 | -61 09 41.0 | B0506-612 | 05 06 08.49 | -61 13 33.3 | BL | 2360 | 1480 | 3240 |
| 37 | 05 22 57.98 | -36 27 30.9 | B0521-365 | 05 21 12.98 | -36 30 16.0 | Q | 2491 | 707 | 4275 |
| 38 | 05 30 56.41 | +13 31 55.2 | B0528+134 | 05 28 06.76 | +13 29 42.3 | Q | 1198 | 1093 | 1303 |
| 39 | 05 32 39.00 | +07 32 43.3 | B0529+075 | 05 29 56.50 | +07 30 38.1 | Q | 944 | 944 | 945 |
| 40 | 05 38 50.37 | -44 05 09.0 | B0537-441 | 05 37 21.09 | -44 06 44.7 | Q | 2018 | 1300 | 2737 |
| 41 | 06 04 25.17 | -42 25 30.0 | B0602-424 | 06 02 52.49 | -42 25 14.1 | Q | 2175 | | |
| 42 | 06 07 59.69 | -08 34 50.0 | B0605-085 | 06 05 36.03 | -08 34 20.3 | Q | 1436 | 642 | 2230 |
| 43 | 06 09 40.95 | -15 42 40.7 | B0607-157 | 06 07 25.99 | -15 42 03.3 | Q | 2672 | 880 | 4465 |
| 44 | 06 35 46.55 | -75 16 16.8 | B0637-752 | 06 37 23.43 | -75 13 37.5 | Q | 1679 | 658 | 2700 |
| 45 | 06 48 14.11 | -30 44 19.6 | B0646-306 | 06 46 19.22 | -30 40 54.3 | Q | 379 | 296 | 463 |
| 46 | 07 30 19.11 | -11 41 12.7 | B0727-115 | 07 27 58.10 | -11 34 52.6 | Q | 1485 | 540 | 2430 |
| 47 | 07 38 07.39 | +17 42 19.0 | B0735+178 | 07 35 14.13 | +17 49 09.3 | BL | 1605 | 690 | 2520 |
| 48 | 07 39 18.04 | +01 37 04.6 | B0736+017 | 07 36 42.52 | +01 44 00.2 | Q | 2051 | 517 | 3585 |
| 49 | 07 57 06.64 | +09 56 34.8 | B0754+100 | 07 54 22.58 | +10 04 39.7 | BL | 792 | 570 | 1015 |
| 50 | 08 08 15.54 | -07 51 09.8 | B0805-077 | 08 05 49.56 | -07 42 22.3 | Q | 477 | 254 | 700 |

| No. | _RAJ2000 | _DEJ2000 | Name | RAB1950 | DEB1950 | Type | Sc | Smin | Smax |
|---|---|---|---|---|---|---|---|---|---|
| | "h:m:s" | "d:m:s" | | "h:m:s" | "d:m:s" | | mJy | mJy | mJy |
| 51 | 08 25 50.33 | +03 09 24.5 | B0823+033 | 08 23 13.54 | +03 19 15.5 | BL | 1203 | 700 | 1706 |
| 52 | 08 36 39.25 | -20 16 58.8 | B0834-201 | 08 34 24.64 | -20 06 29.6 | Q | 813 | 470 | 1156 |
| 53 | 08 54 48.87 | +20 06 30.6 | B0851+202 | 08 51 57.25 | +20 17 58.5 | BL | 3345 | 1100 | 5590 |
| 54 | 09 09 10.09 | +01 21 35.6 | B0906+015 | 09 06 35.19 | +01 33 48.2 | Q | 2347 | 1981 | 2713 |
| 55 | 09 22 46.42 | -39 59 35.1 | B0920-397 | 09 20 48.24 | -39 46 42.2 | Q | 467 | 356 | 578 |
| 56 | 10 35 02.16 | -20 11 34.3 | B1032-199 | 10 32 37.37 | -19 56 02.0 | Q | 374 | 259 | 490 |
| 57 | 10 37 16.08 | -29 34 02.9 | B1034-293 | 10 34 55.83 | -29 18 26.9 | Q | 1703 | 390 | 3016 |
| 58 | 10 48 06.62 | -19 09 35.8 | B1045-188 | 10 45 40.10 | -18 53 44.0 | Q | 717 | 470 | 964 |
| 59 | 10 58 29.61 | +01 33 58.9 | B1055+018 | 10 55 55.32 | +01 50 03.7 | Q | 1901 | 1030 | 2772 |
| 60 | 10 58 43.31 | -80 03 54.1 | B1057-797 | 10 57 49.73 | -79 47 47.7 | Q | 915 | 680 | 1150 |
| 61 | 11 03 52.22 | -53 57 00.7 | B1101-536 | 11 01 41.05 | -53 40 49.3 | Q | 863 | 814 | 913 |
| 62 | 11 07 08.70 | -44 49 07.7 | B1104-445 | 11 04 50.38 | -44 32 52.9 | Q | 751 | 502 | 1000 |
| 63 | 11 18 57.30 | +12 34 41.7 | B1116+128 | 11 16 20.78 | +12 51 06.8 | Q | 3237 | 254 | 6220 |
| 64 | 11 27 04.39 | -18 57 17.4 | B1124-186 | 11 24 34.02 | -18 40 46.2 | Q | 464 | 291 | 638 |
| 65 | 11 30 07.05 | -14 49 27.4 | B1127-145 | 11 27 35.67 | -14 32 54.3 | Q | 910 | 601 | 1220 |
| 66 | 11 47 01.34 | -38 12 11.5 | B1144-379 | 11 44 30.83 | -37 55 31.0 | BL | 1133 | 1067 | 1200 |
| 67 | 11 47 33.63 | -67 53 41.8 | B1145-676 | 11 45 09.60 | -67 37 01.0 | Q | 740 | 281 | 1200 |
| 68 | 11 52 17.19 | -08 41 04.0 | B1149-084 | 11 49 43.83 | -08 24 22.5 | Q | 1205 | 42 | 2368 |
| 69 | 12 29 06.41 | +02 03 05.2 | B1226+023 | 12 26 32.96 | +02 19 40.0 | Q | 14703 | 1169 | 28237 |
| 70 | 12 46 04.23 | -07 30 46.6 | B1243-072 | 12 43 28.79 | -07 14 23.4 | Q | 270 | 90 | 450 |
| 71 | 12 46 46.80 | -25 47 49.3 | B1244-255 | 12 44 06.72 | -25 31 26.6 | Q | 1297 | 590 | 2005 |
| 72 | 12 56 11.17 | -05 47 21.6 | B1253-055 | 12 53 35.84 | -05 31 07.9 | Q | 13200 | 3970 | 22430 |
| 73 | 13 05 33.01 | -10 33 19.5 | B1302-102 | 13 02 55.85 | -10 17 16.3 | Q | 381 | 293 | 470 |
| 74 | 13 16 07.99 | -33 38 59.2 | B1313-333 | 13 13 20.05 | -33 23 09.6 | Q | 2101 | 523 | 3680 |
| 75 | 13 25 27.61 | -43 01 08.8 | B1322-428 | 13 22 31.60 | -42 45 32.9 | Q | 9205 | 8200 | 10210 |
| 76 | 13 37 39.78 | -12 57 24.7 | B1334-127 | 13 34 59.81 | -12 42 09.6 | Q | 4064 | 2198 | 5930 |
| 77 | 13 54 46.51 | -10 41 02.7 | B1352-104 | 13 52 06.83 | -10 26 20.7 | Q | 490 | 430 | 551 |
| 78 | 13 57 04.43 | +19 19 07.4 | B1354+195 | 13 54 42.09 | +19 33 44.1 | Q | 826 | 275 | 1378 |
| 79 | 14 15 58.82 | +13 20 23.7 | B1413+135 | 14 13 33.92 | +13 34 17.5 | BL | 1331 | 407 | 2255 |
| 80 | 14 24 55.61 | -68 07 59.1 | B1420-679 | 14 20 45.20 | -67 54 25.0 | Q | 373 | 323 | 423 |
| 81 | 14 27 56.35 | -42 06 19.4 | B1424-418 | 14 24 46.72 | -41 52 54.5 | Q | 615 | 600 | 631 |
| 82 | 14 54 27.60 | -37 47 34.7 | B1451-375 | 14 51 18.47 | -37 35 24.2 | Q | 796 | 442 | 1150 |
| 83 | 15 04 24.98 | +10 29 39.3 | B1502+106 | 15 02 00.16 | +10 41 17.9 | Q | 636 | 178 | 1094 |
| 84 | 15 07 04.79 | -16 52 30.3 | B1504-166 | 15 04 16.42 | -16 40 59.3 | Q | 384 | 288 | 480 |
| 85 | 15 12 50.53 | -09 05 59.8 | B1510-089 | 15 10 08.90 | -08 54 47.5 | Q | 3473 | 607 | 6340 |
| 86 | 15 17 41.81 | -24 22 19.5 | B1514-241 | 15 14 45.27 | -24 11 22.6 | BL | 1190 | 600 | 1780 |
