VLBI Software Documentation
Scheduling Program

Standard Schedule File Format

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Program Reference Manual

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1.0 Purpose

This manual describes the standard format for schedule files produced by `sked`, the Mark III VLBI scheduling program, and read by `drudg`, the experiment preparation program. A schedule file is an ASCII file that contains all of the information needed to conduct the experiment for the complete network of stations.

The "drudg" file format produced by `PC-SCHED` is similar to and compatible with the format described in this manual, but it lacks some of the new extensions.

The schedule file described in this manual is produced by running the Mark III/IV scheduling program `sked`. Within `sked`, standard source positions, station information, frequency codes, and source fluxes can be selected from catalog files by the person creating the schedule. The purpose of this manual is to describe the format of the schedule file, with attention to the specific dependencies of pointers between the different file sections.

The **sked's Catalogs** manual describes the formats of the catalog files which are the source of most of the lines in the schedule file. Much of the descriptions below are summaries of more complete information found in the descriptions of the `sked` catalog files.

1.1 Naming Conventions

The naming convention for `sked` schedule files is

experiment_code`.skd`

where *experiment_code* is the experiment code name listed in the master schedule distributed and maintained by NASA/SGP.

The naming convention for schedule files from `PC-SCHED` is

project_code`.drg`

where *project_code* is the code assigned when the project is awarded observing time.

1.2 Schedule File Section Names

The schedule file has up to 10 sections, each identified by a line having a `$` in column 1 followed by the section title. The section names must be spelled out in their entirety in order for `sked` and `drudg` to recognize the sections. Unrecognized sections are ignored. The section titles recognized by `sked` and `drudg` are:

`$EXPER`	experiment title
`$PARAM`	parameters used by `sked` and `drudg`
`$SOURCES`	list of sources for this experiment
`$STATIONS`	list of stations in this experiment
`$FLUX`	flux densities for each source
`$CODES`	frequency sequences and station LOs
`$HEAD`	tape recorder head positions
`$PROC`	station procedures
`$OP`	automatic scheduling options
`$SKED`	scheduled observations

Section 2 of this manual contains a description of the format of each schedule file section. Section 3 contains a listing of some sample schedule files.

2.0 Schedule File Sections

The format for each section of the schedule file is described in separate subsections. For examples of complete schedule files, see section 3.0.

A * character appearing as the first character of a line causes the line to be treated as a comment in a schedule file.

NOTE: All lines are read by `sked` and `drudg` in free field format with blanks as delimiters. This means that
fields are not restricted to specific columns,
all fields must be present, and
there may be no embedded blanks.
A "field" is thus defined as a set of contiguous characters surrounded by blanks.

The order in which sections appear in the file is completely arbitrary, with the only exception being that $EXPER must be first and $PARAM second. `sked` writes a new schedule file with the sections in a certain order. In subsequent `sked` sessions, modified sections are written out first, followed by any unchanged sections. Thus you will see the $SKED section migrate to the top of the file and long-unchanged sections appear at the bottom.

When `sked` and `drudg` read the schedule file, they first read sections as they appear in the file, then go back and re-read any sections that require information that appeared later in the file. For example, the $CODES section cannot be read and checked until the $STATIONS section is read. If $CODES appears before $STATIONS in the file, then $CODES will be re-read after the end of the file is reached.

The order of lines within each section is arbitrary except in cases noted in the descriptions.

Both `sked` and `drudg` do extensive checking of the contents of the schedule files as they are read in, an cross-checks and consistency checks between sections.

$EXPER

The $EXPER section consists of only one line, having the name for the experiment, maximum 8 characters. The name (optional) appears on the same line as the $EXPER. For geodetic experiments, the name should be the experiment name given in the master VLBI schedules distributed by NASA/SGP. For astronomical experiments, the name is the project code assigned when the project is granted observing time. Example:

```
$EXPER   CA036      (maximum 8characters)
```

$PARAM

The $PARAM section contains the default parameters used during the last session with the program sked in which this schedule file was used. sked handles the reading and writing of this section of the schedule file automatically, without any user action required. The section consists of key words followed by strings or numerical values. The order of the lines and the order of the words in this section is arbitrary.

This section is read by the correlator to determine if the schedule was written with early tape start.

drudg searches for the certain key words in this section and uses their numerical values for certain of its timing calculations. Please refer to the SNAP file section of the **drudg** manual.

$SOURCES

The $SOURCES section holds a list of each source to be observed, with name, position, and epoch. These positions are precessed as necessary by sked and drudg. The format described below is the same as entries found in the source catalog file. sked reads the catalog source.cat (or other user-specified catalog fie) to extract the selected source positions.

The source entry fields and an example:

```
IAU-name Common hh mm ss.ssss  dd  mm  ss.ss    Epoch Veloc Ref
0016+731 $       0 19 45.7859  73  27  30.01535 2000.0 0.0  CDP
```

Field	Description
IAU-name	IAU name in form hhmm-ddd, e.g. 1226+022.
Common	Common source name, e.g. 3C273B, max 8 characters. $ in this field means there is no common name.
hh	Hours of right ascension, between 0 and 23.
mm	Minutes of right ascension, between 0 and 59.
ss.sss	Seconds of right ascension, max 8 digits past decimal point. Value 0 to 59.9999.
dd	Degrees of declination, between 0 and 89, may be signed.
mm	Minutes of declination, between 0 and 59, may be signed.
ss.ss	Seconds of declination, max 7 digits past decimal point. Value between 0 and 59.999, may be signed.
Epoch	Epoch of this position, e.g. 2000.0.
Veloc	Velocity for spectral line sources, km/s. This field must be present only for compatibility with very old versions of sked. Normal value is 0.0. This field is not read by the current version of sked.
Ref	Who determined this position. sked catalogs are updated annually with a current GLOBAL solution. This value is not read by sked.

Negative declinations are indicated by signing any of the fields of the declination. For example,

```
-00 02 41.0
00 -02 41.0
00 02 -41.0
```

would all be interpreted as the same declination.

The format for a satellite record is similar to those for celestial sources except there is more information. The record can be up to 160 characters in length and is to be included in $SOURCES section of schedule files. The calculations for which this data is used will carry up to eleven significant digits. The record contains:

```
ORBIT NAME INC ECC A.P R.A ANOM AXIS MOTN YEAR DAY
```

Field	Description
ORBIT	The literal word ORBIT, this signifies that this is a satellite record.
NAME	The eight character name of the satellite.
INC	The orbital inclination, in degrees.
ECC	The orbital eccentricity, unitless.
A.P	The argument of perigee, in degrees.
R.A	The right ascension of the node, in degrees.
ANOM	The orbital anomaly, in degrees.
AXIS	The semimajor axis, in kilometers. Only one of this field and MOTN should be nonzero.
MOTN	The orbital motion,in revolutions per day. Only one of this field and AXIS should be nonzero.
YEAR	The year of the epoch of the elements, e.g. 1983.
DAY	The day of the year, including fraction, of the epoch of the elements.

$STATIONS

The $STATIONS section contains information on each station participating in the experiment. There can be up to five lines for each station:

the A lines: antenna limits and rates,
the P lines: station position information,
the T lines: station data acquisition terminal information,
the H lines: horizon mask,
the C lines: coordinate masks.

It is possible to have three different names associated with a station which is scheduled for VLBI observing. The separation of station location, antenna name, and station equipment information accommodates the use of fixed observatories, mobile antennas, and transportable terminals. For example, the transportable Mark III terminal might be installed at the Hat Creek antenna, or the mobile antenna MV-2 might be located at Platteville for a particular experiment. These configurations would be indicated on the antenna information line: two fields on this line are the IDs of the physical location of the antenna and the terminal currently installed there.

Information in this section is normally selected from sked's catalogs. sked accesses the catalog files antenna.cat, position.cat, mask.cat, and equip.cat to gather the information for this section.

The antenna (A) lines must precede the other types of lines in this section. The format of the antenna information line and an example:

```
A ID Ant      Axis Offset  Rate1  Con1  Lim1 Rate2  Con2  Lim2  D   PO TE HC
A A GILCREEK XYNS 7.31520 60.0 0 -86.3 86.3 60.0 0 -74.1 74.1 25.0 AL 36 AL
```

Field	Description
A	Identifies this line as antenna information.
ID	1-character identifier for this antenna, e.g. K for Haystack.
Ant	Full name of the antenna, up to 8 characters.
Axis	Axis type: AZEL, HADC, XYNS, XYEW, RICH, SEST, ALGO.
Offset	Axis offset, in meters.
Rate1	Slew rate of the first axis (H.A., Az, or X), degrees/minute.
Con1	Constant overhead for first axis slew, sec.

Lim1	Lower, upper limits for the first axis, in degrees. (Azimuth limits include cable wrap as a continuous run. For example, the OVRO limits are 270.0 to 690.0 degrees.)
Rate2	Slew rate of the second axis (Dec, El, or Y), degrees/minute.
Con2	Constant overhead for second axis slew, sec
Lim2	Lower, upper limits for the second axis, in degrees.
D	Antenna diameter, in meters.
PO	2-character ID for the position of this antenna, points to the ID in the P line. Required.
TE	2-character ID for the Mark III terminal located at this antenna, points to the ID in the T line. Required.
HC	2-character ID for the horizon/coordinate mask, points to the ID in the H and/or C line(s). Optional.

The format of the position information line and an example:

```
P ID Location       X            Y           Z      Occ.Code Long.   Lat. Who
P AL GILCREEK -2281545.447 -1453645.959 5756993.683 00000000 147.50 64.98 CDP
```

Field	Description
P	Identifies this line as position information.
ID	2-character identifier for this location. Corresponds to the position pointer PO in the A record.
Location	Full name of the station position, up to 8 characters. This name appears in sked and drudg listings and in analysis results.
X,Y,Z	Geocentric coordinates (right-handed system) of the VLBI reference point at this location, in meters.
Occ.Code	8-character occupation code. Assigned by SGP and written into field logs. Set to 00000000 if unknown.
Long., Lat.	Geodetic west longitude, north latitude, degrees. Ignored by sked and drudg, used only for humans reading this list.
Who	Source of the position, e.g. SGP global solution.

The format of the terminal information line is:

```
T ID Terminal  HdxDen  NumxTape  B1 SEFD1 B2 SEFD2 SEFD Parameters
T 36   TVDS-3     1      8820     X  750   S  800 S 1.0 0.96 X 1.0 .97
N 105  NRAO20   1x56000  17640    X  750   S  800 S 1.0 0.96 X 1.0 .97
D FD   FD-VLBA  1x56000  2x17640  X  750   S  800 S 1.0 0.96 X 1.0 .97
```

Field	Description
T	identifies this line as Mark III terminal information.
ID	2-character Mark III terminal identifier, corresponds to terminal pointer TE in the A record.
Terminal	Full name of the Mark III terminal, 8 characters.
HdxDen	Number of heads and bit density in a single field. The density may be specified only for high density stations.
NumxTape	Number of tape drives and maximum length of tape used at this station, feet. If only one recorder is used at the station, this field should be only the tape length.
B1,SEFD1	First band and SEFD
B2,SEFD2	Second band and SEFD
SEFD Parameters	Coefficients for SEFD dependence on elevation.

The format of the horizon mask line and an example:

```
H  ID   Az1  El1  Az2   El2 ....   Azn
H AL 0 10 35 6.5 95 8 115 10 130 12 195 8 330 11 360
H FD 0 10 35 6.5 95 8 115 10 130 12 195 8 330 11
```

Field	Description
H	Identifies this line as a horizon mask.
ID	2-character identifier for this horizon mask, corresponds to pointer HC in the A record.

The first example shows a horizon mask represented by step functions.

Az1	First azimuth, usually 0, in decimal degrees.
El1	First elevation, degrees. Applicable between Az1 and Az2.
Az2	Second azimuth, in decimal degrees.
El2	Second elevation, degrees. Applicable between Az2 and Az3.
Azn	Last azimuth, usually 360, in decimal degrees. A maximum of 18 pairs of values may be used.

The second example shows a horizon mask represented by line segments. Each azimuth and elevation represent a point on the sky. The mask at any other point is determined by interpolating straight lines between the specified points.

Az1	First azimuth, usually 0, in decimal degrees.
El1	First elevation, degrees.
Az2	Second azimuth, in decimal degrees.

El2	Second elevation, degrees.

The format of the coordinate mask line is:

```
C  ID   C11  C21  C12  C22 ....  C1n
C HC -38 21 -20 51.8 -10 68 2 80 68 90
```

Field	Description
C	Identifies this line as a coordinate mask.
ID	2-character identifier for this coordinate mask, corresponds to the HC pointer in the A record.
C11	First value of coordinate 1, in degrees.
C21	First value of coordinate 2, in degrees. Applicable between C11 and C12.
C12	Second value of coordinate 1, in degrees.
C22	Second value of coordinate 2, degrees. Applicable between C12 and C13.
C1n	Last value of coordinate 1, in degrees. A maximum of 18 pairs of values may be entered.

$CODES

The $CODES section defines the frequency sequences to be used for the Mark III experiment and gives the LO configuration at each station. A 2-character code is assigned to each unique frequency sequence; any number of codes may be defined in this section, up to the maximum that sked and drudg can handle.

In the descriptions given in this section, the field Code identifies a group of frequencies which will be observed simultaneously. The field Subgp identifies those frequencies which will be coherently combined during processing, e.g. X-band or S-band.

There are up to five types of entries in this section, each identified by the leading character on the lines:

the F line: a frequency code name
the C lines: the frequency sequence
the L lines: the LO setups
the R line: the sample rate
the B line: barrel roll

The frequency code name must come first in this section, and the others may be in principle be in arbitrary order.

The format of the code name entry and an example:

```
F Name    ID  Stations (optional)
F CDP-SX  SX  GILCREEK KOKEE NRAO20
```

Field	Description
F	Identifies this line as having the frequency-code name.
Name	The name of this frequency code, max 8 characters.
ID	The 2-character frequency code. This code appears on each observation line.
Stations	List of stations that are using this code. If there are no stations listed than all stations in the schedule are assumed to use this code.