| 87 | 15 22 37.67 | -27 30 10.8 | B1519-273 | 15 19 37.24 | -27 19 30.2 | BL | 350 | 211 | 490 |
| 88 | 15 40 49.49 | +14 47 45.9 | B1538+149 | 15 38 30.24 | +14 57 21.9 | BL | 444 | 352 | 536 |
| 89 | 15 49 29.44 | +02 37 01.2 | B1546+027 | 15 46 58.30 | +02 46 06.2 | Q | 1138 | 517 | 1760 |
| 90 | 15 50 35.27 | +05 27 10.5 | B1548+056 | 15 48 06.94 | +05 36 11.3 | BL | 604 | 248 | 960 |
| 91 | 16 08 46.20 | +10 29 07.8 | B1606+106 | 16 06 23.40 | +10 36 59.9 | Q | 495 | 310 | 680 |
| 92 | 16 17 49.27 | -77 17 18.5 | B1610-771 | 16 10 51.47 | -77 09 52.4 | Q | 539 | 488 | 590 |
| 93 | 16 17 18.06 | -58 48 09.7 | B1613-586 | 16 13 05.50 | -58 40 47.0 | Q | 691 | | |
| 94 | 16 26 06.02 | -29 51 27.0 | B1622-297 | 16 22 57.24 | -29 44 41.4 | Q | 1025 | 400 | 1650 |
| 95 | 16 58 09.01 | +07 41 27.6 | B1655+077 | 16 55 43.96 | +07 45 59.8 | Q | 630 | 260 | 1000 |
| 96 | 17 00 53.16 | -26 10 51.7 | B1657-261 | 16 57 47.72 | -26 06 29.5 | Q | 1315 | 650 | 1980 |
| 97 | 17 33 02.68 | -13 04 49.1 | B1730-130 | 17 30 13.51 | -13 02 45.4 | Q | 3444 | 909 | 5980 |
| 98 | 17 43 58.86 | -03 50 04.6 | B1741-038 | 17 41 20.62 | -03 48 48.9 | Q | 1283 | 590 | 1976 |
| 99 | 17 51 32.81 | +09 39 00.8 | B1749+096 | 17 49 10.39 | +09 39 42.9 | BL | 3582 | 380 | 6784 |
| 100 | 18 00 30.43 | -24 04 01.5 | B1757-240 | 17 57 26.80 | -24 03 57.0 | Q | 11180 | 8360 | 14000 |
| 101 | 18 33 39.89 | -21 03 39.8 | B1830-211 | 18 30 40.60 | -21 06 00.0 | Q | 1096 | 520 | 1673 |
| 102 | 18 37 28.71 | -71 08 43.5 | B1831-711 | 18 31 41.21 | -71 11 14.2 | Q | 495 | 475 | 515 |
| 103 | 19 11 09.66 | -20 06 55.1 | B1908-201 | 19 08 12.47 | -20 11 55.2 | Q | 958 | 870 | 1046 |

| No. | _RAJ2000 | _DEJ2000 | Name | RAB1950 | DEB1950 | Type | Sc | Smin | Smax |
|---|---|---|---|---|---|---|---|---|---|
| | "h:m:s" | "d:m:s" | | "h:m:s" | "d:m:s" | | mJy | mJy | mJy |
| 104 | 19 24 51.06 | -29 14 30.1 | B1921-293 | 19 21 42.24 | -29 20 26.4 | BL | 6517 | 2210 | 10825 |
| 105 | 19 37 16.30 | -39 58 01.3 | B1933-400 | 19 33 51.21 | -40 04 47.3 | Q | 599 | 569 | 630 |
| 106 | 19 57 59.82 | -38 45 07.0 | B1954-388 | 19 54 39.05 | -38 53 14.2 | Q | 1245 | 978 | 1513 |
| 107 | 20 00 57.09 | -17 48 57.6 | B1958-179 | 19 58 04.61 | -17 57 17.0 | Q | 1794 | 959 | 2630 |
| 108 | 20 09 25.39 | -48 49 53.8 | B2005-489 | 20 05 46.56 | -48 58 43.5 | BL | 698 | 606 | 790 |
| 109 | 20 11 15.71 | -15 46 40.3 | B2008-159 | 20 08 25.92 | -15 55 38.3 | Q | 627 | 544 | 710 |
| 110 | 21 09 33.19 | -41 10 20.6 | B2106-413 | 21 06 19.40 | -41 22 33.6 | Q | 664 | | |
| 111 | 21 23 44.52 | +05 35 22.2 | B2121+053 | 21 21 14.81 | +05 22 27.4 | Q | 721 | 520 | 923 |
| 112 | 21 31 35.26 | -12 07 04.8 | B2128-123 | 21 28 52.68 | -12 20 20.6 | Q | 459 | 350 | 568 |
| 113 | 21 34 10.30 | -01 53 17.2 | B2131-021 | 21 31 35.13 | -02 06 40.0 | Q | 655 | 500 | 810 |
| 114 | 21 36 38.59 | +00 41 54.5 | B2134+004 | 21 34 05.22 | +00 28 25.3 | Q | 675 | 521 | 830 |
| 115 | 21 48 05.45 | +06 57 38.6 | B2145+067 | 21 45 36.08 | +06 43 40.8 | Q | 2995 | 1600 | 4390 |
| 116 | 21 58 06.29 | -15 01 09.3 | B2155-152 | 21 55 23.25 | -15 15 30.2 | BL | 975 | 460 | 1490 |
| 117 | 22 13 02.49 | -25 29 30.1 | B2210-257 | 22 10 14.13 | -25 44 22.5 | Q | 310 | 101 | 520 |
| 118 | 22 18 52.04 | -03 35 36.9 | B2216-038 | 22 16 16.39 | -03 50 40.8 | Q | 455 | 250 | 660 |
| 119 | 22 25 47.26 | -04 57 01.4 | B2223-052 | 22 23 11.08 | -05 12 17.9 | Q | 6579 | 1448 | 11710 |
| 120 | 22 29 40.08 | -08 32 54.5 | B2227-088 | 22 27 02.34 | -08 48 17.8 | Q | 755 | 130 | 1380 |
| 121 | 22 32 36.41 | +11 43 50.9 | B2230+114 | 22 30 07.81 | +11 28 22.7 | Q | 1445 | 920 | 1970 |
| 122 | 22 35 13.23 | -48 35 58.8 | B2232-488 | 22 32 11.46 | -48 51 31.1 | Q | 1030 | 1000 | 1060 |
| 123 | 22 46 18.23 | -12 06 51.3 | B2243-123 | 22 43 39.80 | -12 22 40.4 | Q | 927 | 655 | 1200 |
| 124 | 22 53 57.75 | +16 08 53.5 | B2251+158 | 22 51 29.53 | +15 52 54.2 | Q | 5383 | 2470 | 8296 |
| 125 | 22 58 05.96 | -27 58 21.3 | B2255-282 | 22 55 22.46 | -28 14 25.8 | Q | 2622 | 805 | 4439 |
| 126 | 23 20 44.86 | +05 13 50.0 | B2318+049 | 23 18 12.14 | +04 57 23.4 | Q | 605 | 150 | 1060 |
| 127 | 23 23 31.95 | -03 17 05.1 | B2320-035 | 23 20 57.53 | -03 33 33.8 | Q | 485 | | |
| 128 | 23 29 17.70 | -47 30 19.1 | B2326-477 | 23 26 33.71 | -47 46 51.8 | Q | 689 | 608 | 770 |
| 129 | 23 48 02.61 | -16 31 12.0 | B2345-167 | 23 45 27.69 | -16 47 52.7 | Q | 1307 | 754 | 1860 |
| 130 | 23 57 53.27 | -53 11 13.7 | B2355-534 | 23 55 18.17 | -53 27 56.1 | Q | 457 | 437 | 477 |

## Annex 3: List of Potential SPIRE Pointing Sources

**Notes**

| | |
|---|---|
| **Cat** | S indicates SEST catalogue; J indicates JCMT catalogue |
| **PKSB** | Parkes catalogue designation (1950 epoch) |
| **PKSJ** | Parkes catalogue designation (2000 epoch) |
| **Other** | Alternative commonmly used name |
| **Coordinates** | Source position from NED unless otherwise indicated |
| **α** | Estimated submillimetre spectral index, based on SED informaiton in NED |
| **Env** | TBD indicator of confusion noise in the source environment |
| **Ver** | Indication that all data herein on the source have been checked and that it is declared usable as a pointing source |