The format of the frequency sequence lines and some examples:

```
C Code Subgp Freq     Pcal   Ch Mode     Bw    P(tus,tls,tum,tlm)   VC
```

```
C SX    X    8210.99 10000.0 1  C        2.000 1(15) 2(16)
C SX    X    8217.99 10000.0 9  A        2.000 1(23,24)
C LB    L    1670.99 10000.0 9  E        2.000 1(1) 2(15) 3(2) 4(16)
C SV    X    8217.99 10000.0 9  MK41:4   8.000 1(-1)                 2
C VS    C    4966.99 10000.0 9  VLBA1:4 16.000 1(15,,23) 2(16,,24)
```

Note that all these fields must be present on all lines.

Field	Description
`C`	identifies this line as frequency-code information.
`Code`	2-character frequency code, e.g. `SX`.
`Subgp`	The sub-group within this frequency code, e.g. `X`.
`Freq`	The observing frequency, in MHz, which is translated to D.C. (total LO frequency).
`Pcal`	The phase calibration signal frequency, in hertz.
`Ch`	The channel number of this frequency, matches the field on the corresponding `L` line.
`Mode`	The formatter mode: `A, B, C, D, E` for Mark III, `VLBA` for non-data-replacement modes, or `MK34` for Mark IV data-replacement modes. Mode E is a software mode in which the forward passes are recorded in formatter mode B and the reverse passes in mode C. The numbers following the VLBA or Mark IV modes indicate the fanout.
`Bw`	The recorded channel bandwidth, in MHz: `16, 8, 4, 2, 1, 0.5, 0.25, 0.125`.
`P`	The number of the subpass within the mode. For example, mode C and the VSOP mode are both two-subpass modes, mode E is a four-subpass mode, and the geodetic Mark IV mode is a one-subpass mode.
`tus`	The track which has the upper sideband sign bit recorded. For each subpass, `tus` must be specified. Important note: all track numbers in the schedule file *use Mark III numbering*, even for VLBA or Mark IV modes. If the signal will be fanned out only the first track is listed.
`tls`	The lower sideband partner to `tus`, only appears if both sidebands are recorded in one pass, as in mode A.
`tum`	The track which has the upper sideband magnitude bit recorded.
`tls`	The lower sideband partner to `tum`, only appears if both sidebands are recorded in one pass.
`VC`	The number of the physical video converter or baseband converter that is assigned to this channel. Only required if the physical module is different from the channel number.

The format of the LO information lines and an example:

```
L ID Code Subgp IF   SumLO    Ch  SB
L E  SX   X     IF1N 8080.0    1   U
L E  SX   S     IF2N 2020.0    9   U
L A  SX   S     A    8080.0    7   U
L A  SX   S     B    2020.0    9   U
```

Alternate format:

```
L B  LB   L     IF1N 1510.0    1L 3L 5L 7L 9L 11L 13L
```

Field	Description
L	Identifies this line as LO configuration information.
ID	1-character station identifier, must match a code in the $STATIONS section.
Code	2-character frequency code, must match a code on an F line.
Subgp	The subgroup within this code, must match a subgroup on a C line.
IF	IF distributor channel name. For Mark III and IV systems add the input type in the form ni where n=1 or 2, i=N (normal input) or A (alternate input). For VLBA systems, use one of the four channels, A, B, C, D.
SumLO	Total LO before the last video converter, including sign of all previous mixings, in MHz.
Ch	The channel number to which this line applies. This is matched to the channel number on the C line.
SB	The net sideband for this channel.

In the alternate format, supported for .drg files produced by PC-SCHED, the channels assigned to this LO may be listed. The letter following the channel number is meant to indicate patching, but this is ignored because the patching is computed by drudg.

The format of the sample rate information line and an example:

```
R Code Rate
R  SX   4.0
```

This line has only one value on it which is the formatter sample rate for the specified frequency code. If this line is missing then a sample rate equal to twice the channel bandwidth is used as the default.

The format of the barrel roll information line and an example:

```
B Code Station Value Station Value ...
B  SV   GILCREEK 8:1 KOKEE 16:1  NRAO20 16:1
```

Each line indicates the value of the barrel roll to be used for the listed stations in the specified frequency code. If this line is not present then no barrel rolling is done.

$HEAD

The $HEAD section contains the commanded headstack offsets used during recording. The format for this information and an example:

```
ID Code  Pass1dir(offset) Pass2dir(offset) ...
 A  SX    11(-330) 22(-330) 31(-275) ...
```

Field	Description
ID	1-character station identifier, must be one of the IDs in the $STATIONS section.
Code	2-character frequency code, must be one of the codes in the $CODES section.
Passn	Pass number, 1-9, A-Z, a-z. If the pass number is greater than 100, this indicates an entry for the second headstack.
dir	Tape direction (1 = forward; 2 = reverse)
offset	Head offset in microns

$FLUX

The $FLUX section contains flux densities and source models for the sources found in the $SOURCES section. For sources with structure, the structure may be represented as a series of step functions or as a set of model parameters. The model used for each component is an elliptical gaussian. Refer to the flux catalog description for more information.

Using fluxes in sked for other than S/X observations has not been tested. drudg does not use this section. This section is required only if sked is calculating scan lengths.

The two formats of these lines and some examples:

```
Source  Band  Type Base1 Flux1 Base2 Flux2 Base3 Flux3 Base4 Flux4
Source  Band  Type Flux  MajAx Ratio  PA   Off1  Off2
3C84     X     B    0.0   50.0  500.0
3C84     S     B    0.0   30.0  500.0
OJ287    X     M    3.5   0.35  1.0  0.0    0.0   0.0
OJ287    S     M    2.3   1.5   1.0  0.0    0.0   0.0
0954+658 X     M    0.8   0.65  0.15  -20   0.0   0.0
0954+658 S     M    0.9   0.9   1.0  0.0    0.0   0.0
```

Field	Description
Source	Source name, one of the common names in the $SOURCES section.
Band	One-character band designator, e.g. S or X. Must match one of the bands found in the $CODES section.
Type	M for model parameters or B for baseline/flux pairs.

Baseline/flux pairs are assumed to be present if Type is B.

Base,Flux Fluxes are in Janskys, baselines in km. Flux1 is the source flux density valid for baseline lengths between Base1 and Base2, Flux2 is the flux density for baseline lengths between Base2 and Base3, etc. A maximum of eight fluxes and nine baselines is allowed. Fields beyond Base2 are optional.

The following parameters are assumed if Type is M. Up to three model components may be specified for each source by including additional lines with the same source, band and type.

Flux	Flux of the component, Jy.
MajAx	Size of the major axis of the component, mill-arcsec.
Ratio	Axial ratio of the component.
PA	Position angle of the major axis, degrees, between -180 and +180.

`Off1`	Distance of the component from some origin, milli-arcsec. Not implemented.
`Off2`	Position angle of the component centroid wrt the origin, degrees. Not implemented.

$SKED

The $SKED section contains information on the individual observations. This section is created by the program sked or by PC-SCHED as the user schedules observations. The fields in this line and an example are shown below. The headers and the example wrap onto the second line in this manual, but all information is on a single line in the file.

```
source cal code preob start maxdur midob idle postob ic.. pdfoot..
prfl dur..

1156+29 10 SX PREOB 90359160000 90 MIDOB 0 POSTOB A-H- 1F00000 2R02025
YYYN 90 90
```

Field	Description
source	The source common name, max 8 characters. Must match a common name in the $SOURCES section.
cal	The time scheduled for calibration, seconds.
code	The 2-character frequency code to be used during this observation. Must match a code in the $CODES section.
preob	The name of the procedure to be executed before the observation begins (e.g. radiometry).
start	The start day/time in form yydddhhmmss.
maxdur	Duration of this observation in seconds. If station-by-station durations are present at the end of the line, this is the longest one.
midob	Name of the procedure to be executed during the observation (e.g. for cable cal, weather).
idle	Time allowed for the postob procedure. The antenna remains tracking the source.
postob	Name of the procedure to be executed after the observation (e.g. for radiometry when you're sure to be on source).
ic...	A list of IDs and cable wrap for stations participating in this observation. i = 1-character station identifier, must match one of the IDs on an A line in the $STATIONS section. c = cable wrap indicator: - means don't care or unique azimuth, C means clockwise wrap, W means counter-clockwise wrap (C and W are determined from the mid-point of the cable looking down on the antenna.)
pdfoot	p = tape pass number (1-9,A-Z,a-z), d = direction (F or R), foot = footage counter at the start of this observation. There is one such field for each station in the list of IDs. Footages have 4 or 5 digits.

`prflags`	Four-character string indicating whether setup, parity check, prepass and peak are always required.
`dur`	Durations by station (optional). Length of observation for each station, in seconds. Previous `maxdur` field is the maximum of these values.

$PROCEDURES

The $PROCEDURES section contains procedure names and SNAP commands for each station. Lines in this section are entered using an editor. drudg reads this section and creates any procedures listed here in addition to the standard procedures.

The format of the first line of each procedure is:

```
IDs procname command command ...
```

IDs	List of 1-character Network station identifiers with no spaces between, e.g. AKEMH. This procedure will be created for each of these stations as they are processed in drudg.
procname	Name of the procedure.
command command ...	Each SNAP command in the procedure follows the procedure name. The procedure is created having one command per line in the procedure library. If all of the commands for the procedure don't fit on the line, use a continuation line (see below). Comments are commands that begin with a " (quote mark). drudg searches for the closing quote and writes out the entire comment as a single line in the procedure. If no closing quote is supplied on the current line, the end of the line is taken as the end of the comment.

The format of a continuation line is:

```
- command command ...
```

-	The - (minus) sign is used to indicate that this line is a continuation of the procedure immediately above. The number of continuation lines is not limited.
command command ...	Commands are listed on the continuation line in the same manner as the first line.

$OP

The $OP section holds the flags and values used with the automatic observation selection options in sked. Each entry in this section consists of a key word followed by a flag or a value. The order of the lines in this section must not be changed, and the order of the words must not be changed. The lines and words correspond exactly to the options displayed in sked and documented in the **sked** manual.

3.0 Sample Schedule Files

Listings of sample schedule files follow this page. The schedules are listed in the table below. The $SKED sections of the samples have been truncated to about a page; this should be sufficient for an example. All other sections are listed in their entirety. There are some long lines that wrap around in this listing, e.g. observations and horizon masks.

Schedule file name	Purpose
rdv01.skd	R&D schedule, using VLBA stations plus Mark IV stations. Recorded in fanout mode, 8-channel frequency sequence. This sample demonstrates the extension features of the schedule file.
europe2.skd	European geodetic network schedule. Standard Mark III, mode C observing.

europe2.skd

```
$EXPER EUROP5
$PARAM
DURATION   110 IDLE     0 CALIBRATION    10 LOOKAHEAD    20 MINIMUM     0
MINSCAN    90 VSCAN Y MODSCAN    10 WIDTH    79 CORSYNCH     0
VIS SUB SNR AUTO CONFIRM Y CHANGE   420 MODULAR    10 MINSUBNET    0
FREQUENCY SX PREOB PREOB  MIDOB MIDOB  POSTOB POSTOB BARREL NONE
SYNCHRONIZE OFF PRFLAG YYNN SETUP   20 PARITY   70 PREPASS    0
SOURCE    5 HEAD    6 TAPETM    1 EARLY   15 MIDTP    0 SUNDIS  15
SUBNET  Sm-Ma-Mc-Nt-Ny-On-Wz-Yb
ELEVATION  Sm 5.0 Ma 5.0 Mc 5.0 Nt 5.0 Ny 5.0 On 5.0 Wz 5.0 Yb 5.0
SNR  Sm-Ma X 22 Sm-Ma S 15 Sm-Mc X 22 Sm-Mc S 15 Sm-Nt X 22 Sm-Nt S 15
SNR  Sm-Ny X 22 Sm-Ny S 15 Sm-On X 22 Sm-On S 15 Sm-Wz X 22 Sm-Wz S 15
SNR  Sm-Yb X 22 Sm-Yb S 15 Ma-Mc X 22 Ma-Mc S 15 Ma-Nt X 22 Ma-Nt S 15
SNR  Ma-Ny X 22 Ma-Ny S 15 Ma-On X 22 Ma-On S 15 Ma-Wz X 22 Ma-Wz S 15
SNR  Ma-Yb X 22 Ma-Yb S 15 Mc-Nt X 22 Mc-Nt S 15 Mc-Ny X 22 Mc-Ny S 15
SNR  Mc-On X 22 Mc-On S 15 Mc-Wz X 22 Mc-Wz S 15 Mc-Yb X 22 Mc-Yb S 15
SNR  Nt-Ny X 22 Nt-Ny S 15 Nt-On X 22 Nt-On S 15 Nt-Wz X 22 Nt-Wz S 15
SNR  Nt-Yb X 22 Nt-Yb S 15 Ny-On X 22 Ny-On S 15 Ny-Wz X 22 Ny-Wz S 15
SNR  Ny-Yb X 22 Ny-Yb S 15 On-Wz X 22 On-Wz S 15 On-Yb X 22 On-Yb S 15
SNR  Wz-Yb X 22 Wz-Yb S 15
SNR  MARGIN  X 0 MARGIN  S 0
SCAN  1 110 2 110 3 110 4 110 5 110 6 110 7 110 8 110 9 110 10 110 11 110
SCAN  12 110 13 110 14 110 15 110 16 110 17 110 18 110 19 110 20 110
SCAN  21 110 22 110 23 110 24 110 25 110 26 110 27 110 28 110 29 110
SCAN  30 110 31 110 32 110 33 110 34 110 35 110 36 110 37 110 38 110
$SOURCES
 0016+731 $        00 19 45.786000   73  27 30.01700   2000.0 0.0 Johnston_et_al.
 0048-097 $        00 50 41.317218  -09  29  5.21519   2000.0 0.0 GLB923Z
 0059+581 $        01 02 45.762456   58  24  11.13105  2000.0 0.0 GLB923Z
 0119+041 $        01 21 56.861563   04  22  24.72891  2000.0 0.0 GLB923Z
 0229+131 $        02 31 45.893913   13  22  54.71059  2000.0 0.0 GLB923Z
 0336-019 CTA26    03 39 30.937657  -01  46  35.80899  2000.0 0.0 GLB923Z
 0454-234 $        04 57 3.179197   -23  24  52.02376  2000.0 0.0 GLB923Z
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 0457+024 $        04 59 52.050495   02  29  31.17200  2000.0 0.0 GLB923Z
 0458-020 $        05 01 12.809753  -01  59  14.26002  2000.0 0.0 GLB923Z
 0528+134 $        05 30 56.416533   13  31  55.14596  2000.0 0.0 GLB923Z
 0552+398 $        05 55 30.805191   39  48  49.16175  2000.0 0.0 GLB923Z
 0727-115 $        07 30 19.112409  -11  41  12.60084  2000.0 0.0 GLB923Z
 0735+178 $        07 38 7.393633    17  42  19.00206  2000.0 0.0 GLB887
 0804+499 $        08 08 39.665657   49  50  36.53044  2000.0 0.0 GLB923Z
 0823+033 $        08 25 50.338195   03  09  24.52104  2000.0 0.0 GLB923Z
 0851+202 OJ287    08 54 48.874641   20  06  30.64229  2000.0 0.0 GLB923Z
 0919-260 $        09 21 29.353897  -26  18  43.38329  2000.0 0.0 GLB923Z
 0923+392 4C39.25  09 27 3.013450    39  02  20.85411  2000.0 0.0 GLB923Z
 0953+254 OK290    09 56 49.875061   25  15  16.05266  2000.0 0.0 GLB923Z
 0955+476 $        09 58 19.671109   47  25  7.84538   2000.0 0.0 GLB923Z
 1044+719 $        10 48 27.618736   71  43  35.94254  2000.0 0.0 GLB923Z
 1219+044 $        12 22 22.549460   04  13  15.78229  2000.0 0.0 GLB923Z
 1308+326 $        13 10 28.663639   32  20  43.78908  2000.0 0.0 GLB923Z
 1334-127 $        13 37 39.782648  -12  57  24.68634  2000.0 0.0 GLB923Z
 1357+769 $        13 57 55.371265   76  43  21.05701  2000.0 0.0 GLB923Z
 1606+106 $        16 08 46.203073   10  29  7.78165   2000.0 0.0 GLB923Z
 1622-253 $        16 25 46.891390  -25  27  38.32068  2000.0 0.0 GLB923Z
 1638+398 NRAO512  16 40 29.632839   39  46  46.03376  2000.0 0.0 GLB923Z
 1726+455 $        17 27 27.650994   45  30  39.73580  2000.0 0.0 GLB923Z
 1741-038 $        17 43 58.855977  -03  50  4.61230   2000.0 0.0 GLB923Z
 1749+096 $        17 51 32.818493   09  39  .73242    2000.0 0.0 GLB923Z
 1803+784 $        18 00 45.684080   78  28  4.01531   2000.0 0.0 GLB887
 1921-293 $        19 24 51.055589  -29  14  30.11876  2000.0 0.0 GLB923Z
 1958-179 $        20 00 57.090168  -17  48  57.67142  2000.0 0.0 GLB923Z
 2121+053 $        21 23 44.517280   05  35  22.09183  2000.0 0.0 GLB923Z
 2145+067 $        21 48 5.458581    06  57  38.60218  2000.0 0.0 GLB923Z
 2234+282 $        22 36 22.470914   28  28  57.41002  2000.0 0.0 GLB923Z
 2255-282 $        22 58 5.962576   -27  58  21.25967  2000.0 0.0 GLB923Z
$STATIONS
A C  CRIMEA   AZEL 0.00000  54.0 30  332.0  748.0  36.0 35    3.0   85.0  22.0 Sm 35 CR
A I  MATERA   AZEL 0.00000 120.0  0  260.0  800.0 120.0  0    4.0   88.0  20.0 Ma 119  --
A B  MEDICINA AZEL 1.83000  48.0  0  270.0  810.0  30.0  0    5.0   88.5  32.0 Mc 38  ME
A S  NOTO     AZEL 1.83000  43.0  4  290.0  810.0  30.0  2    5.0   88.5  32.0 Nt NO  NT
A N  NYALES20 AZEL 0.00000 120.0  0  260.0  809.0 120.0  0    0.0   89.7  20.0 Ny 66  NY
A T  ONSALA60 AZEL 0.00000 144.0 20  340.0  740.0  60.0 10    5.0   85.0  20.0 On 02
A V  WETTZELL AZEL 0.00000 180.0  0  270.0  810.0  90.0  0    2.0   89.0  20.0 Wz 33  WZ
A Y  YEBES    AZEL 0.0      60.0 10    5.0  715.0  60.0 10   10.0   89.0  13.7 Yb 105
P Yb YEBES     4848782.42     -261703.57     4123035.69      73333601   3.09   40.52 GPS
```

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P Sm CRIMEA    3785227.30000  2551207.40000  4439806.90000   73323401 326.02   44.40 Other
P Ma MATERA    4641938.92824  1393002.85957  4133325.47142   72435701 343.30   40.65 GLB914F1
P Nt NOTO      4934563.26211  1321201.11878  3806484.40523   75478901 345.01   36.88 GLB914F1
P Wz WETTZELL  4075539.99770   931735.12784  4801629.33281   72247801 347.12   49.15 GLB914F1
P Ny NYALES20  1202462.96654   252734.41660  6237766.05628   73313301 348.14   78.93 NEOSA75
P On ONSALA60  3370606.11550   711917.37421  5349830.69004   72137701 348.07   57.40 GLB914F1
P Mc MEDICINA  4461370.11980   919596.66875  4449559.16040   72308801 348.35   44.52 GLB914F1
T 35  TVDS-2      1      8820   X  3000   S  2000
T 119  MATERA     1      8820   X  1500   S   850
T 38  MEDICINA    1      8820   X   310   S   500 S 0.5 0.839 0.161 X 0.1 -1.26 2.26
T NO  NOTO        1      8820   X  1725   S  1100
T 66  RICHMOND    1      8820   X   900   S  1200 S 1.0 0.979 0.021 X 1.0 0.962 0.038
T 02  ONSALA      1      8820   X  2450   S  3200 S 0.2 0.418 0.582 X 0.5 0.777 0.223
T 33  WETTZELL    1      8820   X   750   S  1115 S 1.0 0.934 0.0660 X 1.0 0.948 0.0516
T 105  YEBES       1      8820   x  3000   S  5000
H CR 0 15  10 13  40 13  80 0  180 0  230 8  270 11   330 22  360 15
H ME .0    5.0   360.0  5.0
H NT 0 7 5 8  20 6  35 6  70 9  120 5  140 5  150 6  180 4  305 4  310 6.5  360 7
H NY 0 2  10 4  55 4  65 2  120 2  130 5  150 5  170 12   190 5  220 8  230 4  260 12  280 4  310 2  360 2
H WZ 0 4.5  25 4.5  26 3  35 3  36 4.5  90 4.5  91 3  120 3   121 4  160 4  161 3  200 3  201 4  230 4  231 1  310 1  311 4    330 4  331
5  350 5  351 4.5  360 4.5
$CODES
F EUR-SX   SX CRIMEA   MATERA   MEDICINA NOTO     NYALES20 ONSALA60 WETTZELL YEBES
C SX X 8210.99  10000.0   1 C        2.000 1(15) 2(16)
C SX X 8220.99  10000.0   2 C        2.000 1(1) 2(2)
C SX X 8250.99  10000.0   3 C        2.000 1(17) 2(18)
C SX X 8310.99  10000.0   4 C        2.000 1(3) 2(4)
C SX X 8420.99  10000.0   5 C        2.000 1(19) 2(20)
C SX X 8500.99  10000.0   6 C        2.000 1(5) 2(6)
C SX X 8550.99  10000.0   7 C        2.000 1(21) 2(22)
C SX X 8570.99  10000.0   8 C        2.000 1(7) 2(8)
C SX S 2212.99  10000.0   9 C        2.000 1(23) 2(24)
C SX S 2222.99  10000.0  10 C        2.000 1(9) 2(10)
C SX S 2237.99  10000.0  11 C        2.000 1(25) 2(26)
C SX S 2267.99  10000.0  12 C        2.000 1(11) 2(12)
C SX S 2292.99  10000.0  13 C        2.000 1(27) 2(28)
C SX S 2297.99  10000.0  14 C        2.000 1(13) 2(14)
L C  SX X  1N   8080      1  U
L C  SX X  1N   8080      2  U
L C  SX X  1N   8080      3  U
L C  SX X  1N   8080      4  U
```

```
L C  SX X  1N   8080      5  U
L C  SX X  1N   8080      6  U
L C  SX X  1N   8080      7  U
L C  SX X  1N   8080      8  U
L C  SX S  2N   2020      9  U
L C  SX S  2N   2020     10  U
L C  SX S  2N   2020     11  U
L C  SX S  2N   2020     12  U
L C  SX S  2N   2020     13  U
L C  SX S  2N   2020     14  U
L I  SX X  1N   8080      1  U
L I  SX X  1N   8080      2  U
L I  SX X  1N   8080      3  U
L I  SX X  1N   8080      4  U
L I  SX X  1N   8080      5  U
L I  SX X  1N   8080      6  U
L I  SX X  1N   8080      7  U
L I  SX X  1N   8080      8  U
L I  SX S  2N   2020      9  U
L I  SX S  2N   2020     10  U
L I  SX S  2N   2020     11  U
L I  SX S  2N   2020     12  U
L I  SX S  2N   2020     13  U
L I  SX S  2N   2020     14  U
L B  SX X  1N   8080      1  U
L B  SX X  1N   8080      2  U
L B  SX X  1N   8080      3  U
L B  SX X  1N   8080      4  U
L B  SX X  1N   8080      5  U
L B  SX X  1N   8080      6  U
L B  SX X  1N   8080      7  U
L B  SX X  1N   8080      8  U
L B  SX S  2N   2020      9  U
L B  SX S  2N   2020     10  U
L B  SX S  2N   2020     11  U
L B  SX S  2N   2020     12  U
L B  SX S  2N   2020     13  U
L B  SX S  2N   2020     14  U
L S  SX X  A    7600.1    1  U
L S  SX X  A    7600.1    2  U
L S  SX X  A    7600.1    3  U
```

```
L S  SX X  A    7600.1    4  U
L S  SX X  A    7600.1    5  U
L S  SX X  A    7600.1    6  U
L S  SX X  A    7600.1    7  U
L S  SX X  A    7600.1    8  U
L S  SX S  C    1540.1    9  U
L S  SX S  C    1540.1   10  U
L S  SX S  C    1540.1   11  U
L S  SX S  C    1540.1   12  U
L S  SX S  C    1540.1   13  U
L S  SX S  C    1540.1   14  U
L N  SX X  1N   8080      1  U
L N  SX X  1N   8080      2  U
L N  SX X  1N   8080      3  U
L N  SX X  1N   8080      4  U
L N  SX X  1N   8080      5  U
L N  SX X  1N   8080      6  U
L N  SX X  1N   8080      7  U
L N  SX X  1N   8080      8  U
L N  SX S  2N   2020      9  U
L N  SX S  2N   2020     10  U
L N  SX S  2N   2020     11  U
L N  SX S  2N   2020     12  U
L N  SX S  2N   2020     13  U
L N  SX S  2N   2020     14  U
L T  SX X  1N   8080      1  U
L T  SX X  1N   8080      2  U
L T  SX X  1N   8080      3  U
L T  SX X  1N   8080      4  U
L T  SX X  1N   8080      5  U
L T  SX X  1N   8080      6  U
L T  SX X  1N   8080      7  U
L T  SX X  1N   8080      8  U
L T  SX S  2N   2020      9  U
L T  SX S  2N   2020     10  U
L T  SX S  2N   2020     11  U
L T  SX S  2N   2020     12  U
L T  SX S  2N   2020     13  U
L T  SX S  2N   2020     14  U
L V  SX X  1N   8080      1  U
L V  SX X  1N   8080      2  U
```

```
L V  SX X  1N   8080      3  U
L V  SX X  1N   8080      4  U
L V  SX X  1N   8080      5  U
L V  SX X  1N   8080      6  U
L V  SX X  1N   8080      7  U
L V  SX X  1N   8080      8  U
L V  SX S  2N   2020      9  U
L V  SX S  2N   2020     10  U
L V  SX S  2N   2020     11  U
L V  SX S  2N   2020     12  U
L V  SX S  2N   2020     13  U
L V  SX S  2N   2020     14  U
L Y  SX X  1N   8080      1  U
L Y  SX X  1N   8080      2  U
L Y  SX X  1N   8080      3  U
L Y  SX X  1N   8080      4  U
L Y  SX X  1N   8080      5  U
L Y  SX X  1N   8080      6  U
L Y  SX X  1N   8080      7  U
L Y  SX X  1N   8080      8  U
L Y  SX S  2N   2020      9  U
L Y  SX S  2N   2020     10  U
L Y  SX S  2N   2020     11  U
L Y  SX S  2N   2020     12  U
L Y  SX S  2N   2020     13  U
L Y  SX S  2N   2020     14  U
$SKED
0552+398   10 SX PREOB  97076143000   180 MIDOB      0 POSTOB C-I-B-S-N-T-V-Y-                                    1F00000
1F00000 1F00000 1F00000 1F00000 1F00000 1F00000 1F00000  YYNN   180  180  180  180  180  180  180  180
NRAO512    10 SX PREOB  97076143500    90 MIDOB      0 POSTOB NWTW                                            1F02193
1F02193  YYNN    90   90
CTA26      10 SX PREOB  97076143540    90 MIDOB      0 POSTOB I-B-S-V-YW                                      1F02193
1F02193 1F02193 1F02193 1F02193  YYNN    90   90   90   90   90
0119+041   10 SX PREOB  97076143850   360 MIDOB      0 POSTOB I-B-S-N-T-V-YW                                  1F03374
1F03374 1F03374 1F03374 1F03374 1F03374 1F03374  YYNN   210   90  240  180  360  100  360
1726+455   10 SX PREOB  97076144310    90 MIDOB      0 POSTOB NCVC                                            1F05567
1F04667  YYNN    90   90
2145+067   10 SX PREOB  97076144620    90 MIDOB      0 POSTOB ICB-S-T-YW                                      1F05905
1F04555 1F06242 1F07592 1F07592  YYNN    90   90   90   90   90
0059+581   10 SX PREOB  97076145000   100 MIDOB      0 POSTOB ICBCSCN-T-VCYW                                  1F07086
1F05736 1F07423 1F06748 2R08820 1F05848 2R08820  YYNN    90   90   90   90  100   90  100
```