| **Measured S(λ)** | Some sources have both JCMT and SEST data - both are indicated; JCMT data are more reliable, being based on more recent observations and closer in wavelength to SPIRE bands |
| **Visibility** | Based on restricted solar aspect angle range |

| | | Name | | | Coordinates (J2000) | | | | | | α | Measured S(λ) (Jy) | | | | | | Est. S(λ) (Jy) | | | Env | Ver | CoP/PV |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | 850μm (JCMT) | | | 1200 μm (SEST) | | | 250 | 350 | 500 | | (Y/N) | Visibility |
| **No** | **Cat** | **PKSB** | **PKSJ** | **Other** | **RA** | | | **Dec** | | | | **Typ** | **Range** | | **Avg** | **Range** | | **Min** | **Min** | **Min** | | | **(Restricted)** |
| 1 | S | | | EQ1757-240 | 18 | 0 | 30.43 | -24 | 4 | 1.500 | -0.7 | | | | 11.2 | 8.4 | 14.0 | 2.8 | 3.5 | 4.5 | | Y | N |
| 2 | J | 0851+202 | 0854+2006 | OJ287 | 8 | 54 | 48.8749 | 20 | 6 | 30.641 | -0.5 | 4 | 3.3 | 5.1 | | | | 1.8 | 2.1 | 2.5 | | Y | N |
| 3 | J | 1921-293 | 1325-4303 | | 19 | 24 | 51.0559 | -29 | 14 | 30.120 | -1.16 | 4 | 4 | 5 | | | | 1.0 | 1.4 | 2.2 | | Y | N |
| | S | 1921-293 | 1325-4303 | | | | | | | | | | | | 6.5 | 2.2 | 10.8 | 0.36 | 0.53 | 0.80 | | | N |
| 4 | J | 2230+114 | 2232+1143 | 4C+11.69 | 22 | 32 | 36.4089 | 11 | 43 | 50.904 | -0.96 | 3.3 | 3.3 | 3.5 | | | | 1.0 | 1.4 | 2.0 | | Y | N |
| 5 | J | | | 8C0716+714 | 7 | 21 | 53.4484 | 71 | 20 | 36.363 | -0.38 | 1.7 | 1.6 | 2.5 | | | | 1.0 | 1.1 | 1.3 | | Y | N |
| 6 | J | 0420-014 | 0423-0120 | | 4 | 23 | 15.8007 | -1 | 20 | 33.064 | -0.54 | 1.8 | 1.8 | 6.1 | | | | 0.93 | 1.1 | 1.4 | | Y | OD65 - 115 |
| 7 | J | 1226+023 | 1229+0203 | 3C273 | 12 | 29 | 6.6997 | 2 | 3 | 8.598 | -0.73 | 2.1 | 2.1 | 4.2 | | | | 0.86 | 1.1 | 1.4 | | Y | Up to OD75 |
| | S | 1226+023 | | | 12 | 29 | 6.6997 | 2 | 3 | 8.598 | -0.73 | | | | 14.7 | 1.2 | 28.2 | 0.37 | 0.47 | 0.62 | | | |
| 8 | J | 2251+158 | 2253+1608 | 3C454.3 | 22 | 53 | 57.7479 | 16 | 8 | 53.560 | -1.16 | 7 | 3.4 | 7 | | | | 0.82 | 1.2 | 1.8 | | Y | Up to OD40 |
| | S | 2251+158 | 2253+1608 | 3C454.3 | | | | | | | | | | | 5.4 | 2.5 | 8.3 | 0.40 | 0.59 | 0.89 | | Y | |
| 9 | J | 0537-441 | 0538-4405 | | 5 | 38 | 50.3614 | -44 | 5 | 8.934 | -0.88 | 2.3 | 2.3 | | | | | 0.78 | 1.0 | 1.4 | | Y | Y |
| 10 | J | 1253-055 | 1256-0547 | 3C279 | 12 | 56 | 11.1665 | -5 | 47 | 21.523 | -1.29 | 3.4 | 3.4 | 7.6 | | | | 0.70 | 1.1 | 1.7 | | Y | OD42 - 85 |
| | S | 1253-055 | 1256-0547 | 3C279 | | | | | | | | | | | 13.2 | 4.0 | 22.4 | 0.52 | 0.81 | 1.28 | | | |
| 11 | J | 1334-127 | 1337-1257 | | 13 | 37 | 39.7827 | -12 | 57 | 24.692 | -1.04 | 2.4 | 2.4 | 3.8 | | | | 0.67 | 1.0 | 1.4 | | Y | OD55 - 99 |
| 12 | S | 0454-463 | 0455-4615 | | 4 | 55 | 50.7724 | -46 | 15 | 58.681 | -1.07 | | | | 3.6 | 3.6 | 3.7 | 0.66 | 0.95 | 1.4 | | Y | Up to OD129 |
| 13 | S | 2223-052 | 2225-0457 | 3C446 | 22 | 25 | 47.2592 | -4 | 57 | 1.390 | -0.56 | | | | 6.6 | 1.4 | 11.7 | 0.60 | 0.73 | 0.89 | | Y | N |
| 14 | J | 1741-038 | 1743-0350 | | 17 | 43 | 58.8561 | -3 | 50 | 4.616 | -0.98 | 1.9 | 1.9 | 2.1 | | | | 0.58 | 0.80 | 1.1 | | Y | OD115-160 |
| 15 | J | | | BL Lac | 22 | 2 | 43.2913 | 42 | 16 | 39.979 | -0.54 | 4.4 | 1.1 | 4.4 | | | | 0.57 | 0.68 | 0.83 | | Y | Up to OD48 |
| 15 | S | 0906+015 | 0909+0121 | 4C+01.24 | 9 | 9 | 10.0915 | 1 | 21 | 35.618 | -0.85 | | | | 2.3 | 2.0 | 2.7 | 0.52 | 0.70 | 0.94 | | Y | N |
| 17 | J | | | 3C345 | 16 | 42 | 58.8099 | 39 | 48 | 36.993 | -0.93 | 1.5 | 1.5 | 2 | | | | 0.48 | 0.66 | 0.9 | | Y | OD75-200 |
| 18 | J | | | 4C+50.11 | 3 | 59 | 29.7472 | 50 | 57 | 50.161 | -1.16 | 1.8 | 1.8 | 3.1 | | | | 0.43 | 0.64 | 0.97 | | Y | OD71-122 |
| 19 | S | 1334-127 | 1337-1257 | | 13 | 37 | 39.7827 | -12 | 57 | 24.692 | -1.04 | | | | 4.1 | 2.2 | 5.9 | 0.43 | 0.61 | 0.89 | | Y | OD55-98 |
| 20 | S | 0506-612 | 0506-6109 | | 5 | 6 | 43.9887 | -61 | 9 | 40.993 | -0.93 | | | | 2.4 | 1.5 | 3.2 | 0.34 | 0.47 | 0.66 | | Y | Y |
| 21 | S | 2145+067 | 2148+0657 | 4C+06.69 | 21 | 48 | 5.4586 | 6 | 57 | 38.604 | -1.05 | | | | 3.0 | 1.6 | 4.4 | 0.31 | 0.44 | 0.64 | | Y | N |
| 22 | J | | | 4C+28.07 | 2 | 37 | 52.4056 | 28 | 48 | 8.990 | -1.31 | 1.3 | 1.2 | 1.5 | | | | 0.24 | 0.38 | 0.60 | | Y | OD52-95 |

| | | Name | | | Coordinates (J2000) | | | | | | α | Measured S(λ) (Jy) | | | | | | Est. S(λ) (Jy) | | | Env | Ver | CoP/PV Visibility |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | 850μm (JCMT) | | | 1200 μm (SEST) | | | 250 | 350 | 500 | | (Y/N) | |
| No | Cat | PKSB | PKSJ | Other | RA | | | Dec | | | | Typ | Range | | Avg | Range | | Min | Min | Min | | | (Restricted) |
| 16 | J | 0133+476 | | | 1 | 36 | 58.595 | 47 | 51 | 29.100 | -0.7 | 1.6 | 1.1 | 1.7 | | | | 0.22 | 0.34 | 0.55 | | | |
| 17 | J | 2223-052 | | | 22 | 25 | 47.259 | -4 | 57 | 1.390 | -0.7 | 1.3 | 1.1 | 1.3 | | | | 0.57 | 0.68 | 0.83 | | | |
| 18 | J | 1730-130 | | | 17 | 33 | 2.706 | -13 | 4 | 49.550 | -0.7 | 1.1 | 1.1 | 1.5 | | | | 0.47 | 0.59 | 0.76 | | | |
| 19 | J | 0003-066 | | | 0 | 6 | 13.893 | -6 | 23 | 35.330 | -0.7 | 1 | 1.1 | 1.7 | | | | 0.47 | 0.59 | 0.76 | | | |
| 20 | S | 0537-441 | | | 5 | 38 | 50.37 | -44 | 5 | 9.000 | -0.7 | | | | 2.02 | 1.30 | 2.74 | 0.43 | 0.55 | 0.70 | | | |
| 21 | J | 0607-157 | | | 6 | 9 | 40.95 | -15 | 42 | 40.670 | -0.7 | 1 | 1 | | | | | 0.42 | 0.54 | 0.69 | | | |