```
4C39.25    10 SX PREOB  97076145410    90 MIDOB      0 POSTOB ICBCSCNWT-VCYC                                    2R08820
1F06917 2R08820 2R08820 2R07527 1F07029 2R07527  YYNN    90   90   90   90   90   90   90
1803+784   10 SX PREOB  97076145740   240 MIDOB      0 POSTOB ICBCSCNWTWVCYW                                    2R07639
2R08820 2R07639 2R07639 2R06346 2R08820 2R06346  YYNN   140   90  160  100  240   90  240
OJ287      10 SX PREOB  97076150300    90 MIDOB      0 POSTOB I-BCSCN-T-VC                                      2R05896
2R07639 2R05671 2R06346 2R03478 2R07639  YYNN    90   90   90   90   90   90
0804+499   10 SX PREOB  97076150710   360 MIDOB      0 POSTOB IWBCSCN-T-VCYC                                    2R04715
2R06458 2R04490 2R05165 3F00000 2R06458 3F00000  YYNN   210   90  250  150  360  110  360
1308+326   10 SX PREOB  97076151510    90 MIDOB      0 POSTOB NWT-                                              2R03309
3F04218  YYNN    90   90
0048-097   10 SX PREOB  97076151630   340 MIDOB      0 POSTOB I-B-S-V-YC                                        3F00000
2R05277 3F00000 2R05052 3F04218  YYNN   290  100  340  230  340
NRAO512    10 SX PREOB  97076151740    90 MIDOB      0 POSTOB NWTW                                              2R02128
3F05399  YYNN    90   90
0454-234   10 SX PREOB  97076152410   170 MIDOB      0 POSTOB I-B-S-V-YC                                        3F03431
2R03984 3F03993 2R02296 4R08820  YYNN   150   90  170   90  170
..... (additional scan lines omitted)
$HEAD
C SX 11(-330) 22(-330) 31(-275) 42(-275) 51(-220) 62(-220)
C SX 71(-165) 82(-165) 91(-110) A2(-110) B1(-55)  C2(-55)
C SX D1(0)    E2(0)    F1(55)   G2(55)   H1(110)  I2(110)
C SX J1(165)  K2(165)  L1(220)  M2(220)  N1(275)  O2(275)
I SX 11(-330) 22(-330) 31(-275) 42(-275) 51(-220) 62(-220)
I SX 71(-165) 82(-165) 91(-110) A2(-110) B1(-55)  C2(-55)
I SX D1(0)    E2(0)    F1(55)   G2(55)   H1(110)  I2(110)
I SX J1(165)  K2(165)  L1(220)  M2(220)  N1(275)  O2(275)
B SX 11(-330) 22(-330) 31(-275) 42(-275) 51(-220) 62(-220)
B SX 71(-165) 82(-165) 91(-110) A2(-110) B1(-55)  C2(-55)
B SX D1(0)    E2(0)    F1(55)   G2(55)   H1(110)  I2(110)
B SX J1(165)  K2(165)  L1(220)  M2(220)  N1(275)  O2(275)
S SX 11(-330) 22(-330) 31(-275) 42(-275) 51(-220) 62(-220)
S SX 71(-165) 82(-165) 91(-110) A2(-110) B1(-55)  C2(-55)
S SX D1(0)    E2(0)    F1(55)   G2(55)   H1(110)  I2(110)
S SX J1(165)  K2(165)  L1(220)  M2(220)  N1(275)  O2(275)
N SX 11(-330) 22(-330) 31(-275) 42(-275) 51(-220) 62(-220)
N SX 71(-165) 82(-165) 91(-110) A2(-110) B1(-55)  C2(-55)
N SX D1(0)    E2(0)    F1(55)   G2(55)   H1(110)  I2(110)
N SX J1(165)  K2(165)  L1(220)  M2(220)  N1(275)  O2(275)
T SX 11(-330) 22(-330) 31(-275) 42(-275) 51(-220) 62(-220)
T SX 71(-165) 82(-165) 91(-110) A2(-110) B1(-55)  C2(-55)
T SX D1(0)    E2(0)    F1(55)   G2(55)   H1(110)  I2(110)
```

```
T SX J1(165)  K2(165)  L1(220)  M2(220)  N1(275)  O2(275)
V SX 11(-330) 22(-330) 31(-275) 42(-275) 51(-220) 62(-220)
V SX 71(-165) 82(-165) 91(-110) A2(-110) B1(-55)  C2(-55)
V SX D1(0)    E2(0)    F1(55)   G2(55)   H1(110)  I2(110)
V SX J1(165)  K2(165)  L1(220)  M2(220)  N1(275)  O2(275)
Y SX 11(-330) 22(-330) 31(-275) 42(-275) 51(-220) 62(-220)
Y SX 71(-165) 82(-165) 91(-110) A2(-110) B1(-55)  C2(-55)
Y SX D1(0)    E2(0)    F1(55)   G2(55)   H1(110)  I2(110)
Y SX J1(165)  K2(165)  L1(220)  M2(220)  N1(275)  O2(275)
$FLUX
0016+731  X  M   1.90   .60  .50  126.0    .00    .00
0016+731  S  M   1.40  2.20  .30  123.0    .00    .00
0048-097  X  M   1.10   .20 1.00     .0    .00    .00
0048-097  S  M    .70   .70 1.00     .0    .00    .00
0059+581  X  M   2.50   .30 1.00     .0    .00    .00
0059+581  S  M   1.80  1.20 1.00     .0    .00    .00
0119+041  X  M   1.40   .70 1.00     .0    .00    .00
0119+041  S  M   1.30  1.10 1.00     .0    .00    .00
0229+131  X  M   1.50   .60 1.00     .0    .00    .00
0229+131  S  M   1.30  1.40 1.00     .0    .00    .00
CTA26     X  M   2.70   .70 1.00     .0    .00    .00
CTA26     S  M   2.50  1.60 1.00     .0    .00    .00
0454-234  X  M   1.60   .40 1.00     .0    .00    .00
0454-234  S  M   1.90  1.40 1.00     .0    .00    .00
0457+024  X  M   1.30   .70 1.00     .0    .00    .00
0457+024  S  M   2.00  2.30 1.00     .0    .00    .00
0458-020  X  M   2.30   .40 1.00     .0    .00    .00
0458-020  S  M   2.20  1.20 1.00     .0    .00    .00
0528+134  X  M   3.80   .40 1.00     .0    .00    .00
0528+134  S  M   1.70  2.20 1.00     .0    .00    .00
0552+398  X  M   6.50   .50 1.00     .0    .00    .00
0552+398  S  M   3.50  1.30 1.00     .0    .00    .00
0727-115  X  M   5.60   .40 1.00     .0    .00    .00
0727-115  S  M   4.00  1.20 1.00     .0    .00    .00
0735+178  X  M   2.50   .60 1.00     .0    .00    .00
0735+178  S  M   2.40  1.00 1.00     .0    .00    .00
0804+499  X  M   1.30   .30 1.00     .0    .00    .00
0804+499  S  M   1.10  1.00 1.00     .0    .00    .00
0823+033  X  M   1.80   .40 1.00     .0    .00    .00
0823+033  S  M   1.70  1.20 1.00     .0    .00    .00
OJ287     X  M   2.30   .60 1.00     .0    .00    .00
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OJ287     S  M   2.00  1.30 1.00     .0    .00    .00
0919-260  X  M   1.60   .90 1.00     .0    .00    .00
0919-260  S  M   1.80  3.50 1.00     .0    .00    .00
4C39.25   X  M  12.50   .50 1.00     .0    .00    .00
4C39.25   S  M   4.60  1.30 1.00     .0    .00    .00
OK290     X  M   1.60   .60 1.00     .0    .00    .00
OK290     S  M   1.50  1.00 1.00     .0    .00    .00
0955+476  X  M   1.20   .30 1.00     .0    .00    .00
0955+476  S  M   1.00   .80 1.00     .0    .00    .00
1044+719  X  M    .60   .40 1.00     .0    .00    .00
1044+719  S  M    .70  1.10 1.00     .0    .00    .00
1219+044  X  M    .70   .20 1.00     .0    .00    .00
1219+044  S  M    .80   .50 1.00     .0    .00    .00
1308+326  X  M   3.50   .30 1.00     .0    .00    .00
1308+326  S  M   1.80   .60 1.00     .0    .00    .00
1334-127  X  M   5.60   .30 1.00     .0    .00    .00
1334-127  S  M   3.00   .90 1.00     .0    .00    .00
1357+769  X  M   1.40   .30 1.00     .0    .00    .00
1357+769  S  M   1.10   .60 1.00     .0    .00    .00
1606+106  X  M   1.30   .40 1.00     .0    .00    .00
1606+106  S  M   1.50  1.20 1.00     .0    .00    .00
1622-253  X  M   1.90   .80  .40   29.0    .00    .00
1622-253  S  M   1.30  2.20 1.00     .0    .00    .00
NRAO512   X  M   1.40   .30 1.00     .0    .00    .00
NRAO512   S  M   1.30   .70 1.00     .0    .00    .00
1726+455  X  M    .90   .40 1.00     .0    .00    .00
1726+455  S  M   1.10  1.10 1.00     .0    .00    .00
1741-038  X  M   3.00   .30 1.00     .0    .00    .00
1741-038  S  M   1.90   .80 1.00     .0    .00    .00
1749+096  X  M   2.70   .20 1.00     .0    .00    .00
1749+096  S  M   1.30  1.40 1.00     .0    .00    .00
1803+784  X  M   1.60   .30  .40   85.0    .00    .00
1803+784  S  M   1.70  1.70  .30   92.0    .00    .00
1921-293  X  M  20.00   .40 1.00     .0    .00    .00
1921-293  S  M   7.00  7.00 1.00     .0    .00    .00
1921-293  S  M   5.00   .80 1.00     .0    .00    .00
1958-179  X  M   2.00   .40 1.00     .0    .00    .00
1958-179  S  M   1.60  1.00 1.00     .0    .00    .00
2121+053  X  M   1.20   .70 1.00     .0    .00    .00
2121+053  S  M   1.70  1.40 1.00     .0    .00    .00
2145+067  X  M   8.20   .40 1.00     .0    .00    .00
```

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2145+067  S  M   1.50   .60 1.00     .0    .00    .00
2145+067  S  M   1.20  5.00 1.00     .0    .00    .00
2234+282  X  M   1.10   .60 1.00     .0    .00    .00
2234+282  S  M   1.40  1.20 1.00     .0    .00    .00
2255-282  X  M   1.70   .30 1.00     .0    .00    .00
2255-282  S  M   1.20  3.90 1.00     .0    .00    .00
$OP
COVERAGE T LASTHR 12 MAXOBS T MINTIM T LOCALCOV T BEST% 50 CART T SNRWT T TAPE FFFFFFFF
NOISE 30 EVN#SOR F LOWEL  0 EXPAND F RISESET F MINSLEW T MINBETW  25
XP F YP F DUT F PSI F EPS F
C AOFF F ARAT F COFF F CRT1 F CRT2 F X T Y T Z T
I AOFF F ARAT F COFF F CRT1 F CRT2 F X T Y T Z T
B AOFF F ARAT F COFF F CRT1 F CRT2 F X T Y T Z T
S AOFF F ARAT F COFF F CRT1 F CRT2 F X T Y T Z T
N AOFF F ARAT F COFF F CRT1 F CRT2 F X T Y T Z T
T AOFF F ARAT F COFF F CRT1 F CRT2 F X T Y T Z T
V AOFF F ARAT F COFF F CRT1 F CRT2 F X F Y F Z F
Y AOFF F ARAT F COFF F CRT1 F CRT2 F X T Y T Z T
  1 F    2 F    3 F    4 F    5 F    6 F    7 F    8 F    9 F   10 F
 11 F   12 F   13 F   14 F   15 F   16 F   17 F   18 F   19 F   20 F
 21 F   22 F   23 F   24 F   25 F   26 F   27 F   28 F   29 F   30 F
 31 F   32 F   33 F   34 F   35 F   36 F   37 F   38 F
XP F YP F DUT F PSI F EPS F
C AOFF T ARAT F COFF T CRT1 T CRT2 F X T Y T Z T
I AOFF T ARAT F COFF T CRT1 T CRT2 F X T Y T Z T
B AOFF T ARAT F COFF T CRT1 T CRT2 F X T Y T Z T
S AOFF T ARAT F COFF T CRT1 T CRT2 F X T Y T Z T
N AOFF T ARAT F COFF T CRT1 T CRT2 F X T Y T Z T
T AOFF T ARAT F COFF T CRT1 T CRT2 F X T Y T Z T
V AOFF T ARAT F COFF F CRT1 F CRT2 F X F Y F Z F
Y AOFF T ARAT F COFF T CRT1 T CRT2 F X T Y T Z T
  1 F    2 F    3 F    4 F    5 F    6 F    7 F    8 F    9 F   10 F
 11 F   12 F   13 F   14 F   15 F   16 F   17 F   18 F   19 F   20 F
 21 F   22 F   23 F   24 F   25 F   26 F   27 F   28 F   29 F   30 F
 31 F   32 F   33 F   34 F   35 F   36 F   37 F   38 F
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rdv01.skd

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$EXPER RDV01
$PARAM
DURATION   196 IDLE     0 CALIBRATION    10 LOOKAHEAD     0 MINIMUM     0
MINSCAN    70 VSCAN Y MODSCAN     1 WIDTH    79 CORSYNCH     0
VIS SUB SNR AUTO CONFIRM Y CHANGE   420 MODULAR     1 MINSUBNET    2
FREQUENCY SX PREOB PREOB  MIDOB MIDOB  POSTOB POSTOB
SYNCHRONIZE OFF PRFLAG YYNN SETUP   20 PARITY   70 PREPASS    0
SOURCE    5 HEAD    6 TAPETM    1 EARLY   20 MIDTP   10 SUNDIS  15
SUBNET  Br-Fd-Gc-Hn-Kk-Kp-La-Mc-Mk-Nl-Gn-On-Gg-Ov-Pt-Sc-Wf
ELEVATION  Br 5.5 Fd 5.5 Gc 5.5 Hn 5.5 Kk 5.5 Kp 5.5 La 5.5 Mc 5.5 Mk 5.5
ELEVATION  Nl 5.5 Gn 5.5 On 5.5 Gg 5.0 Ov 5.5 Pt 5.5 Sc 5.5 Wf 5.5
SNR  Br-Fd X 20 Br-Fd S 15 Br-Gc X 20 Br-Gc S 15 Br-Hn X 20 Br-Hn S 15
SNR  Br-Kk X 20 Br-Kk S 15 Br-Kp X 20 Br-Kp S 15 Br-La X 20 Br-La S 15
SNR  Br-Mc X 20 Br-Mc S 15 Br-Mk X 20 Br-Mk S 15 Br-Nl X 20 Br-Nl S 15
SNR  Br-Gn X 20 Br-Gn S 15 Br-On X 20 Br-On S 15 Br-Gg X 0 Br-Gg S 0
SNR  Br-Ov X 20 Br-Ov S 15 Br-Pt X 20 Br-Pt S 15 Br-Sc X 20 Br-Sc S 15
SNR  Br-Wf X 20 Br-Wf S 15 Fd-Gc X 20 Fd-Gc S 15 Fd-Hn X 20 Fd-Hn S 15
SNR  Fd-Kk X 20 Fd-Kk S 15 Fd-Kp X 20 Fd-Kp S 15 Fd-La X 20 Fd-La S 15
SNR  Fd-Mc X 20 Fd-Mc S 15 Fd-Mk X 20 Fd-Mk S 15 Fd-Nl X 20 Fd-Nl S 15
SNR  Fd-Gn X 20 Fd-Gn S 15 Fd-On X 20 Fd-On S 15 Fd-Gg X 0 Fd-Gg S 0
SNR  Fd-Ov X 20 Fd-Ov S 15 Fd-Pt X 20 Fd-Pt S 15 Fd-Sc X 20 Fd-Sc S 15
SNR  Fd-Wf X 20 Fd-Wf S 15 Gc-Hn X 20 Gc-Hn S 15 Gc-Kk X 20 Gc-Kk S 15
SNR  Gc-Kp X 20 Gc-Kp S 15 Gc-La X 20 Gc-La S 15 Gc-Mc X 20 Gc-Mc S 15
SNR  Gc-Mk X 20 Gc-Mk S 15 Gc-Nl X 20 Gc-Nl S 15 Gc-Gn X 20 Gc-Gn S 15
SNR  Gc-On X 20 Gc-On S 15 Gc-Gg X 0 Gc-Gg S 0 Gc-Ov X 20 Gc-Ov S 15
SNR  Gc-Pt X 20 Gc-Pt S 15 Gc-Sc X 20 Gc-Sc S 15 Gc-Wf X 20 Gc-Wf S 15
SNR  Hn-Kk X 20 Hn-Kk S 15 Hn-Kp X 20 Hn-Kp S 15 Hn-La X 20 Hn-La S 15
SNR  Hn-Mc X 20 Hn-Mc S 15 Hn-Mk X 20 Hn-Mk S 15 Hn-Nl X 20 Hn-Nl S 15
SNR  Hn-Gn X 20 Hn-Gn S 15 Hn-On X 20 Hn-On S 15 Hn-Gg X 0 Hn-Gg S 0
SNR  Hn-Ov X 20 Hn-Ov S 15 Hn-Pt X 20 Hn-Pt S 15 Hn-Sc X 20 Hn-Sc S 15
SNR  Hn-Wf X 20 Hn-Wf S 15 Kk-Kp X 20 Kk-Kp S 15 Kk-La X 20 Kk-La S 15
SNR  Kk-Mc X 20 Kk-Mc S 15 Kk-Mk X 20 Kk-Mk S 15 Kk-Nl X 20 Kk-Nl S 15
SNR  Kk-Gn X 20 Kk-Gn S 15 Kk-On X 20 Kk-On S 15 Kk-Gg X 0 Kk-Gg S 0
SNR  Kk-Ov X 20 Kk-Ov S 15 Kk-Pt X 20 Kk-Pt S 15 Kk-Sc X 20 Kk-Sc S 15
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SNR  Kk-Wf X 20 Kk-Wf S 15 Kp-La X 20 Kp-La S 15 Kp-Mc X 20 Kp-Mc S 15
SNR  Kp-Mk X 20 Kp-Mk S 15 Kp-Nl X 20 Kp-Nl S 15 Kp-Gn X 20 Kp-Gn S 15
SNR  Kp-On X 20 Kp-On S 15 Kp-Gg X 0 Kp-Gg S 0 Kp-Ov X 20 Kp-Ov S 15
SNR  Kp-Pt X 20 Kp-Pt S 15 Kp-Sc X 20 Kp-Sc S 15 Kp-Wf X 20 Kp-Wf S 15
SNR  La-Mc X 20 La-Mc S 15 La-Mk X 20 La-Mk S 15 La-Nl X 20 La-Nl S 15
SNR  La-Gn X 20 La-Gn S 15 La-On X 20 La-On S 15 La-Gg X 0 La-Gg S 0
SNR  La-Ov X 20 La-Ov S 15 La-Pt X 20 La-Pt S 15 La-Sc X 20 La-Sc S 15
SNR  La-Wf X 20 La-Wf S 15 Mc-Mk X 20 Mc-Mk S 15 Mc-Nl X 20 Mc-Nl S 15
SNR  Mc-Gn X 20 Mc-Gn S 15 Mc-On X 20 Mc-On S 15 Mc-Gg X 0 Mc-Gg S 0
SNR  Mc-Ov X 20 Mc-Ov S 15 Mc-Pt X 20 Mc-Pt S 15 Mc-Sc X 20 Mc-Sc S 15
SNR  Mc-Wf X 20 Mc-Wf S 15 Mk-Nl X 20 Mk-Nl S 15 Mk-Gn X 20 Mk-Gn S 15
SNR  Mk-On X 20 Mk-On S 15 Mk-Gg X 0 Mk-Gg S 0 Mk-Ov X 20 Mk-Ov S 15
SNR  Mk-Pt X 20 Mk-Pt S 15 Mk-Sc X 20 Mk-Sc S 15 Mk-Wf X 20 Mk-Wf S 15
SNR  Nl-Gn X 20 Nl-Gn S 15 Nl-On X 20 Nl-On S 15 Nl-Gg X 0 Nl-Gg S 0
SNR  Nl-Ov X 20 Nl-Ov S 15 Nl-Pt X 20 Nl-Pt S 15 Nl-Sc X 20 Nl-Sc S 15
SNR  Nl-Wf X 20 Nl-Wf S 15 Gn-On X 20 Gn-On S 15 Gn-Gg X 0 Gn-Gg S 0
SNR  Gn-Ov X 20 Gn-Ov S 15 Gn-Pt X 20 Gn-Pt S 15 Gn-Sc X 20 Gn-Sc S 15
SNR  Gn-Wf X 20 Gn-Wf S 15 On-Gg X 0 On-Gg S 0 On-Ov X 20 On-Ov S 15
SNR  On-Pt X 20 On-Pt S 15 On-Sc X 20 On-Sc S 15 On-Wf X 20 On-Wf S 15
SNR  Gg-Ov X 0 Gg-Ov S 0 Gg-Pt X 0 Gg-Pt S 0 Gg-Sc X 0 Gg-Sc S 0 Gg-Wf X 0 Gg-Wf S 0
SNR  Ov-Pt X 20 Ov-Pt S 15 Ov-Sc X 20 Ov-Sc S 15 Ov-Wf X 20 Ov-Wf S 15
SNR  Pt-Sc X 20 Pt-Sc S 15 Pt-Wf X 20 Pt-Wf S 15 Sc-Wf X 20 Sc-Wf S 15
SNR  MARGIN  X 5 MARGIN  S 3
SCAN  1 196 2 196 3 196 4 196 5 196 6 196 7 196 8 196 9 196 10 196 11 196
SCAN  12 196 13 196 14 196 15 196 16 196 17 196 18 196 19 196 20 196
SCAN  21 196 22 196 23 196 24 196 25 196 26 196 27 196 28 196 29 196
SCAN  30 196 31 196 32 196 33 196 34 196 35 196 36 196 37 196 38 196
SCAN  39 196 40 196 41 196 42 196 43 196 44 196 45 196 46 196 47 196
SCAN  48 196 49 196 50 196 51 196 52 196 53 196 54 196 55 196 56 196
SCAN  57 196 58 196 59 196 60 196 61 196 62 196 63 196 64 196 65 196
SCAN  66 196 67 196 68 196 69 196 70 196 71 196 72 196 73 196 74 196
SCAN  75 196 76 196 77 196 78 196 79 196 80 196
$SKED
1357+769   10 SX PREOB  97030220000    90 MIDOB     0 POSTOB D-A-H-K-L-M-B-N-O-P-T-Q-R-Z-                                    1F00000
1F00000 1F00000 1F00000 1F00000 1F00000 1F00000 1F00000 1F00000 1F00000 1F00000 1F00000 1F00000 1F00000  YYNN    90   90   90   90   90