| 22 | J | 0754+100 | | | 7 | 57 | 6.643 | 9 | 56 | 34.850 | -0.7 | 1 | 1 | 1.1 | | | | 0.42 | 0.54 | 0.69 | | | |
| 23 | J | 0923+392 | | | 9 | 27 | 3.014 | 39 | 2 | 20.850 | -0.7 | 1 | 1 | 1.3 | | | | 0.42 | 0.54 | 0.69 | | | |
| 24 | J | 1514-241 | | | 15 | 17 | 41.813 | -24 | 22 | 19.480 | -0.7 | 1 | 0.9 | 1.1 | | | | 0.38 | 0.48 | 0.62 | | | |
| 25 | J | 1807+698 | | | 18 | 6 | 50.681 | 69 | 49 | 28.110 | -0.7 | 0.9 | 0.9 | 1 | | | | 0.45 | 0.55 | 0.67 | | | |
| 26 | S | 0851+202 | | | 8 | 54 | 48.87 | 20 | 6 | 30.600 | -0.7 | | | | 3.35 | 1.10 | 5.59 | 0.37 | 0.46 | 0.60 | | | |
| 27 | S | 0528+134 | | | 5 | 30 | 56.41 | 13 | 31 | 55.200 | -0.7 | | | | 1.20 | 1.09 | 1.30 | 0.36 | 0.46 | 0.59 | | | |
| 28 | S | 1144-379 | | | 11 | 47 | 1.34 | -38 | 12 | 11.500 | -0.7 | | | | 1.13 | 1.07 | 1.20 | 0.36 | 0.45 | 0.58 | | | |
| 29 | S | 0420-014 | | | 4 | 23 | 15.81 | -1 | 20 | 33.100 | -0.7 | | | | 2.56 | 1.05 | 4.07 | 0.35 | 0.44 | 0.57 | | | |
| 30 | S | 1055+018 | | | 10 | 58 | 29.61 | 1 | 33 | 58.900 | -0.7 | | | | 1.90 | 1.03 | 2.77 | 0.34 | 0.43 | 0.56 | | | |
| 31 | J | 0528+134 | | | 5 | 30 | 56.417 | 13 | 31 | 55.150 | -0.7 | 1.3 | 0.8 | 1.3 | | | | 0.34 | 0.43 | 0.55 | | | |
| 32 | J | 0727-115 | | | 7 | 30 | 19.112 | -11 | 41 | 12.600 | -0.7 | 0.8 | 0.8 | | | | | 0.34 | 0.43 | 0.55 | | | |
| 33 | J | 1633+382 | | | 16 | 35 | 15.493 | 38 | 8 | 4.500 | -0.7 | 0.8 | 0.8 | 1.6 | | | | 0.34 | 0.43 | 0.55 | | | |
| 34 | S | 0208-512 | | | 2 | 10 | 46.2 | -51 | 1 | 1.900 | -0.7 | | | | 2.62 | 1.00 | 4.24 | 0.33 | 0.42 | 0.54 | | | |
| 35 | S | 2232-488 | | | 22 | 35 | 13.23 | -48 | 35 | 58.800 | -0.7 | | | | 1.03 | 1.00 | 1.06 | 0.33 | 0.42 | 0.54 | | | |
| 36 | S | 1954-388 | | | 19 | 57 | 59.82 | -38 | 45 | 7.000 | -0.7 | | | | 1.25 | 0.98 | 1.51 | 0.33 | 0.41 | 0.53 | | | |
| 37 | S | 0202+149 | | | 2 | 4 | 50.41 | 15 | 14 | 11.000 | -0.7 | | | | 1.29 | 0.97 | 1.60 | 0.32 | 0.41 | 0.53 | | | |
| 38 | S | 1958-179 | | | 20 | 0 | 57.09 | -17 | 48 | 57.600 | -0.7 | | | | 1.79 | 0.96 | 2.63 | 0.32 | 0.40 | 0.52 | | | |
| 39 | S | 0529+075 | | | 5 | 32 | 39 | 7 | 32 | 43.300 | -0.7 | | | | 0.94 | 0.94 | 0.95 | 0.31 | 0.40 | 0.51 | | | |
| 40 | S | 0402-362 | | | 4 | 3 | 53.77 | -36 | 5 | 1.500 | -0.7 | | | | 1.72 | 0.94 | 2.50 | 0.31 | 0.40 | 0.51 | | | |
| 41 | S | 0221+067 | | | 2 | 24 | 28.42 | 6 | 59 | 23.400 | -0.7 | | | | 1.17 | 0.93 | 1.40 | 0.31 | 0.39 | 0.50 | | | |
| 42 | S | 2230+114 | | | 22 | 32 | 36.41 | 11 | 43 | 50.900 | -0.7 | | | | 1.45 | 0.92 | 1.97 | 0.31 | 0.39 | 0.50 | | | |
| 43 | S | 1730-130 | | | 17 | 33 | 2.68 | -13 | 4 | 49.100 | -0.7 | | | | 3.44 | 0.91 | 5.98 | 0.30 | 0.38 | 0.49 | | | |
| 44 | J | 1055+018 | | | 10 | 58 | 29.605 | 1 | 33 | 58.820 | -0.7 | 0.7 | 0.7 | 3.1 | | | | 0.30 | 0.38 | 0.48 | | | |
| 45 | J | 1908-202 | | | 19 | 11 | 9.653 | -20 | 6 | 55.110 | -0.7 | 0.7 | 0.7 | | | | | 0.30 | 0.38 | 0.48 | | | |
| 46 | J | 2005+403 | | | 20 | 7 | 44.945 | 40 | 29 | 48.600 | -0.7 | 0.7 | 0.7 | | | | | 0.30 | 0.38 | 0.48 | | | |
| 47 | J | 2255-282 | | | 22 | 58 | 5.963 | -27 | 58 | 21.260 | -0.7 | 0.7 | 0.7 | 1 | | | | 0.30 | 0.38 | 0.48 | | | |
| 48 | S | 0607-157 | | | 6 | 9 | 40.95 | -15 | 42 | 40.700 | -0.7 | | | | 2.67 | 0.88 | 4.47 | 0.29 | 0.37 | 0.48 | | | |
| 49 | S | 1908-201 | | | 19 | 11 | 9.66 | -20 | 6 | 55.100 | -0.7 | | | | 0.96 | 0.87 | 1.05 | 0.29 | 0.37 | 0.47 | | | |
| 50 | S | 1101-536 | | | 11 | 3 | 52.22 | -53 | 57 | 0.700 | -0.7 | | | | 0.86 | 0.81 | 0.91 | 0.27 | 0.34 | 0.44 | | | |
| 51 | S | 2255-282 | | | 22 | 58 | 5.96 | -27 | 58 | 21.300 | -0.7 | | | | 2.62 | 0.81 | 4.44 | 0.27 | 0.34 | 0.44 | | | |
| 52 | S | 0106+013 | | | 1 | 8 | 38.75 | 1 | 34 | 58.900 | -0.7 | | | | 1.17 | 0.80 | 1.54 | 0.27 | 0.34 | 0.43 | | | |
| 53 | J | 0454-234 | | | 4 | 57 | 3.179 | -23 | 24 | 52.020 | -0.7 | 0.7 | 0.6 | 0.8 | | | | 0.25 | 0.32 | 0.41 | | | |
| 54 | J | 1803+784 | | | 18 | 0 | 45.684 | 78 | 28 | 4.020 | -0.7 | 0.7 | 0.6 | 0.8 | | | | 0.25 | 0.32 | 0.41 | | | |

| | | Name | | | Coordinates (J2000) | | | | | | α | Measured S(λ) (Jy) | | | | | | Est. S(λ) (Jy) | | | Env | Ver | CoP/PV Visibility |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | 850μm (JCMT) | | | 1200 μm (SEST) | | | 250 | 350 | 500 | | (Y/N) | |
| No | Cat | PKSB | PKSJ | Other | RA | | | Dec | | | | Typ | Range | | Avg | Range | | Min | Min | Min | | | (Restricted) |
| 55 | J | 0235+164 | | | 2 | 38 | 38.93 | 16 | 36 | 59.270 | -0.7 | 0.6 | 0.6 | 1.1 | | | | 0.25 | 0.32 | 0.41 | | | |
| 56 | J | 0736+017 | | | 7 | 39 | 18.034 | 1 | 37 | 4.620 | -0.7 | 0.6 | 0.6 | 3.4 | | | | 0.25 | 0.32 | 0.41 | | | |
| 57 | J | 1548+056 | | | 15 | 50 | 35.269 | 5 | 27 | 10.450 | -0.7 | 0.6 | 0.6 | 0.8 | | | | 0.25 | 0.32 | 0.41 | | | |
| 58 | J | 1611+343 | | | 16 | 13 | 41.064 | 34 | 12 | 47.910 | -0.7 | 0.6 | 0.6 | 0.8 | | | | 0.25 | 0.32 | 0.41 | | | |
| 59 | S | 2345-167 | | | 23 | 48 | 2.61 | -16 | 31 | 12.000 | -0.7 | | | | 1.31 | 0.75 | 1.86 | 0.25 | 0.32 | 0.41 | | | |
| 60 | S | 0521-365 | | | 5 | 22 | 57.98 | -36 | 27 | 30.900 | -0.7 | | | | 2.49 | 0.71 | 4.28 | 0.24 | 0.30 | 0.38 | | | |
| 61 | S | 0430+052 | | | 4 | 33 | 11.09 | 5 | 21 | 15.600 | -0.7 | | | | 0.79 | 0.70 | 0.88 | 0.23 | 0.30 | 0.38 | | | |