 90   90   90   90   90   90   90   90   90
0202+149   10 SX PREOB  97030220000    70 MIDOB     0 POSTOB C-E-F-                                                          1F00000
1F00000 1F00000  YYNN    70   70   70
0133+476   10 SX PREOB  97030220308    70 MIDOB     0 POSTOB CWEC                                                            1F01012
1F00600  YYNN    70   70
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1726+455   10 SX PREOB  97030220328   300 MIDOB      0 POSTOB BWDWA-HWKWLWMWNWOWPWT-QWRWF-ZW                                    1F00733
1F00733 1F01222 1F00733 1F01222 1F00733 1F00733 1F00733 1F00733 1F00733 1F01237 1F00733 1F00733 1F00600 1F00733  YYNN   300  300  300  300
300  300  300  300  300  300  300  300  300  300  300  300
1044+719   10 SX PREOB  97030220618    70 MIDOB      0 POSTOB CWEC                                                          1F02024
1F01200  YYNN    70   70
0201+113   10 SX PREOB  97030221108   262 MIDOB     0 POSTOB B-D-A-H-KWL-M-CWNWO-P-T-Q-R-E-F-ZW                             1F02866
1F02866 1F04777 1F02866 1F04777 1F02866 1F02866 1F03036 1F02866 1F02866 1F02866 1F04837 1F02866 1F02866 1F01800 1F02733 1F02866  YYNN
262  262  262  262  262  262  262  262  262  262  262  262  262  262  262  262  262
2255-282   10 SX PREOB  97030221708   262 MIDOB      0 POSTOB B-D-L-M-N-O-Q-R-ZW                                            1F04746
1F04746 1F04746 1F04746 1F04746 1F04746 1F04746 1F04746 1F04746  YYNN   262  262  262  262  262  262  262  262  262
0059+581   10 SX PREOB  97030221717    70 MIDOB      0 POSTOB CWT-                                                          1F06208
2R08820  YYNN    70   70
0402-362   10 SX PREOB  97030221722    70 MIDOB      0 POSTOB P-E-F-                                                        1F04746
1F03680 1F04613  YYNN    70   70   70
3C274      10 SX PREOB  97030222129    86 MIDOB      0 POSTOB C-T-                                                          1F07220
2R07808  YYNN    86   86
..... (additional scan lines omitted)
$CODES
F VGEOSX   SX BR-VLBA  FD-VLBA  GILCREEK HN-VLBA  KOKEE    KP-VLBA  LA-VLBA  MK-VLBA  NL-VLBA  NRAO20   OV-VLBA  PIETOWN  SC-VLBA
C SX X 8405.99  10000.0   1 VLBA1:4  8.000 1(-1)
C SX X 8475.99  10000.0   2 VLBA1:4  8.000 1(7)
C SX X 8790.99  10000.0   3 VLBA1:4  8.000 1(15)
C SX X 8895.99  10000.0   4 VLBA1:4  8.000 1(23)
C SX S 2220.99  10000.0   5 VLBA1:4  8.000 1(0)
C SX S 2240.99  10000.0   6 VLBA1:4  8.000 1(8)
C SX S 2330.99  10000.0   7 VLBA1:4  8.000 1(16)
C SX S 2360.99  10000.0   8 VLBA1:4  8.000 1(24)
F VGEOSX   SX MEDICINA ONSALA60 GGAO7108 WESTFORD
C SX X 8405.99  10000.0   1 Mk341:4  8.000 1(-1)    3
C SX X 8475.99  10000.0   2 Mk341:4  8.000 1(7)    4
C SX X 8790.99  10000.0   3 Mk341:4  8.000 1(15)    5
C SX X 8895.99  10000.0   4 Mk341:4  8.000 1(23)    6
C SX S 2220.99  10000.0   5 Mk341:4  8.000 1(0)    9
C SX S 2240.99  10000.0   6 Mk341:4  8.000 1(8)   10
C SX S 2330.99  10000.0   7 Mk341:4  8.000 1(16)   13
C SX S 2360.99  10000.0   8 Mk341:4  8.000 1(24)   14
R SX 16.000
B SX GILCREEK 8:1  KOKEE    16:1 NRAO20   16:1
L B  SX X  B    7900      1  U
L B  SX X  B    7900      2  U
L B  SX X  B    7900      3  U
```

```
L B  SX X  B    7900      4  U
L B  SX S  A    2900      5  L
L B  SX S  A    2900      6  L
L B  SX S  A    2900      7  L
L B  SX S  A    2900      8  L
L D  SX X  B    7900      1  U
L D  SX X  B    7900      2  U
L D  SX X  B    7900      3  U
L D  SX X  B    7900      4  U
L D  SX S  A    2900      5  L
L D  SX S  A    2900      6  L
L D  SX S  A    2900      7  L
L D  SX S  A    2900      8  L
L A  SX X  B    7600.1    1  U
L A  SX X  B    7600.1    2  U
L A  SX X  C    8080.0    3  U
L A  SX X  C    8080.0    4  U
L A  SX S  A    1540.1    5  U
L A  SX S  A    1540.1    6  U
L A  SX S  A    1540.1    7  U
L A  SX S  A    1540.1    8  U
L H  SX X  B    7900      1  U
L H  SX X  B    7900      2  U
L H  SX X  B    7900      3  U
L H  SX X  B    7900      4  U
L H  SX S  A    2900      5  L
L H  SX S  A    2900      6  L
L H  SX S  A    2900      7  L
L H  SX S  A    2900      8  L
L K  SX X  B    7600      1  U
L K  SX X  B    7600      2  U
L K  SX X  C    8100      3  U
L K  SX X  C    8100      4  U
L K  SX S  A    1500      5  U
L K  SX S  A    1500      6  U
L K  SX S  A    1500      7  U
L K  SX S  A    1500      8  U
L L  SX X  B    7900      1  U
L L  SX X  B    7900      2  U
L L  SX X  B    7900      3  U
L L  SX X  B    7900      4  U
```

```
L L  SX S  A    2900      5  L
L L  SX S  A    2900      6  L
L L  SX S  A    2900      7  L
L L  SX S  A    2900      8  L
L M  SX X  B    7900      1  U
L M  SX X  B    7900      2  U
L M  SX X  B    7900      3  U
L M  SX X  B    7900      4  U
L M  SX S  A    2900      5  L
L M  SX S  A    2900      6  L
L M  SX S  A    2900      7  L
L M  SX S  A    2900      8  L
L C  SX X  1N   8080      3  U
L C  SX X  1N   8080      4  U
L C  SX X  3N   8580.1    5  U
L C  SX X  3N   8580.1    6  U
L C  SX S  2N   2020      9  U
L C  SX S  2N   2020     10  U
L C  SX S  2N   2020     13  U
L C  SX S  2N   2020     14  U
L N  SX X  B    7900      1  U
L N  SX X  B    7900      2  U
L N  SX X  B    7900      3  U
L N  SX X  B    7900      4  U
L N  SX S  A    2900      5  L
L N  SX S  A    2900      6  L
L N  SX S  A    2900      7  L
L N  SX S  A    2900      8  L
L O  SX X  B    7900      1  U
L O  SX X  B    7900      2  U
L O  SX X  B    7900      3  U
L O  SX X  B    7900      4  U
L O  SX S  A    2900      5  L
L O  SX S  A    2900      6  L
L O  SX S  A    2900      7  L
L O  SX S  A    2900      8  L
L P  SX X  B    7600      1  U
L P  SX X  B    7600      2  U
L P  SX X  C    8100      3  U
L P  SX X  C    8100      4  U
L P  SX S  A    1500      5  U
```

```
L P  SX S  A    1500      6  U
L P  SX S  A    1500      7  U
L P  SX S  A    1500      8  U
L T  SX X  1N   8080      3  U
L T  SX X  1N   8080      4  U
L T  SX X  3N   8580.1    5  U
L T  SX X  3N   8580.1    6  U
L T  SX S  2N   2020      9  U
L T  SX S  2N   2020     10  U
L T  SX S  2N   2020     13  U
L T  SX S  2N   2020     14  U
L Z  SX X  1N   8080      3  U
L Z  SX X  1N   8080      4  U
L Z  SX X  3N   8580.1    5  U
L Z  SX X  3N   8580.1    6  U
L Z  SX S  2N   2020      9  U
L Z  SX S  2N   2020     10  U
L Z  SX S  2N   2020     13  U
L Z  SX S  2N   2020     14  U
L Q  SX X  B    7900      1  U
L Q  SX X  B    7900      2  U
L Q  SX X  B    7900      3  U
L Q  SX X  B    7900      4  U
L Q  SX S  A    2900      5  L
L Q  SX S  A    2900      6  L
L Q  SX S  A    2900      7  L
L Q  SX S  A    2900      8  L
L R  SX X  B    7900      1  U
L R  SX X  B    7900      2  U
L R  SX X  B    7900      3  U
L R  SX X  B    7900      4  U
L R  SX S  A    2900      5  L
L R  SX S  A    2900      6  L
L R  SX S  A    2900      7  L
L R  SX S  A    2900      8  L
L E  SX X  B    7900      1  U
L E  SX X  B    7900      2  U
L E  SX X  B    7900      3  U
L E  SX X  B    7900      4  U
L E  SX S  A    2900      5  L
L E  SX S  A    2900      6  L
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L E  SX S  A    2900      7  L
L E  SX S  A    2900      8  L
L F  SX X  1N   8080      3  U
L F  SX X  1N   8080      4  U
L F  SX X  3N   8580.1    5  U
L F  SX X  3N   8580.1    6  U
L F  SX S  2N   2020      9  U
L F  SX S  2N   2020     10  U
L F  SX S  2N   2020     13  U
L F  SX S  2N   2020     14  U
$HEAD
B SX 11(-319) 21(31)   31(-271) 41(79)   51(-223) 61(127)
B SX 71(-175) 81(175)  91(-127) A1(223)  B1(-79)  C1(271)
B SX D1(-31)  E1(319)
D SX 11(-319) 21(31)   31(-271) 41(79)   51(-223) 61(127)
D SX 71(-175) 81(175)  91(-127) A1(223)  B1(-79)  C1(271)
D SX D1(-31)  E1(319)
A SX 11(-319) 21(31)   31(-271) 41(79)   51(-223) 61(127)
A SX 71(-175) 81(175)  91(-127) A1(223)  B1(-79)  C1(271)
A SX D1(-31)  E1(319)
H SX 11(-319) 21(31)   31(-271) 41(79)   51(-223) 61(127)
H SX 71(-175) 81(175)  91(-127) A1(223)  B1(-79)  C1(271)
H SX D1(-31)  E1(319)
K SX 11(-319) 21(31)   31(-271) 41(79)   51(-223) 61(127)
K SX 71(-175) 81(175)  91(-127) A1(223)  B1(-79)  C1(271)
K SX D1(-31)  E1(319)
L SX 11(-319) 21(31)   31(-271) 41(79)   51(-223) 61(127)
L SX 71(-175) 81(175)  91(-127) A1(223)  B1(-79)  C1(271)
L SX D1(-31)  E1(319)
M SX 11(-319) 21(31)   31(-271) 41(79)   51(-223) 61(127)
M SX 71(-175) 81(175)  91(-127) A1(223)  B1(-79)  C1(271)
M SX D1(-31)  E1(319)
C SX 11(-319) 21(31)   31(-271) 41(79)   51(-223) 61(127)
C SX 71(-175) 81(175)  91(-127) A1(223)  B1(-79)  C1(271)
C SX D1(-31)  E1(319)
N SX 11(-319) 21(31)   31(-271) 41(79)   51(-223) 61(127)
N SX 71(-175) 81(175)  91(-127) A1(223)  B1(-79)  C1(271)
N SX D1(-31)  E1(319)
O SX 11(-319) 21(31)   31(-271) 41(79)   51(-223) 61(127)
O SX 71(-175) 81(175)  91(-127) A1(223)  B1(-79)  C1(271)
O SX D1(-31)  E1(319)
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P SX 11(-319) 21(31)   31(-271) 41(79)   51(-223) 61(127)
P SX 71(-175) 81(175)  91(-127) A1(223)  B1(-79)  C1(271)
P SX D1(-31)  E1(319)
T SX 11(-319) 21(31)   31(-271) 41(79)   51(-223) 61(127)
T SX 71(-175) 81(175)  91(-127) A1(223)  B1(-79)  C1(271)
T SX D1(-31)  E1(319)
Z SX 11(-319) 21(31)   31(-271) 41(79)   51(-223) 61(127)
Z SX 71(-175) 81(175)  91(-127) A1(223)  B1(-79)  C1(271)
Z SX D1(-31)  E1(319)
Q SX 11(-319) 21(31)   31(-271) 41(79)   51(-223) 61(127)
Q SX 71(-175) 81(175)  91(-127) A1(223)  B1(-79)  C1(271)
Q SX D1(-31)  E1(319)
R SX 11(-319) 21(31)   31(-271) 41(79)   51(-223) 61(127)
R SX 71(-175) 81(175)  91(-127) A1(223)  B1(-79)  C1(271)
R SX D1(-31)  E1(319)
E SX 11(-319) 21(31)   31(-271) 41(79)   51(-223) 61(127)
E SX 71(-175) 81(175)  91(-127) A1(223)  B1(-79)  C1(271)
E SX D1(-31)  E1(319)
F SX 11(-319) 21(31)   31(-271) 41(79)   51(-223) 61(127)
F SX 71(-175) 81(175)  91(-127) A1(223)  B1(-79)  C1(271)
F SX D1(-31)  E1(319)
$SOURCES
 0003-066 $        00 06 13.892701  -06  23  35.33932  2000.0 0.0 test-sat
 0014+813 $         0 17 08.47481    81  35   8.1384  2000.0 0.0 z,calib
 0048-097 $        00 50 41.317218  -09  29  5.21519   2000.0 0.0 GLB923Z
 0059+581 $        01 02 45.761876   58  24  11.13692  2000.0 0.0 calib
 0104-408 $         1 06 45.1079000 -40  34  19.95600 2000.0 0.0 calib
 0111+021 $        01 13 43.144809   02  22  17.31085  2000.0 0.0 close
 0119+115 $        01 21 41.594908   11  49  50.40752  2000.0 0.0 test-s
 0119+041 $         1 21 56.8616940   4  22  24.73331 2000.0 0.0 calib
 0133+476 $         1 36 58.5947305  47  51  29.09775 2000.0 0.0 calib
 0201+113 $         2  3 46.6569839  11  34  45.40840 2000.0 0.0 z,calib
 0202+149 $         2  4 50.4138377  15  14  11.04155 2000.0 0.0 calib
 0208-512 $         2 10 46.2005600 -51   1   1.89254 2000.0 0.0 sthcal
 0229+131 $         2 31 45.8940044  13  22  54.71532 2000.0 0.0 calib
 0234+285 $        02 37 52.405517   28  48  8.98421   2000.0 0.0 test-c
 0238-084 NGC1052  02 41 4.798400   -08  15  20.75694  2000.0 0.0 close
 0336-019 CTA26     3 39 30.9377633  -1  46  35.80432 2000.0 0.0 calib
 0402-362 $         4  3 53.7501027 -36   5   1.91172 2000.0 0.0 CDP
 0430+052 3C120    04 33 11.095395   05  21  15.61492  2000.0 0.0 GLB923Z
 0454-234 $         4 57  3.1792460 -23  24  52.01832 2000.0 0.0 calib
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0458-020 $         5  1 12.8098739  -1  59  14.25488 2000.0 0.0 calib
0528+134 $         5 30 56.4166919  13  31  55.15068  2000.0 0.0 CDP
0537-441 $         5 38 50.361650  -44   5   8.93777  2000.0 0.0 GLB722
0552+398 $         5 55 30.8054474  39  48  49.16618  2000.0 0.0 calib
0556+238 $        05 59 32.032846   23  53  53.92369  2000.0 0.0 solar
0642+449 $         6 46 32.0257582  44  51  16.59226 2000.0 0.0 z=3.4
0727-115 $         7 30 19.1124438 -11  41  12.59780 2000.0 0.0 calib
0742+103 $        07 45 33.059294   10  11  12.69227  2000.0 0.0 GLB923Z
0804+499 $        08 08 39.665657   49  50  36.53044  2000.0 0.0 calib
0823+033 $         8 25 50.3383103   3   9  24.52308 2000.0 0.0 calib
0851+202 OJ287    08 54 48.874641   20  06  30.64229  2000.0 0.0 calib
0919-260 $        09 21 29.353897  -26  18  43.38329  2000.0 0.0 GLB923Z
0920-397 $        09 22 46.418457  -39  59  35.06467  2000.0 0.0 candidate
0923+392 4C39.25  09 27 3.013450    39  02  20.85411  2000.0 0.0 GLB923Z
0953+254 OK290     9 56 49.8753536  25  15  16.05175 2000.0 0.0 calib
0955+476 $        09 58 19.671109   47  25  7.84538   2000.0 0.0 calib
1004+141 $        10 07 41.497842   13  56  29.60464  2000.0 0.0 z
1034-293 $        10 37 16.0796820 -29  34   2.80979 2000.0 0.0 GLB722
1044+719 $        10 48 27.62011    71  43  35.9415  2000.0 0.0 calib
1101+384 $        11  4  27.31391   38  12  31.79979  2000.0 0.0 close
1124-186 $        11 27 4.392388   -18  57  17.43610  2000.0 0.0 mu-imp
1128+385 $        11 30 53.282261   38  15  18.55206  2000.0 0.0 GLB923Z
1144-379 $        11 47 1.370752   -38  12  11.01778  2000.0 0.0 GLB923Z
1145-071 $        11 47 51.554314  -07  24  41.14162 2000.0 0.0 double?
1156+295 $        11 59 31.833646   29  14  43.83224  2000.0 0.0 test-c
1219+044 $        12 22 22.549439   04  13  15.77731 2000.0 0.0 GLB887
1228+126 3C274    12 30 49.423204   12  23  28.05002  2000.0 0.0 GLB923Z
1255-316 $        12 57 59.060721  -31  55  16.84554  2000.0 0.0 GLB923Z
1300+580 $        13 02 52.46557   +57  48  37.6100   2000.0 0.0 BLOKQ.940425
1308+326 $        13 10 28.6639333  32  20  43.78507  2000.0 0.0 calib
1313-333 $        13 16 7.985868   -33  38  59.16576  2000.0 0.0 GLB923Z
1334-127 $        13 37 39.7826911 -12  57  24.69060 2000.0 0.0 calib
1351-018 $        13 54  6.84935   -02   6   3.2971  2000.0 0.0 z=3.7
1357+769 $        13 57 55.371265   76  43  21.05701  2000.0 0.0 calib
1404+286 OQ208    14 07 .394267     28  27  14.69634  2000.0 0.0 GLB923Z
1418+546 $        14 19 46.597282   54  23  14.79347  2000.0 0.0 test-i
1424-418 $        14 27 56.2973570 -42   6  19.43572 2000.0 0.0 calib
1451-375 $        14 54 27.409586  -37  47  33.13770  2000.0 0.0 GA
1514-241 $        15 17 41.812951  -24  22  19.46941  2000.0 0.0 GLB923Z
1606+106 $        16 08 46.203073   10  29  7.78165   2000.0 0.0 GLB923Z
1611+343 $        16 13 41.064252   34  12  47.91455  2000.0 0.0 GLB923Z
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 1622-253 $         16 25 46.891390  -25  27  38.32068  2000.0 0.0 radio_gal
 1638+398 NRAO512   16 40 29.632839   39  46  46.03376  2000.0 0.0 calib
 1726+455 $         17 27 27.650994   45  30  39.73580  2000.0 0.0 GLB923Z
 1739+522 $         17 40 36.9780599  52  11  43.40655 2000.0 0.0 calib
 1741-038 $         17 43 58.8561047  -3  50   4.61680 2000.0 0.0 calib
 1745+624 $         17 46 14.034171   62  26  54.73741 2000.0 0.0 z = 3.87
 1749+096 $         17 51 32.8185949   9  39   0.72799 2000.0 0.0 calib
 1803+784 $         18 00 45.685456   78  28   4.02194 2000.0 0.0 GLB923Z
 1815-553 $         18 19 45.3992590 -55  21  20.74661 2000.0 0.0 GLB722
 1908-201 $         19 11 9.652585   -20  06  55.10638  2000.0 0.0 solar
 1921-293 $         19 24 51.055826  -29  14  30.12341  2000.0 0.0 GLB887
 1954-388 $         19 57 59.81909   -38  45  06.3583  2000.0 0.0 BLOKQ
 2052-474 $         20 56 16.359245  -47  14  47.62811  2000.0 0.0 candidate
 2136+141 $         21 39 1.309238    14  23  35.99024  2000.0 0.0 test-c
 2145+067 $         21 48  5.4586592   6  57  38.60189 2000.0 0.0 calib
 2200+420 VR422201  22 02 43.291585   42  16  39.97734  2000.0 0.0 test-c
 2230+114 CTA102    22 32 36.408832   11  43  50.90103  2000.0 0.0 GLB923Z
 2234+282 $         22 36 22.4708428  28  28  57.41085 2000.0 0.0 calib
 2243-123 $         22 46 18.2319626 -12   6  51.27938 2000.0 0.0 test-mu-res
 2255-282 $         22 58  5.9628760 -27  58  21.25781 2000.0 0.0 calib
$STATIONS
A B  BR-VLBA  AZEL 2.00000  90.0  0  270.0  810.0  30.0  0    2.3   88.0  25.0 Br BR BV
A D  FD-VLBA  AZEL 2.00000  90.0  0  270.0  810.0  30.0  0    2.3   88.0  25.0 Fd FV FV
A A  GILCREEK XYNS 7.31520  60.0  0  -86.0   86.0  60.0  0  -73.5   73.5  25.9 Gc 101 AL
A H  HN-VLBA  AZEL 2.00000  90.0  0  270.0  810.0  30.0  0    2.3   88.0  25.0 Hn HN HN
A K  KOKEE    AZEL 0.508   120.0  2  270.0  810.0 120.0  2    0.0   89.7  20.0 Kk 102
A L  KP-VLBA  AZEL 2.00000  90.0  0  270.0  810.0  30.0  0    2.3   88.0  25.0 Kp KV KV
A M  LA-VLBA  AZEL 2.00000  90.0  0  270.0  810.0  30.0  0    2.3   88.0  25.0 La LA  LA
A C  MEDICINA AZEL 1.83000  48.0  0  270.0  810.0  30.0  0    5.0   88.5  32.0 Mc 38  ME
A N  MK-VLBA  AZEL 2.00000  90.0  0  270.0  810.0  30.0  0    2.3   88.0  25.0 Mk MK  MK
A O  NL-VLBA  AZEL 2.00000  90.0  0  270.0  810.0  30.0  0    2.3   88.0  25.0 Nl NL  NL
A P  NRAO20   AZEL 0.508   120.0  2  270.0  810.0 120.0  2    0.0   89.7  20.0 Gn 106 N2
A T  ONSALA60 AZEL 0.00000 144.0 20  340.0  740.0  60.0 10    5.0   85.0  20.0 On 02
A Z  ORION_5M AZEL 0.00000 180.0  0  102.0  792.0 180.0  0    6.2   89.0   5.0 Gg 10
A Q  OV-VLBA  AZEL 2.00000  90.0  0  270.0  810.0  30.0  0    2.3   88.0  25.0 Ov OV  OV
A R  PIETOWN  AZEL 2.00000  90.0  0  270.0  810.0  30.0  0    2.3   88.0  25.0 Pt PT  PT
A E  SC-VLBA  AZEL 2.00000  90.0  0  270.0  810.0  30.0  0    2.3   88.0  25.0 Sc SC  SC
A F  WESTFORD AZEL 0.31800 240.0  0  100.0  460.0 180.0  0    4.0   87.2  18.0 Wf 07  WF
P Sc SC-VLBA   2607848.37191 -5488069.75259  1932739.43743   76159001  64.58   17.76 GLB914F1
P Wf WESTFORD  1492206.56475 -4458130.54994  4296015.50408   72097301  71.49   42.61 GLB914F1
P Hn HN-VLBA   1446375.09865 -4447939.70146  4322306.07530   76185001  71.99   42.93 GLB914F1
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P Gg GGAO7108  1130794.70379 -4831233.75833  3994216.93411   71085301  76.83   39.02 GLB914F1
P Gn NRAO20    883772.89796 -4924385.43899  3944042.59185   72484701  79.83   38.44 NEOSA-93
P Nl NL-VLBA   -130872.27783 -4762317.21361  4226851.04657   76129701  91.57   41.77 GLB914F1
P Fd FD-VLBA   -1324009.17558 -5332181.91303  3231962.43049   76139801 103.94   30.64 GLB914F1
P La LA-VLBA   -1449752.41188 -4975298.59857  3709123.92990   76119601 106.25   35.78 GLB914F1
P Pt PIETOWN   -1640953.75180 -5014815.99768  3575411.88180   72348601 108.12   34.30 GLB914F1
P Kp KP-VLBA   -1995678.70153 -5037317.74162  3357328.16737   76109401 111.61   31.96 GLB914F1
P Ov OV-VLBA   -2409150.14627 -4478573.31470  3838617.41731   76165401 118.28   37.23 GLB914F1
P Br BR-VLBA   -2112064.99535 -3705356.47215  4726813.80450   76149901 119.68   48.13 GLB914F1
P Gc GILCREEK  -2281547.23434 -1453645.01163  5756993.17336   40476601 147.50   64.98 GLB914F1
P Mk MK-VLBA   -5464074.95256 -2495249.17624  2148296.74116   76175501 155.46   19.80 GLB914F1
P Kk KOKEE     -5543837.60347 -2054567.90477  2387851.83549   72983001 159.67   22.13 GLB914F1
P On ONSALA60  3370606.11550   711917.37421  5349830.69004   72137701 348.07   57.40 GLB914F1
P Mc MEDICINA  4461370.11980   919596.66875  4449559.16040   72308801 348.35   44.52 GLB914F1
T BR  BR-VLBA  1x56000 2x17640  X   500   S   400 S 0.1 -2.087 3.087 X 0.5 0.731 0.269
T FV  FD-VLBA  1x56000 2x17640  X   500   S   400 S 0.1 -2.087 3.087 X 0.5 0.731 0.269
T 101  MOJ-VLBA    1      8820   X   750   S   800 X 1.0 0.954 0.0464 S 1.0 0.974 0.0263
T HN  HN-VLBA  1x56000 2x17640  X   500   S   400 S 0.1 -2.087 3.087 X 0.5 0.731 0.269
T 102  KO-VLBA     1      8820   X   900   S   750 X 1.0 0.9453 0.0547 S 1.0 0.9695 0.0305
T KV  KP-VLBA  1x56000 2x17640  X   500   S   400 S 0.1 -2.087 3.087 X 0.5 0.731 0.269
T LA  LA-VLBA  1x56000 2x17640  X   500   S   400 S 0.1 -2.259 3.259 X 1.0 0.934 0.0660
T 38  MEDICINA    1      8820   X   310   S   500 S 0.5 0.839 0.161 X 0.1 -1.26 2.26
T MK  MK-VLBA  1x56000 2x17640  X   500   S   400 S 0.1 -2.087 3.087 X 0.5 0.731 0.269
T NL  NL-VLBA  1x56000 2x17640  X   500   S   400 S 0.1 -2.087 3.087 X 0.5 0.731 0.269
T 106  NRAO20   1x56000  17640   X   900   S   600 X 1.0 0.9497 0.0503 S 1.0 0.9277 0.0723
T 02  ONSALA      1      8820   X  2450   S  3200 S 0.2 0.418 0.582 X 0.5 0.777 0.223
T 10  MV3_5M   2x56000  17640   X 30000   S 45000
T OV  OV-VLBA  1x56000 2x17640  X   500   S   400 S 0.1 -2.087 3.087 X 0.5 0.731 0.269
T PT  PT-VLBA  1x56000 2x17640  X   500   S   400 S 0.1 -2.002 3.002 X 0.25 0.494 0.506
T SC  SC-VLBA  1x56000 2x17640  X   500   S   400 S 0.1 -2.087 3.087 X 0.5 0.731 0.269
T 07  WESTFORD 1x56000  17640   X  1500   S  1400 S 1.0 0.962 0.0384 X 1.0 0.939 0.0608
H AL 0 17  20 10  50 5  90 5  140 10  150 12  160 12  180 17  205 8  225 5  290 5  340 11 360 17
H ME .0    5.0   360.0  5.0
H PT 0    3 165    3 185  4.5 270  4.5 280    3 360    3
H FV 0    5 20    5 25    3 50    3 65  7.5 75    5 85    6  95    6 115    3 220    3 225  4.5 230    3 245    3 260  5.5 265  5.5
285    3 295    3 305    5 325    5 335  6.5 340  6.5 350    5 360    5
H KV 0    3 40    3 50    6 65    8 82  9.5 95    3 180    3   205    4 220    6 245    6 270    3 360    3
H HN 0    8 15    8 40    6 70    6 80    7 125    9 140   14  150   14 165    9 225    9 235    7 250    6 260    7 335    7 340    8
 360    8
H SC 0    3 43    3 70  9.5 95    7 120 16.5 130 16.5 145   13   170  9.5 185   14 205 15.5 240    9 265    7 280    3 360    3
H LA 0    3 300    3 305    4 315    4 320    3 360    3
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H BV 0    3 35    3 45    4 70    4 75    5 125    5 140    3  185    3 195    4 220    4 225    3 230    3 255    6 315    6 340  4.5
 350    3 360    3
H NL 0    3 75    3 80    6 105    8 150    8 170    4   200    4 205    3 360    3
H MK 0    6 20    3 120    3 128  5.5 135  5.5 142  4.5 155    9   162   11 175 13.5 185 13.5 198   11 220    3 255    3 270    4 290
11    300   15 315   10 325   12 330   11 340   15 360    6
H OV 0    4 10    6 20   10 40   15 60 15.5 80   11 100    7   120    4 185    4 210  7.5 240  7.5 250  9.5 260  9.5 270  7.5 280  7.5
 300  3.5 310    3 350    3 360    4
H WF  0 5  15 5 16 6 25 6 26 8 60 8 61 5 75 5 76 6.5  85 6.5 86 5 95 5 96 6.5 105 6.5 106 5 115 5 116 4 360 4
H N2 0 2.4 5.4 2.5 9.5 1.9 11.3 1.5 18.5 1.6 42.3 2.0 82.6 3.5  110.2 4.9 120.2 4.7 130.0 3.2 144.0 4.2 145.7 3.8 150.1 3.5 160.1 2.8
170.6 2.6 178.4 1.6 192.9 2.3 200.6 2.2 229.1 4.6 250.2 3.6    258.6 2.2 262.2 7.8 271.6 3.7 280.1 3.2 293.4 4.2 299.7 3.4    310.1 3.8
319.0 3.7 332.8 4.1 350.8 2.7
$FLUX
0003-066  X  M   1.50   .35 1.00     .0    .00    .00
0003-066  S  M   2.30  2.10 1.00     .0    .00    .00