| 62 | S | 0823+033 | | | 8 | 25 | 50.33 | 3 | 9 | 24.500 | -0.7 | | | | 1.20 | 0.70 | 1.71 | 0.23 | 0.30 | 0.38 | | | |
| 63 | S | 0235+164 | | | 2 | 38 | 38.93 | 16 | 36 | 59.300 | -0.7 | | | | 2.38 | 0.69 | 4.06 | 0.23 | 0.29 | 0.38 | | | |
| 64 | S | 0735+178 | | | 7 | 38 | 7.39 | 17 | 42 | 19.000 | -0.7 | | | | 1.61 | 0.69 | 2.52 | 0.23 | 0.29 | 0.37 | | | |
| 65 | S | 1057-797 | | | 10 | 58 | 43.31 | -80 | 3 | 54.100 | -0.7 | | | | 0.92 | 0.68 | 1.15 | 0.23 | 0.29 | 0.37 | | | |
| 66 | S | 0637-752 | | | 6 | 35 | 46.55 | -75 | 16 | 16.800 | -0.7 | | | | 1.68 | 0.66 | 2.70 | 0.22 | 0.28 | 0.36 | | | |
| 67 | S | 2243-123 | | | 22 | 46 | 18.23 | -12 | 6 | 51.300 | -0.7 | | | | 0.93 | 0.66 | 1.20 | 0.22 | 0.28 | 0.35 | | | |
| 68 | S | 1657-261 | | | 17 | 0 | 53.16 | -26 | 10 | 51.700 | -0.7 | | | | 1.32 | 0.65 | 1.98 | 0.22 | 0.27 | 0.35 | | | |
| 69 | S | 0003-066 | | | 0 | 6 | 13.89 | -6 | 23 | 35.300 | -0.7 | | | | 0.89 | 0.65 | 1.13 | 0.22 | 0.27 | 0.35 | | | |
| 70 | S | 0605-085 | | | 6 | 7 | 59.69 | -8 | 34 | 50.000 | -0.7 | | | | 1.44 | 0.64 | 2.23 | 0.21 | 0.27 | 0.35 | | | |
| 71 | S | 0454-234 | | | 4 | 57 | 3.18 | -23 | 24 | 52.100 | -0.7 | | | | 0.67 | 0.64 | 0.71 | 0.21 | 0.27 | 0.35 | | | |
| 72 | J | 0954+658 | | | 9 | 58 | 47.245 | 65 | 33 | 54.820 | -0.7 | 1 | 0.5 | 1 | | | | 0.21 | 0.27 | 0.34 | | | |
| 73 | J | 1823+568 | | | 18 | 24 | 7.068 | 56 | 51 | 1.490 | -0.7 | 1 | 0.5 | 1.1 | | | | 0.21 | 0.27 | 0.34 | | | |
| 74 | J | 2134+004 | | | 21 | 36 | 38.586 | 0 | 41 | 54.210 | -0.7 | 0.7 | 0.5 | 0.7 | | | | 0.21 | 0.27 | 0.34 | | | |
| 75 | J | 0212+735 | | | 2 | 17 | 30.813 | 73 | 49 | 32.620 | -0.7 | 0.5 | 0.5 | | | | | 0.21 | 0.27 | 0.34 | | | |
| 76 | J | 0521-365 | | | 5 | 22 | 57.985 | -36 | 27 | 30.850 | -0.7 | 0.5 | 0.5 | 2.5 | | | | 0.21 | 0.27 | 0.34 | | | |
| 77 | J | 1313-333 | | | 13 | 16 | 7.986 | -33 | 38 | 59.170 | -0.7 | 0.5 | 0.5 | | | | | 0.21 | 0.27 | 0.34 | | | |
| 78 | J | 1622-253 | | | 16 | 25 | 46.892 | -25 | 27 | 38.330 | -0.7 | 0.5 | 0.5 | | | | | 0.21 | 0.27 | 0.34 | | | |
| 79 | J | 1958-179 | | | 20 | 0 | 57.09 | -17 | 48 | 57.670 | -0.7 | 0.5 | 0.5 | 0.8 | | | | 0.21 | 0.27 | 0.34 | | | |
| 80 | J | 2155-152 | | | 21 | 58 | 6.282 | -15 | 1 | 9.330 | -0.7 | 0.5 | 0.5 | 0.6 | | | | 0.21 | 0.27 | 0.34 | | | |
| 81 | J | 2227-088 | | | 22 | 29 | 40.084 | -8 | 32 | 54.440 | -0.7 | 0.5 | 0.5 | | | | | 0.21 | 0.27 | 0.34 | | | |
| 82 | J | 0735+178 | | | 7 | 38 | 7.394 | 17 | 42 | 19.000 | -0.7 | 0.4 | 0.5 | | | | | 0.21 | 0.27 | 0.34 | | | |
| 83 | S | 0336-019 | | | 3 | 39 | 30.94 | -1 | 46 | 35.800 | -0.7 | | | | 1.50 | 0.61 | 2.39 | 0.20 | 0.26 | 0.33 | | | |
| 84 | S | 2326-477 | | | 23 | 29 | 17.7 | -47 | 30 | 19.100 | -0.7 | | | | 0.69 | 0.61 | 0.77 | 0.20 | 0.26 | 0.33 | | | |
| 85 | S | 1510-089 | | | 15 | 12 | 50.53 | -9 | 5 | 59.800 | -0.7 | | | | 3.47 | 0.61 | 6.34 | 0.20 | 0.26 | 0.33 | | | |
| 86 | S | 2005-489 | | | 20 | 9 | 25.39 | -48 | 49 | 53.800 | -0.7 | | | | 0.70 | 0.61 | 0.79 | 0.20 | 0.26 | 0.33 | | | |
| 87 | S | 1127-145 | | | 11 | 30 | 7.05 | -14 | 49 | 27.400 | -0.7 | | | | 0.91 | 0.60 | 1.22 | 0.20 | 0.25 | 0.33 | | | |
| 88 | S | 1424-418 | | | 14 | 27 | 56.35 | -42 | 6 | 19.400 | -0.7 | | | | 0.62 | 0.60 | 0.63 | 0.20 | 0.25 | 0.33 | | | |
| 89 | S | 1514-241 | | | 15 | 17 | 41.81 | -24 | 22 | 19.500 | -0.7 | | | | 1.19 | 0.60 | 1.78 | 0.20 | 0.25 | 0.33 | | | |
| 90 | S | 1244-255 | | | 12 | 46 | 46.8 | -25 | 47 | 49.300 | -0.7 | | | | 1.30 | 0.59 | 2.01 | 0.20 | 0.25 | 0.32 | | | |
| 91 | S | 1741-038 | | | 17 | 43 | 58.86 | -3 | 50 | 4.600 | -0.7 | | | | 1.28 | 0.59 | 1.98 | 0.20 | 0.25 | 0.32 | | | |
| 92 | S | 0754+100 | | | 7 | 57 | 6.64 | 9 | 56 | 34.800 | -0.7 | | | | 0.79 | 0.57 | 1.02 | 0.19 | 0.24 | 0.31 | | | |
| 93 | S | 1933-400 | | | 19 | 37 | 16.3 | -39 | 58 | 1.300 | -0.7 | | | | 0.60 | 0.57 | 0.63 | 0.19 | 0.24 | 0.31 | | | |

| | | Name | | | Coordinates (J2000) | | | | | | α | Measured S(λ) (Jy) | | | | | | Est. S(λ) (Jy) | | | Env | Ver | CoP/PV Visibility |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | 850μm (JCMT) | | | 1200 μm (SEST) | | | 250 | 350 | 500 | | (Y/N) | |
| No | Cat | PKSB | PKSJ | Other | RA | | | Dec | | | | Typ | Range | | Avg | Range | | Min | Min | Min | | | (Restricted) |
| 94 | S | 0048-427 | | | 0 | 51 | 9.49 | -42 | 26 | 33.300 | -0.7 | | | | 0.85 | 0.57 | 1.14 | 0.19 | 0.24 | 0.31 | | | |
| 95 | S | 2008-159 | | | 20 | 11 | 15.71 | -15 | 46 | 40.300 | -0.7 | | | | 0.63 | 0.54 | 0.71 | 0.18 | 0.23 | 0.29 | | | |
| 96 | S | 0426-380 | | | 4 | 28 | 40.38 | -37 | 56 | 19.700 | -0.7 | | | | 0.57 | 0.54 | 0.60 | 0.18 | 0.23 | 0.29 | | | |
| 97 | S | 0727-115 | | | 7 | 30 | 19.11 | -11 | 41 | 12.700 | -0.7 | | | | 1.49 | 0.54 | 2.43 | 0.18 | 0.23 | 0.29 | | | |
| 98 | S | 0422-380 | | | 4 | 24 | 42.36 | -37 | 56 | 21.400 | -0.7 | | | | 0.57 | 0.53 | 0.61 | 0.18 | 0.22 | 0.29 | | | |
| 99 | S | 1313-333 | | | 13 | 16 | 7.99 | -33 | 38 | 59.200 | -0.7 | | | | 2.10 | 0.52 | 3.68 | 0.17 | 0.22 | 0.28 | | | |
| 100 | S | 2134+004 | | | 21 | 36 | 38.59 | 0 | 41 | 54.500 | -0.7 | | | | 0.68 | 0.52 | 0.83 | 0.17 | 0.22 | 0.28 | | | |
| 101 | S | 1830-211 | | | 18 | 33 | 39.89 | -21 | 3 | 39.800 | -0.7 | | | | 1.10 | 0.52 | 1.67 | 0.17 | 0.22 | 0.28 | | | |
| 102 | S | 2121+053 | | | 21 | 23 | 44.52 | 5 | 35 | 22.200 | -0.7 | | | | 0.72 | 0.52 | 0.92 | 0.17 | 0.22 | 0.28 | | | |
| 103 | S | 0736+017 | | | 7 | 39 | 18.04 | 1 | 37 | 4.600 | -0.7 | | | | 2.05 | 0.52 | 3.59 | 0.17 | 0.22 | 0.28 | | | |
| 104 | S | 1546+027 | | | 15 | 49 | 29.44 | 2 | 37 | 1.200 | -0.7 | | | | 1.14 | 0.52 | 1.76 | 0.17 | 0.22 | 0.28 | | | |
| 105 | J | 1510-089 | | | 15 | 12 | 50.533 | -9 | 5 | 59.830 | -0.7 | 0.9 | 0.4 | 0.9 | | | | 0.17 | 0.21 | 0.28 | | | |
| 106 | J | 1034-293 | | | 10 | 37 | 16.08 | -29 | 34 | 2.810 | -0.7 | 0.5 | 0.4 | 0.5 | | | | 0.17 | 0.21 | 0.28 | | | |
| 107 | J | 1147+245 | | | 11 | 50 | 19.212 | 24 | 17 | 53.840 | -0.7 | 0.5 | 0.4 | 0.5 | | | | 0.17 | 0.21 | 0.28 | | | |
| 108 | J | 1308+326 | | | 13 | 10 | 28.664 | 32 | 20 | 43.780 | -0.7 | 0.5 | 0.4 | 1.3 | | | | 0.17 | 0.21 | 0.28 | | | |
| 109 | J | 2243-123 | | | 22 | 46 | 18.232 | -12 | 6 | 51.280 | -0.7 | 0.5 | 0.4 | 0.5 | | | | 0.17 | 0.21 | 0.28 | | | |
| 110 | J | 0048-097 | | | 0 | 50 | 41.318 | -9 | 29 | 5.210 | -0.7 | 0.4 | 0.4 | 0.5 | | | | 0.17 | 0.21 | 0.28 | | | |
| 111 | J | 0336-019 | | | 3 | 39 | 30.938 | -1 | 46 | 35.800 | -0.7 | 0.4 | 0.4 | 0.5 | | | | 0.17 | 0.21 | 0.28 | | | |
| 112 | J | 0529+075 | | | 5 | 32 | 38.998 | 7 | 32 | 43.350 | -0.7 | 0.4 | 0.4 | | | | | 0.17 | 0.21 | 0.28 | | | |
| 113 | J | 0605-085 | | | 6 | 7 | 59.699 | -8 | 34 | 49.980 | -0.7 | 0.4 | 0.4 | | | | | 0.17 | 0.21 | 0.28 | | | |
| 114 | J | 0836+710 | | | 8 | 41 | 24.365 | 70 | 53 | 42.170 | -0.7 | 0.4 | 0.4 | 0.7 | | | | 0.17 | 0.21 | 0.28 | | | |
| 115 | J | 1413+135 | | | 14 | 15 | 58.817 | 13 | 20 | 23.710 | -0.7 | 0.4 | 0.4 | | | | | 0.17 | 0.21 | 0.28 | | | |
| 116 | J | 1923+210 | | | 19 | 25 | 59.605 | 21 | 6 | 26.160 | -0.7 | 0.4 | 0.4 | | | | | 0.17 | 0.21 | 0.28 | | | |
| 117 | J | 1928+738 | | | 19 | 27 | 48.495 | 73 | 58 | 1.570 | -0.7 | 0.4 | 0.4 | | | | | 0.17 | 0.21 | 0.28 | | | |
| 118 | J | 2008-159 | | | 20 | 11 | 15.711 | -15 | 46 | 40.250 | -0.7 | 0.4 | 0.4 | | | | | 0.17 | 0.21 | 0.28 | | | |
| 119 | J | 2037+511 | | | 20 | 38 | 37.035 | 51 | 19 | 12.660 | -0.7 | 0.4 | 0.4 | 0.5 | | | | 0.17 | 0.21 | 0.28 | | | |
| 120 | J | 2201+315 | | | 22 | 3 | 14.976 | 31 | 45 | 38.270 | -0.7 | 0.4 | 0.4 | | | | | 0.17 | 0.21 | 0.28 | | | |
| 121 | S | 1104-445 | | | 11 | 7 | 8.7 | -44 | 49 | 7.700 | -0.7 | | | | 0.75 | 0.50 | 1.00 | 0.17 | 0.21 | 0.27 | | | |
| 122 | S | 0454-810 | | | 4 | 50 | 5.47 | -81 | 1 | 2.200 | -0.7 | | | | 0.52 | 0.50 | 0.53 | 0.17 | 0.21 | 0.27 | | | |
| 123 | S | 2131-021 | | | 21 | 34 | 10.3 | -1 | 53 | 17.200 | -0.7 | | | | 0.66 | 0.50 | 0.81 | 0.17 | 0.21 | 0.27 | | | |
| 124 | S | 0252-549 | | | 2 | 53 | 29.18 | -54 | 41 | 51.500 | -0.7 | | | | 0.54 | 0.50 | 0.58 | 0.17 | 0.21 | 0.27 | | | |
| 125 | S | 1610-771 | | | 16 | 17 | 49.27 | -77 | 17 | 18.500 | -0.7 | | | | 0.54 | 0.49 | 0.59 | 0.16 | 0.21 | 0.26 | | | |
| 126 | S | 0056-572 | | | 0 | 58 | 46.58 | -56 | 59 | 11.400 | -0.7 | | | | 0.51 | 0.48 | 0.54 | 0.16 | 0.20 | 0.26 | | | |
| 127 | S | 1831-711 | | | 18 | 37 | 28.71 | -71 | 8 | 43.500 | -0.7 | | | | 0.50 | 0.48 | 0.52 | 0.16 | 0.20 | 0.26 | | | |
| 128 | S | 0834-201 | | | 8 | 36 | 39.25 | -20 | 16 | 58.800 | -0.7 | | | | 0.81 | 0.47 | 1.16 | 0.16 | 0.20 | 0.25 | | | |
| 129 | S | 1045-188 | | | 10 | 48 | 6.62 | -19 | 9 | 35.800 | -0.7 | | | | 0.72 | 0.47 | 0.96 | 0.16 | 0.20 | 0.25 | | | |
| 130 | S | 2155-152 | | | 21 | 58 | 6.29 | -15 | 1 | 9.300 | -0.7 | | | | 0.98 | 0.46 | 1.49 | 0.15 | 0.19 | 0.25 | | | |
| 131 | S | 0403-132 | | | 4 | 5 | 34.01 | -13 | 8 | 13.700 | -0.7 | | | | 0.46 | 0.44 | 0.48 | 0.15 | 0.19 | 0.24 | | | |
| 132 | S | 1451-375 | | | 14 | 54 | 27.6 | -37 | 47 | 34.700 | -0.7 | | | | 0.80 | 0.44 | 1.15 | 0.15 | 0.19 | 0.24 | | | |

| | | Name | | | Coordinates (J2000) | | | | | | α | Measured S(λ) (Jy) | | | | | | Est. S(λ) (Jy) | | | Env | Ver | CoP/PV Visibility |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | 850μm (JCMT) | | | 1200 μm (SEST) | | | 250 | 350 | 500 | | (Y/N) | |
| No | Cat | PKSB | PKSJ | Other | RA | | | Dec | | | | Typ | Range | | Avg | Range | | Min | Min | Min | | | (Restricted) |
| 133 | S | 2355-534 | | | 23 | 57 | 53.27 | -53 | 11 | 13.700 | -0.7 | | | | 0.46 | 0.44 | 0.48 | 0.15 | 0.18 | 0.24 | | | |
| 134 | S | 1352-104 | | | 13 | 54 | 46.51 | -10 | 41 | 2.700 | -0.7 | | | | 0.49 | 0.43 | 0.55 | 0.14 | 0.18 | 0.23 | | | |
| 135 | S | 1413+135 | | | 14 | 15 | 58.82 | 13 | 20 | 23.700 | -0.7 | | | | 1.33 | 0.41 | 2.26 | 0.14 | 0.17 | 0.22 | | | |
| 136 | S | 1622-297 | | | 16 | 26 | 6.02 | -29 | 51 | 27.000 | -0.7 | | | | 1.03 | 0.40 | 1.65 | 0.13 | 0.17 | 0.22 | | | |
| 137 | S | 1034-293 | | | 10 | 37 | 16.08 | -29 | 34 | 2.900 | -0.7 | | | | 1.70 | 0.39 | 3.02 | 0.13 | 0.16 | 0.21 | | | |
| 138 | S | 0332-403 | | | 3 | 34 | 13.65 | -40 | 8 | 25.100 | -0.7 | | | | 0.84 | 0.39 | 1.30 | 0.13 | 0.16 | 0.21 | | | |
| 139 | J | 1044+719 | | | 10 | 48 | 27.62 | 71 | 43 | 35.940 | -0.7 | 0.9 | 0.3 | 1.2 | | | | 0.13 | 0.16 | 0.21 | | | |
| 140 | J | 0552+398 | | | 5 | 55 | 30.806 | 39 | 48 | 49.170 | -0.7 | 0.4 | 0.3 | 0.4 | | | | 0.13 | 0.16 | 0.21 | | | |