0014+813  X  B   .0    .5 13000.0
0014+813  S  B   .0    .5 13000.0
0048-097  X  M   1.70   .20 1.00     .0    .00    .00
0048-097  S  M   1.00   .60 1.00     .0    .00    .00
0059+581  X  M   2.00   .20 1.00     .0    .00    .00
0059+581  S  M    .90  1.60  .60   65.0    .00    .00
0104-408  X  M   5.30   .30 1.00     .0    .00    .00
0104-408  S  M   1.60   .60 1.00     .0    .00    .00
0111+021  X  B   .0    .5  6400.0    .4 13000.0
0111+021  S  B   .0    .4 13000.0
0119+115  X  B   .0    .8 13000.0
0119+115  S  B   .0    .8 13000.0
0119+041  X  M   1.20   .60 1.00     .0    .00    .00
0119+041  S  M   1.20  1.10 1.00     .0    .00    .00
0133+476  X  M   1.50   .23 1.00     .0    .00    .00
0133+476  S  M   1.20   .80 1.00     .0    .00    .00
0201+113  X  B   .0    .6  4000.0    .5 13000.0
0201+113  S  B   .0    .9  4000.0    .6 13000.0
0202+149  X  M   1.70   .10 1.00     .0    .00    .00
0202+149  S  M   1.40  1.00 1.00     .0    .00    .00
0208-512  X  M   3.00   .50 1.00     .0    .00    .00
0208-512  S  M   3.30  1.50 1.00     .0    .00    .00
0229+131  X  M   1.00   .60  .50   75.0    .00    .00
0229+131  S  M   1.20  2.00  .40   35.0    .00    .00
0234+285  X  M   2.00   .80  .30   -6.0    .00    .00
0234+285  S  M   2.25  3.50  .40  -10.0    .00    .00
NGC1052   X  B   .0   1.6  5000.0   1.0  6000.0    .4  9000.0    .2 13000.0
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NGC1052   S  B   .0   1.2  5000.0    .3 13000.0
CTA26     X  M   1.10   .60  .50   58.0    .00    .00
CTA26     S  M   2.20  1.80  .50   60.0    .00    .00
0402-362  X  B   .0   1.6  4000.0   1.4 13000.0
0402-362  S  B   .0   1.0  4000.0    .9 13000.0
3C120     X  B   .0   1.0  6500.0    .5 10000.0    .3 13000.0
3C120     S  B   .0   1.0 10000.0    .5 13000.0
0454-234  X  M   1.40   .30 1.00     .0    .00    .00
0454-234  S  M   1.10  2.00  .45  160.0    .00    .00
0458-020  X  M   1.20   .40 1.00     .0    .00    .00
0458-020  S  M   1.50  2.50  .50  150.0    .00    .00
0528+134  X  M   7.00   .40 1.00     .0    .00    .00
0528+134  S  M   3.00  2.20  .60   30.0    .00    .00
0537-441  X  M   4.00   .50 1.00     .0    .00    .00
0537-441  S  M   3.60  1.20 1.00     .0    .00    .00
0552+398  X  M   5.20   .65  .70  103.0    .00    .00
0552+398  S  M   3.60  1.35  .70  103.0    .00    .00
0556+238  X  B   .0    .8 13000.0
0556+238  S  B   .0    .8 13000.0
0642+449  X  B   .0   1.4 13000.0
0642+449  S  B   .0    .7 13000.0
0727-115  X  M   2.10   .40 1.00     .0    .00    .00
0727-115  S  M   2.40  1.50 1.00     .0    .00    .00
0742+103  X  M   1.60   .50 1.00     .0    .00    .00
0742+103  S  M   4.50  1.80 1.00     .0    .00    .00
0804+499  X  M    .60   .30 1.00     .0    .00    .00
0804+499  S  M    .90  1.10 1.00     .0    .00    .00
0823+033  X  M   1.50   .90  .30   25.0    .00    .00
0823+033  S  M   1.50  2.20  .30   14.0    .00    .00
OJ287     X  M   2.75   .55 1.00     .0    .00    .00
OJ287     S  M   1.75  1.30 1.00     .0    .00    .00
0919-260  X  M   1.10   .80 1.00     .0    .00    .00
0919-260  S  M   1.30  3.50 1.00     .0    .00    .00
0920-397  X  M   1.00   .40  .02  158.0    .00    .00
0920-397  S  M   1.00  4.40  .35  174.0    .00    .00
4C39.25   X  M  11.50   .50 1.00     .0    .00    .00
4C39.25   S  M   4.00  1.30 1.00     .0    .00    .00
OK290     X  M   1.20  1.20  .00     .0    .00    .00
OK290     S  M   1.30  1.00 1.00     .0    .00    .00
0955+476  X  M   1.20   .30 1.00     .0    .00    .00
0955+476  S  M   1.10   .70 1.00     .0    .00    .00
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1004+141  X  B   .0    .4 13000.0
1004+141  S  B   .0    .4 13000.0
1034-293  X  M  1.70   .35 1.00     .0    .00    .00
1034-293  S  M  1.10   .80 1.00     .0    .00    .00
1044+719  X  M  1.30   .35 1.00     .0    .00    .00
1044+719  S  M  1.20   .65 1.00     .0    .00    .00
1101+384  X  B   .0    .3 13000.0
1101+384  S  B   .0    .3 13000.0
1124-186  X  M   .90   .30 1.00     .0    .00    .00
1124-186  S  M   .70   .70 1.00     .0    .00    .00
1128+385  X  M  1.20   .30 1.00     .0    .00    .00
1128+385  S  M   .70  1.00 1.00     .0    .00    .00
1144-379  X  M  1.50   .30 1.00     .0    .00    .00
1144-379  S  M  1.30  1.20 1.00     .0    .00    .00
1145-071  X  B   .0    .7 13000.0
1145-071  S  B   .0    .7 13000.0
1156+295  X  M  1.40   .50  .20     .0    .00    .00
1156+295  S  M  1.40  2.00 1.00     .0    .00    .00
1219+044  X  M   .50   .25 1.00     .0    .00    .00
1219+044  S  M   .50  1.90  .30  172.0    .00    .00
3C274     X  B   .0    .5 13000.0
3C274     S  B   .0    .5 13000.0
1255-316  X  M  1.00   .60  .40   28.0    .00    .00
1255-316  S  M   .80  1.50 1.00     .0    .00    .00
1300+580  X  M   .50   .25 1.00     .0    .00    .00
1300+580  S  M   .40  2.00 1.00     .0    .00    .00
1308+326  X  M  3.00   .75  .60  114.0    .00    .00
1308+326  S  M  3.00   .70 1.00     .0    .00    .00
1313-333  X  B   .0    .9 13000.0
1313-333  S  B   .0    .9 13000.0
1334-127  X  M  4.30   .40  .50  140.0    .00    .00
1334-127  S  M  2.50  2.50  .30  168.0    .00    .00
1351-018  X  M   .70   .70 1.00     .0    .00    .00
1351-018  S  M   .90  1.20 1.00     .0    .00    .00
1357+769  X  M   .80   .25 1.00     .0    .00    .00
1357+769  S  M   .60   .60 1.00     .0    .00    .00
OQ208     X  M  1.60  1.30  .40  -10.0    .00    .00
OQ208     S  M  1.50  2.00  .65   -5.0    .00    .00
1418+546  X  B   .0    .5  9000.0    .3 13000.0
1418+546  S  B   .0    .5  9000.0    .3 13000.0
1424-418  X  M  3.50   .30 1.00     .0    .00    .00
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1424-418  S  M   1.50  1.60  .50   70.0    .00    .00
1451-375  X  B   .0   1.0 13000.0
1451-375  S  B   .0    .8 13000.0
1514-241  X  B   .0    .9  4000.0    .7 13000.0
1514-241  S  B   .0    .9  4000.0    .7 13000.0
1606+106  X  M   1.30   .50  .50  108.0    .00    .00
1606+106  S  M   1.40  1.80  .60  140.0    .00    .00
1611+343  X  M   3.20   .60  .45  142.0    .00    .00
1611+343  S  M   2.60  2.80  .40  162.0    .00    .00
1622-253  X  M   1.20   .60 1.00     .0    .00    .00
1622-253  S  M   1.90  1.10 1.00     .0    .00    .00
NRAO512   X  M   1.00   .30 1.00     .0    .00    .00
NRAO512   S  M    .90   .80 1.00     .0    .00    .00
1726+455  X  M    .70   .50  .50   65.0    .00    .00
1726+455  S  M   1.10  1.70  .45   98.0    .00    .00
1739+522  X  M   1.80   .25 1.00     .0    .00    .00
1739+522  S  M   1.00  1.20 1.00     .0    .00    .00
1741-038  X  M   4.00   .30 1.00     .0    .00    .00
1741-038  S  M   2.10   .85 1.00     .0    .00    .00
1745+624  X  B   .0    .5 13000.0
1745+624  S  B   .0    .4 13000.0
1749+096  X  M    .70   .25 1.00     .0    .00    .00
1749+096  S  M    .50  2.20  .30   25.0    .00    .00
1803+784  X  M   1.70   .30 1.00     .0    .00    .00
1803+784  S  M   1.80  1.70 1.00     .0    .00    .00
1815-553  X  M    .50   .70  .10   83.0    .00    .00
1815-553  S  M   1.00  1.50  .60   74.0    .00    .00
1908-201  X  B   .0    .7  6500.0    .5 13000.0
1908-201  S  B   .0   1.4  6500.0    .8  7000.0    .7 13000.0
1921-293  X  M  12.00   .60  .40  155.0    .00    .00
1921-293  S  M   8.00  1.20 1.00     .0    .00    .00
1954-388  X  M   3.80   .50  .50  154.0    .00    .00
1954-388  S  M   2.20  1.10 1.00     .0    .00    .00
2052-474  X  M    .90   .60  .70  135.0    .00    .00
2052-474  S  M   1.20  1.60 1.00     .0    .00    .00
2136+141  X  B   .0    .8  6000.0    .5 13000.0
2136+141  S  B   .0    .8 13000.0
2145+067  X  M   7.00   .75  .50  131.0    .00    .00
2145+067  S  M   2.30  1.50  .50  130.0    .00    .00
VR422201  X  B   .0   1.2 13000.0
VR422201  S  B   .0   2.0 13000.0
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CTA102    X  B   .0    .9 13000.0
CTA102    S  B   .0   1.2 13000.0
2234+282  X  M    .80   .70  .40   50.0    .00    .00
2234+282  S  M   1.20  1.20 1.00     .0    .00    .00
2243-123  X  B   .0   1.0  8000.0    .8 13000.0
2243-123  S  B   .0   2.2  5000.0   1.0  8000.0    .7 13000.0
2255-282  X  M   3.80   .30 1.00     .0    .00    .00
2255-282  S  M   1.40  4.50  .05   50.0    .00    .00
$OP
COVERAGE T LASTHR  1 MAXOBS T MINTIM T LOCALCOV F BEST% 60 CART F SNRWT T TAPE FFFFFFFF
NOISE 30 EVN#SOR F LOWEL  0 EXPAND F RISESET F MINSLEW T MINBETW  90
XP F YP F DUT F PSI F EPS F
B AOFF F ARAT F COFF F CRT1 F CRT2 F X F Y F Z F
D AOFF F ARAT F COFF F CRT1 F CRT2 F X F Y F Z F
A AOFF F ARAT F COFF F CRT1 F CRT2 F X F Y F Z F
H AOFF F ARAT F COFF F CRT1 F CRT2 F X F Y F Z F
K AOFF F ARAT F COFF F CRT1 F CRT2 F X F Y F Z F
L AOFF F ARAT F COFF F CRT1 F CRT2 F X F Y F Z F
M AOFF F ARAT F COFF F CRT1 F CRT2 F X F Y F Z F
C AOFF F ARAT F COFF F CRT1 F CRT2 F X F Y F Z F
N AOFF F ARAT F COFF F CRT1 F CRT2 F X F Y F Z F
O AOFF F ARAT F COFF F CRT1 F CRT2 F X F Y F Z F
P AOFF F ARAT F COFF F CRT1 F CRT2 F X F Y F Z F
T AOFF F ARAT F COFF F CRT1 F CRT2 F X F Y F Z F
Z AOFF F ARAT F COFF F CRT1 F CRT2 F X F Y F Z F
Q AOFF F ARAT F COFF F CRT1 F CRT2 F X F Y F Z F
R AOFF F ARAT F COFF F CRT1 F CRT2 F X F Y F Z F
E AOFF F ARAT F COFF F CRT1 F CRT2 F X F Y F Z F
F AOFF F ARAT F COFF F CRT1 F CRT2 F X F Y F Z F
  1 F    2 F    3 F    4 F    5 F    6 F    7 F    8 F    9 F   10 F
 11 F   12 F   13 F   14 F   15 F   16 F   17 F   18 F   19 F   20 F
 21 F   22 F   23 F   24 F   25 F   26 F   27 F   28 F   29 F   30 F
 31 F   32 F   33 F   34 F   35 F   36 F   37 F   38 F   39 F   40 F
 41 F   42 F   43 F   44 F   45 F   46 F   47 F   48 F   49 F   50 F
 51 F   52 F   53 F   54 F   55 F   56 F   57 F   58 F   59 F   60 F
 61 F   62 F   63 F   64 F   65 F   66 F   67 F   68 F   69 F   70 F
 71 F   72 F   73 F   74 F   75 F   76 F   77 F   78 F   79 F   80 F
XP F YP F DUT F PSI F EPS F
B AOFF F ARAT F COFF F CRT1 F CRT2 F X F Y F Z F
D AOFF F ARAT F COFF F CRT1 F CRT2 F X F Y F Z F
A AOFF F ARAT F COFF F CRT1 F CRT2 F X F Y F Z F
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H AOFF F ARAT F COFF F CRT1 F CRT2 F X F Y F Z F
K AOFF F ARAT F COFF F CRT1 F CRT2 F X F Y F Z F
L AOFF F ARAT F COFF F CRT1 F CRT2 F X F Y F Z F
M AOFF F ARAT F COFF F CRT1 F CRT2 F X F Y F Z F
C AOFF F ARAT F COFF F CRT1 F CRT2 F X F Y F Z F
N AOFF F ARAT F COFF F CRT1 F CRT2 F X F Y F Z F
O AOFF F ARAT F COFF F CRT1 F CRT2 F X F Y F Z F
P AOFF F ARAT F COFF F CRT1 F CRT2 F X F Y F Z F
T AOFF F ARAT F COFF F CRT1 F CRT2 F X F Y F Z F
Z AOFF F ARAT F COFF F CRT1 F CRT2 F X F Y F Z F
Q AOFF F ARAT F COFF F CRT1 F CRT2 F X F Y F Z F
R AOFF F ARAT F COFF F CRT1 F CRT2 F X F Y F Z F
E AOFF F ARAT F COFF F CRT1 F CRT2 F X F Y F Z F
F AOFF F ARAT F COFF F CRT1 F CRT2 F X F Y F Z F
  1 F    2 F    3 F    4 F    5 F    6 F    7 F    8 F    9 F   10 F
 11 F   12 F   13 F   14 F   15 F   16 F   17 F   18 F   19 F   20 F
 21 F   22 F   23 F   24 F   25 F   26 F   27 F   28 F   29 F   30 F
 31 F   32 F   33 F   34 F   35 F   36 F   37 F   38 F   39 F   40 F
 41 F   42 F   43 F   44 F   45 F   46 F   47 F   48 F   49 F   50 F
 51 F   52 F   53 F   54 F   55 F   56 F   57 F   58 F   59 F   60 F
 61 F   62 F   63 F   64 F   65 F   66 F   67 F   68 F   69 F   70 F
 71 F   72 F   73 F   74 F   75 F   76 F   77 F   78 F   79 F   80 F
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