| 141 | J | 1418+546 | | | 14 | 19 | 46.597 | 54 | 23 | 14.780 | -0.7 | 0.4 | 0.3 | 0.8 | | | | 0.13 | 0.16 | 0.21 | | | |
| 142 | J | 0149+218 | | | 1 | 52 | 18.059 | 22 | 7 | 7.700 | -0.7 | 0.3 | 0.3 | | | | | 0.13 | 0.16 | 0.21 | | | |
| 143 | J | 0219+428 | | | 2 | 22 | 39.612 | 43 | 2 | 7.800 | -0.7 | 0.3 | 0.3 | | | | | 0.13 | 0.16 | 0.21 | | | |
| 144 | J | | | 3C120 | 4 | 33 | 11.096 | 5 | 21 | 15.620 | -0.7 | 0.3 | 0.3 | | | | | 0.13 | 0.16 | 0.21 | | | |
| 145 | J | 0642+449 | | | 6 | 46 | 32.026 | 44 | 51 | 16.590 | -0.7 | 0.3 | 0.3 | 0.4 | | | | 0.13 | 0.16 | 0.21 | | | |
| 146 | J | 0745+241 | | | 7 | 48 | 36.109 | 24 | 0 | 24.110 | -0.7 | 0.3 | 0.3 | 0.4 | | | | 0.13 | 0.16 | 0.21 | | | |
| 147 | J | 0748+126 | | | 7 | 50 | 52.046 | 12 | 31 | 4.830 | -0.7 | 0.3 | 0.3 | | | | | 0.13 | 0.16 | 0.21 | | | |
| 148 | J | 1538+149 | | | 15 | 40 | 49.492 | 14 | 47 | 45.880 | -0.7 | 0.3 | 0.3 | | | | | 0.13 | 0.16 | 0.21 | | | |
| 149 | J | 1622-297 | | | 16 | 26 | 6.021 | -29 | 51 | 26.970 | -0.7 | 0.3 | 0.3 | | | | | 0.13 | 0.16 | 0.21 | | | |
| 150 | J | 1749+096 | | | 17 | 51 | 32.819 | 9 | 39 | 0.730 | -0.7 | 0.3 | 0.3 | 1.2 | | | | 0.13 | 0.16 | 0.21 | | | |
| 151 | J | 2007+776 | | | 20 | 5 | 30.999 | 77 | 52 | 43.250 | -0.7 | 0.3 | 0.3 | 0.5 | | | | 0.13 | 0.16 | 0.21 | | | |
| 152 | J | 2021+317 | | | 20 | 23 | 19.017 | 31 | 53 | 2.310 | -0.7 | 0.3 | 0.3 | | | | | 0.13 | 0.16 | 0.21 | | | |
| 153 | J | 1739+522 | | | 17 | 40 | 36.978 | 52 | 11 | 43.410 | -0.7 | 0.1 | 0.3 | 0.1 | | | | 0.13 | 0.16 | 0.21 | | | |
| 154 | S | 1749+096 | | | 17 | 51 | 32.81 | 9 | 39 | 0.800 | -0.7 | | | | 3.58 | 0.38 | 6.78 | 0.13 | 0.16 | 0.21 | | | |
| 155 | S | 0920-397 | | | 9 | 22 | 46.42 | -39 | 59 | 35.100 | -0.7 | | | | 0.47 | 0.36 | 0.58 | 0.12 | 0.15 | 0.19 | | | |
| 156 | S | 1538+149 | | | 15 | 40 | 49.49 | 14 | 47 | 45.900 | -0.7 | | | | 0.44 | 0.35 | 0.54 | 0.12 | 0.15 | 0.19 | | | |
| 157 | S | 2128-123 | | | 21 | 31 | 35.26 | -12 | 7 | 4.800 | -0.7 | | | | 0.46 | 0.35 | 0.57 | 0.12 | 0.15 | 0.19 | | | |
| 158 | S | 0135-247 | | | 1 | 37 | 38.35 | -24 | 30 | 53.900 | -0.7 | | | | 0.71 | 0.35 | 1.07 | 0.12 | 0.15 | 0.19 | | | |
| 159 | S | 0302-623 | | | 3 | 3 | 50.63 | -62 | 11 | 25.600 | -0.7 | | | | 0.53 | 0.34 | 0.71 | 0.11 | 0.14 | 0.18 | | | |
| 160 | S | 1420-679 | | | 14 | 24 | 55.61 | -68 | 7 | 59.100 | -0.7 | | | | 0.37 | 0.32 | 0.42 | 0.11 | 0.14 | 0.18 | | | |
| 161 | S | 0215+015 | | | 2 | 17 | 48.96 | 1 | 44 | 49.600 | -0.7 | | | | 0.71 | 0.31 | 1.11 | 0.10 | 0.13 | 0.17 | | | |
| 162 | S | 1606+106 | | | 16 | 8 | 46.2 | 10 | 29 | 7.800 | -0.7 | | | | 0.50 | 0.31 | 0.68 | 0.10 | 0.13 | 0.17 | | | |
| 163 | S | 0113-118 | | | 1 | 16 | 12.52 | -11 | 36 | 15.500 | -0.7 | | | | 0.43 | 0.30 | 0.57 | 0.10 | 0.13 | 0.16 | | | |
| 164 | S | 0646-306 | | | 6 | 48 | 14.11 | -30 | 44 | 19.600 | -0.7 | | | | 0.38 | 0.30 | 0.46 | 0.10 | 0.12 | 0.16 | | | |
| 165 | S | 0458-020 | | | 5 | 1 | 12.81 | -1 | 59 | 14.300 | -0.7 | | | | 0.74 | 0.30 | 1.19 | 0.10 | 0.12 | 0.16 | | | |
| 166 | S | 1302-102 | | | 13 | 5 | 33.01 | -10 | 33 | 19.500 | -0.7 | | | | 0.38 | 0.29 | 0.47 | 0.10 | 0.12 | 0.16 | | | |
| 167 | S | 1124-186 | | | 11 | 27 | 4.39 | -18 | 57 | 17.400 | -0.7 | | | | 0.46 | 0.29 | 0.64 | 0.10 | 0.12 | 0.16 | | | |
| 168 | S | 1504-166 | | | 15 | 7 | 4.79 | -16 | 52 | 30.300 | -0.7 | | | | 0.38 | 0.29 | 0.48 | 0.10 | 0.12 | 0.16 | | | |
| 169 | S | 1145-676 | | | 11 | 47 | 33.63 | -67 | 53 | 41.800 | -0.7 | | | | 0.74 | 0.28 | 1.20 | 0.09 | 0.12 | 0.15 | | | |
| 170 | S | 0438-436 | | | 4 | 40 | 17.18 | -43 | 33 | 8.600 | -0.7 | | | | 0.42 | 0.28 | 0.55 | 0.09 | 0.12 | 0.15 | | | |
| 171 | S | 1354+195 | | | 13 | 57 | 4.43 | 19 | 19 | 7.400 | -0.7 | | | | 0.83 | 0.28 | 1.38 | 0.09 | 0.12 | 0.15 | | | |

| | | Name | | | Coordinates (J2000) | | | | | | α | Measured S(λ) (Jy) | | | | | | Est. S(λ) (Jy) | | | Env | Ver | CoP/PV Visibility |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | 850μm (JCMT) | | | 1200 μm (SEST) | | | 250 | 350 | 500 | | (Y/N) | |
| No | Cat | PKSB | PKSJ | Other | RA | | | Dec | | | | Typ | Range | | Avg | Range | | Min | Min | Min | | | (Restricted) |
| 172 | S | 0338-214 | | | 3 | 40 | 35.61 | -21 | 19 | 31.200 | -0.7 | | | | 0.38 | 0.27 | 0.50 | 0.09 | 0.11 | 0.15 | | | |
| 173 | S | 1655+077 | | | 16 | 58 | 9.01 | 7 | 41 | 27.600 | -0.7 | | | | 0.63 | 0.26 | 1.00 | 0.09 | 0.11 | 0.14 | | | |
| 174 | S | 1032-199 | | | 10 | 35 | 2.16 | -20 | 11 | 34.300 | -0.7 | | | | 0.37 | 0.26 | 0.49 | 0.09 | 0.11 | 0.14 | | | |
| 175 | J | 0829+046 | | | 8 | 31 | 48.877 | 4 | 29 | 39.090 | -0.7 | 0.5 | 0.2 | 0.5 | | | | 0.08 | 0.11 | 0.14 | | | |
| 176 | J | 0224+671 | | | 2 | 28 | 50.051 | 67 | 21 | 3.030 | -0.7 | 0.3 | 0.2 | 0.4 | | | | 0.08 | 0.11 | 0.14 | | | |
| 177 | J | 1156+295 | | | 11 | 59 | 31.834 | 29 | 14 | 43.830 | -0.7 | 0.3 | 0.2 | 0.4 | | | | 0.08 | 0.11 | 0.14 | | | |
| 178 | J | 0202+319 | | | 2 | 5 | 4.925 | 32 | 12 | 30.100 | -0.7 | 0.2 | 0.2 | | | | | 0.08 | 0.11 | 0.14 | | | |
| 179 | J | 0221+067 | | | 2 | 24 | 28.428 | 6 | 59 | 23.340 | -0.7 | 0.2 | 0.2 | 0.4 | | | | 0.08 | 0.11 | 0.14 | | | |
| 180 | J | 0306+102 | | | 3 | 9 | 3.624 | 10 | 29 | 16.340 | -0.7 | 0.2 | 0.2 | | | | | 0.08 | 0.11 | 0.14 | | | |
| 181 | J | 0458-020 | | | 5 | 1 | 12.81 | -1 | 59 | 14.260 | -0.7 | 0.2 | 0.2 | 0.5 | | | | 0.08 | 0.11 | 0.14 | | | |
| 182 | J | 0917+449 | | | 9 | 20 | 58.458 | 44 | 41 | 53.990 | -0.7 | 0.2 | 0.2 | | | | | 0.08 | 0.11 | 0.14 | | | |
| 183 | J | 1213-172 | | | 12 | 15 | 46.752 | -17 | 31 | 45.400 | -0.7 | 0.2 | 0.2 | 0.3 | | | | 0.08 | 0.11 | 0.14 | | | |
| 184 | J | 1606+106 | | | 16 | 8 | 46.203 | 10 | 29 | 7.780 | -0.7 | 0.2 | 0.2 | 0.3 | | | | 0.08 | 0.11 | 0.14 | | | |
| 185 | J | 1657-261 | | | 17 | 0 | 53.154 | -26 | 10 | 51.720 | -0.7 | 0.2 | 0.2 | | | | | 0.08 | 0.11 | 0.14 | | | |
| 186 | J | 1749+701 | | | 17 | 48 | 32.84 | 70 | 5 | 50.770 | -0.7 | 0.2 | 0.2 | | | | | 0.08 | 0.11 | 0.14 | | | |
| 187 | J | 2145+067 | | | 21 | 48 | 5.459 | 6 | 57 | 38.600 | -0.7 | 0.2 | 0.2 | 3 | | | | 0.08 | 0.11 | 0.14 | | | |
| 188 | S | 0805-077 | | | 8 | 8 | 15.54 | -7 | 51 | 9.800 | -0.7 | | | | 0.48 | 0.25 | 0.70 | 0.08 | 0.11 | 0.14 | | | |
| 189 | S | 1116+128 | | | 11 | 18 | 57.3 | 12 | 34 | 41.700 | -0.7 | | | | 3.24 | 0.25 | 6.22 | 0.08 | 0.11 | 0.14 | | | |
| 190 | S | 0048-097 | | | 0 | 50 | 41.32 | -9 | 29 | 5.200 | -0.7 | | | | 0.89 | 0.25 | 1.53 | 0.08 | 0.11 | 0.14 | | | |
| 191 | S | 2216-038 | | | 22 | 18 | 52.04 | -3 | 35 | 36.900 | -0.7 | | | | 0.46 | 0.25 | 0.66 | 0.08 | 0.11 | 0.14 | | | |
| 192 | S | 1548+056 | | | 15 | 50 | 35.27 | 5 | 27 | 10.500 | -0.7 | | | | 0.60 | 0.25 | 0.96 | 0.08 | 0.10 | 0.13 | | | |
| 193 | S | 1519-273 | | | 15 | 22 | 37.67 | -27 | 30 | 10.800 | -0.7 | | | | 0.35 | 0.21 | 0.49 | 0.07 | 0.09 | 0.11 | | | |
| 194 | S | 0138-097 | | | 1 | 41 | 25.83 | -9 | 28 | 43.700 | -0.7 | | | | 0.42 | 0.21 | 0.63 | 0.07 | 0.09 | 0.11 | | | |
| 195 | S | 1502+106 | | | 15 | 4 | 24.98 | 10 | 29 | 39.300 | -0.7 | | | | 0.64 | 0.18 | 1.09 | 0.06 | 0.08 | 0.10 | | | |
| 196 | S | 0112-017 | | | 1 | 15 | 17.1 | -1 | 27 | 4.600 | -0.7 | | | | 0.39 | 0.17 | 0.61 | 0.06 | 0.07 | 0.09 | | | |
| 197 | S | 0118-272 | | | 1 | 20 | 31.67 | -27 | 1 | 24.600 | -0.7 | | | | 0.38 | 0.16 | 0.60 | 0.05 | 0.07 | 0.09 | | | |
| 198 | S | 2318+049 | | | 23 | 20 | 44.86 | 5 | 13 | 50.000 | -0.7 | | | | 0.61 | 0.15 | 1.06 | 0.05 | 0.06 | 0.08 | | | |
| 199 | S | 2227-088 | | | 22 | 29 | 40.08 | -8 | 32 | 54.500 | -0.7 | | | | 0.76 | 0.13 | 1.38 | 0.04 | 0.05 | 0.07 | | | |
| 200 | J | | | PKS0106 | 1 | 8 | 38.771 | 1 | 35 | 0.320 | -0.7 | 0.2 | 0.1 | 0.3 | | | | 0.04 | 0.05 | 0.07 | | | |
| 201 | J | 0215+015 | | | 2 | 17 | 48.955 | 1 | 44 | 49.700 | -0.7 | 0.1 | 0.1 | | | | | 0.04 | 0.05 | 0.07 | | | |
| 202 | J | 2155-304 | | | 21 | 58 | 52.065 | -30 | 13 | 32.120 | -0.7 | 0.1 | 0.1 | | | | | 0.04 | 0.05 | 0.07 | | | |
| 203 | J | 2318+049 | | | 23 | 20 | 44.857 | 5 | 13 | 49.950 | -0.7 | 0.1 | 0.1 | 0.2 | | | | 0.04 | 0.05 | 0.07 | | | |
| 204 | S | 2210-257 | | | 22 | 13 | 2.49 | -25 | 29 | 30.100 | -0.7 | | | | 0.31 | 0.10 | 0.52 | 0.03 | 0.04 | 0.05 | | | |
| 205 | S | 1243-072 | | | 12 | 46 | 4.23 | -7 | 30 | 46.600 | -0.7 | | | | 0.27 | 0.09 | 0.45 | 0.03 | 0.04 | 0.05 | | | |
| 206 | S | 1149-084 | | | 11 | 52 | 17.19 | -8 | 41 | 4.000 | -0.7 | | | | 1.21 | 0.04 | 2.37 | 0.01 | 0.02 | 0.02 | | | |
| 207 | J | 0422+004 | | | 4 | 24 | 46.842 | 0 | 36 | 6.330 | -0.7 | 0.7 | | | | | | 0.00 | 0.00 | 0.00 | | | |
| 208 | J | 0300+471 | | | 3 | 3 | 35.242 | 47 | 16 | 16.280 | -0.7 | 0.6 | | | | | | 0.00 | 0.00 | 0.00 | | | |
| 209 | J | 2059+034 | | | 21 | 1 | 38.834 | 3 | 41 | 31.320 | -0.7 | 0.5 | | | | | | 0.00 | 0.00 | 0.00 | | | |
| 210 | J | 2345-167 | | | 23 | 48 | 2.609 | -16 | 31 | 12.020 | -0.7 | 0.5 | | | | | | 0.00 | 0.00 | 0.00 | | | |

| | | Name | | | Coordinates (J2000) | | | | | | α | Measured S(λ) (Jy) | | | | | | Est. S(λ) (Jy) | | | Env | Ver | CoP/PV Visibility |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | 850μm (JCMT) | | | 1200 μm (SEST) | | | 250 | 350 | 500 | | (Y/N) | |
| No | Cat | PKSB | PKSJ | Other | RA | | | Dec | | | | Typ | Range | | Avg | Range | | Min | Min | Min | | | (Restricted) |
| 211 | J | | | PKS0438 | 4 | 40 | 17.18 | -43 | 33 | 8.600 | -0.7 | 0.4 | | | | | | 0.00 | 0.00 | 0.00 | | | |
| 212 | S | 0104-408 | | | 1 | 6 | 45.11 | -40 | 34 | 20.000 | -0.7 | | | | 0.74 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | |
| 213 | S | 0130-171 | | | 1 | 32 | 43.48 | -16 | 54 | 48.500 | -0.7 | | | | 0.97 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | |
| 214 | S | 0239+108 | | | 2 | 42 | 29.17 | 11 | 1 | 0.700 | -0.7 | | | | 0.67 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | |
| 215 | S | 0451-282 | | | 4 | 53 | 14.65 | -28 | 7 | 37.300 | -0.7 | | | | 0.49 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | |
| 216 | S | 0602-424 | | | 6 | 4 | 25.17 | -42 | 25 | 30.000 | -0.7 | | | | 2.18 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | |
| 217 | S | 1613-586 | | | 16 | 17 | 18.06 | -58 | 48 | 9.700 | -0.7 | | | | 0.69 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | |
| 218 | S | 2106-413 | | | 21 | 9 | 33.19 | -41 | 10 | 20.600 | -0.7 | | | | 0.66 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | |
| 219 | S | 2320-035 | | | 23 | 23 | 31.95 | -3 | 17 | 5.100 | -0.7 | | | | 0.49 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | |