Using the Plateau de Bure Interferometer

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IRAM, Grenoble

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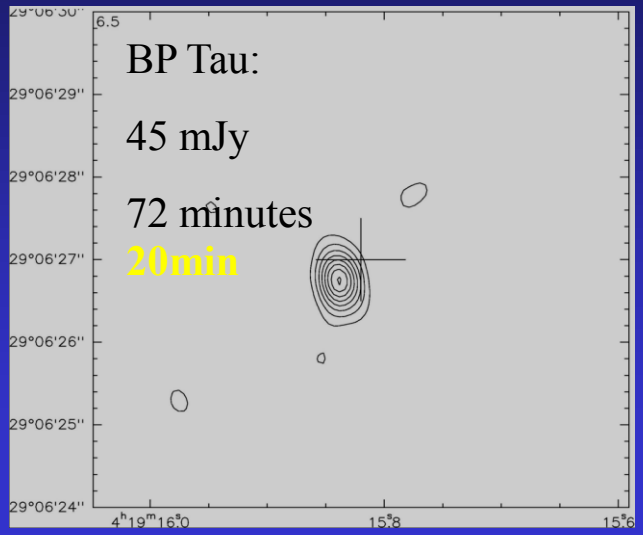
Why should you use the Plateau de Bure Interferometer?

Because the signal is weak…
… and PdBI is sensitive!

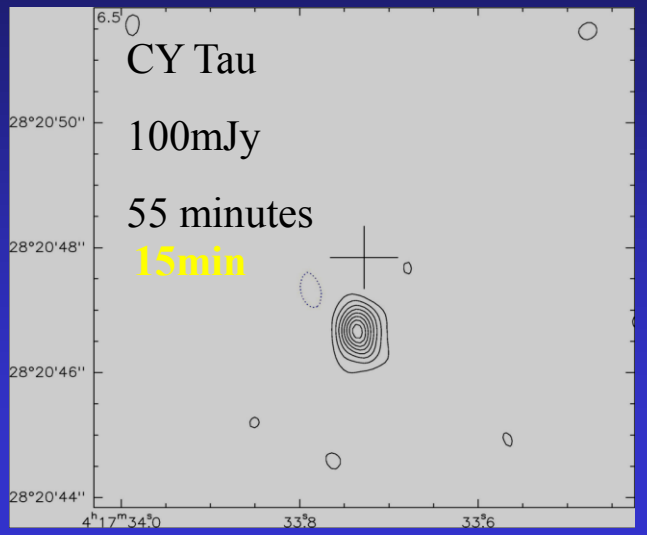
1 shared track in A configuration @ 230GHz

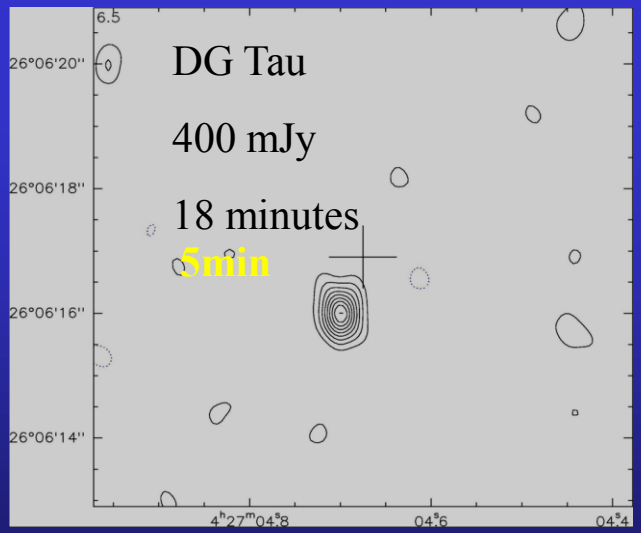
Beam: 0.5" x 0.3"

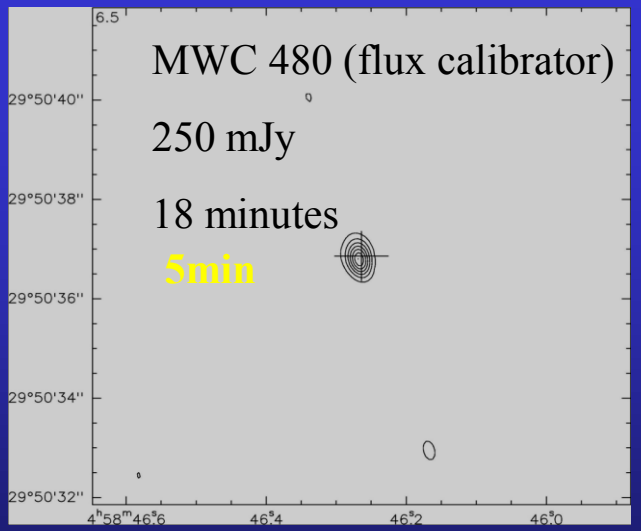


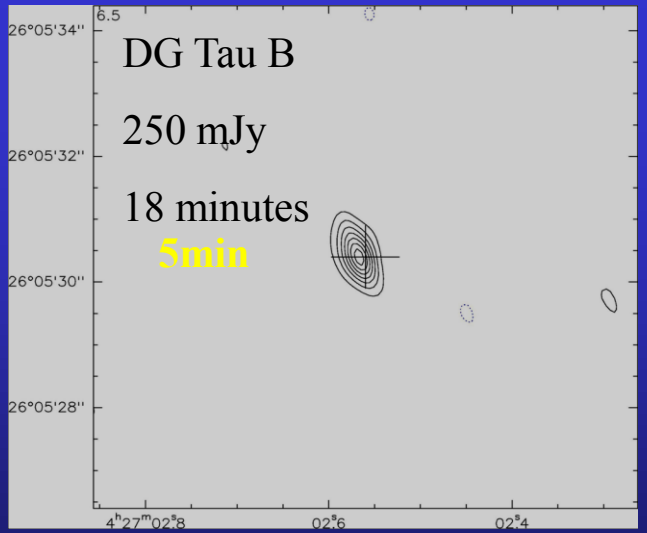
Only ~1/4 of the times would be needed now with WideX

Guilloteau et al. (2010)

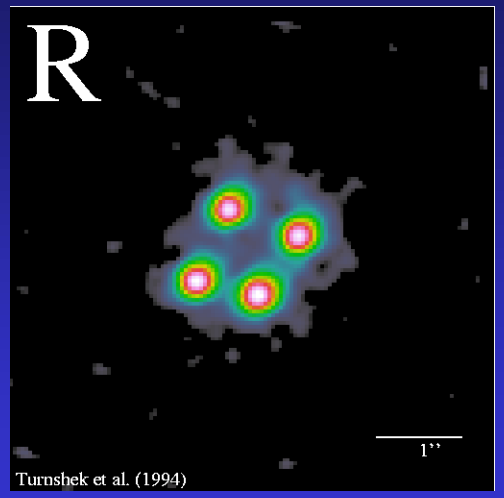








HCN(4-3) and HCO^+(4-3) in the Cloverleaf quasar

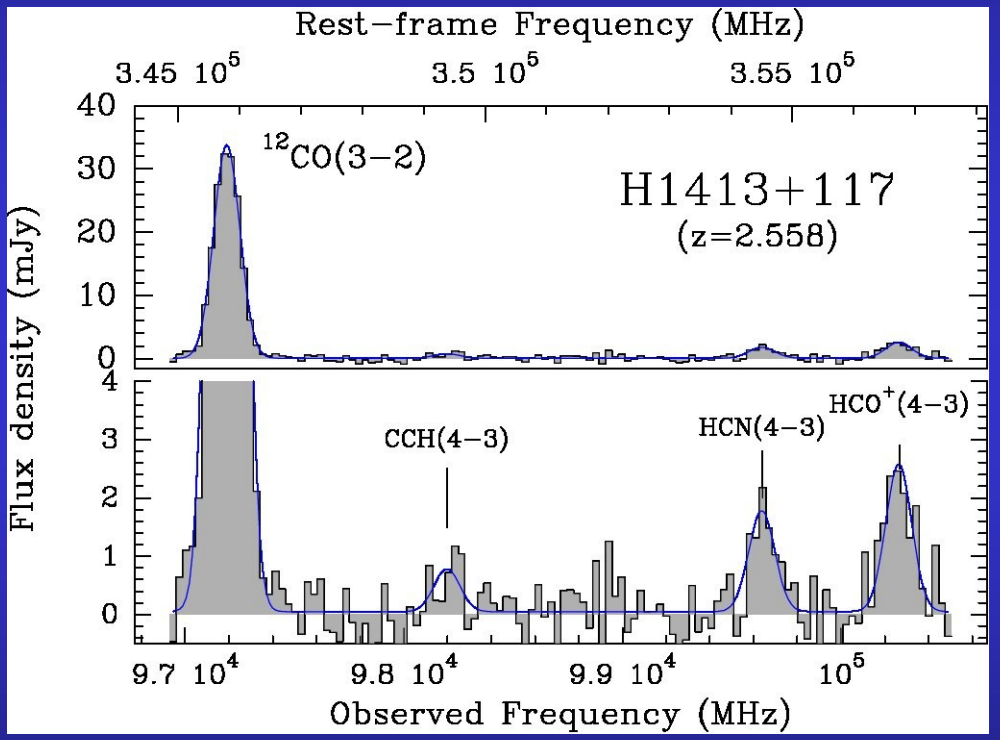


Hubble image (Turnshek et al. 1994)

Searches for HCN started some 17years ago…

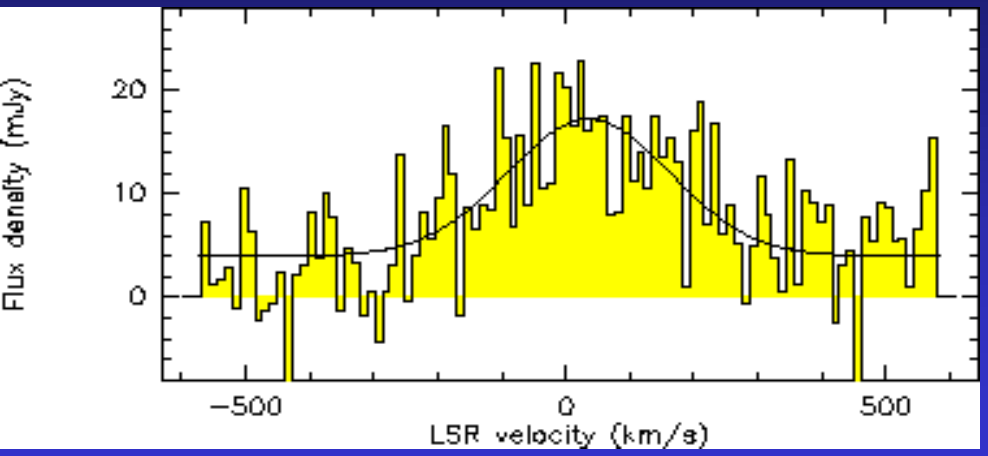
Large bandwidth needed to simultaneously measure the weak continuum!

Spectrum obtained with WideX 2010
(compact configuration, beam 4.8" x 5.7")
8h integration



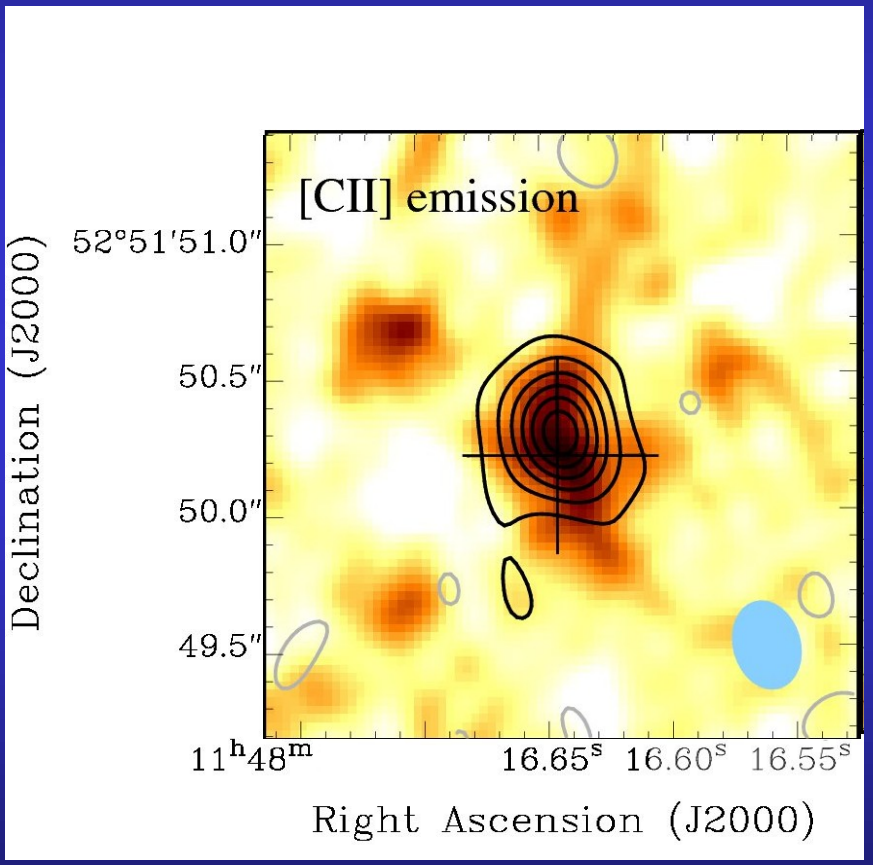
Guélin et al. (2010)

C^+ at 256.17GHz in J1148+5251 @ z = 6.42



Spectrum: 3.5hrs in D-configuration

A-configuration: beam 0.26" x 0.21"



Walter et al. 2009 (Nature 457, 699)

Proposal tech-sheet

IRAM Plateau de Bure Interferometer: Proposal Technical Summary

Please fill one sheet per frequency setup

- **Category and Project type:** 3-mm lines detection
- **Source position and velocity:**

Source	RA (J2000.0)	DEC (J2000.0)	LSR Velocity / Redshift (km/s)
0221+375	02:27:30.813	37:49:32.624	+0

- **For all projects (detection, mapping, mosaic, and snapshot):**
  - *Configuration required:* A B C D Any
  - *No. of tracks requested:* 0 0 0 0 0
  - *Observing time requested:* *1.6 × on-source time* = 0h
  - *Sensitivity:*

Resolution	on-source time	1σ-sensitivity
0 MHz	0 hrs	0 mJy

- **For Mosaic projects:**
  - *offest positions:* (,) (,) (,) (,)
- **Size of largest structure (in arcseconds):** unresolved
- **Continuum part:**
  - *Expected continuum flux:* mJy
  - *Expected continuum source size:* unresolved
  - *Preferred observing frequency (pure continuum projects):*
- **For line projects:** *(add sketch of frequency setup, e.g. as separate .eps file in your .tar archive)*
  - *Expected width of spectral line (to zero power)* km/s
  - *Line rest frequencies:* 109.252 GHz

Point source sensitivity

$$\delta S = \frac{2k}{\eta_a A \cdot \eta_j \eta_C} \cdot \frac{\langle T_{sys} \rangle}{\eta_p \sqrt{N(N-1)} \sqrt{\delta\nu\, t_{\rm on}}} \cdot \frac{1}{\sqrt{N_{\rm pol}}}$$

A	collecting area of a single antenna ($176.7\mathrm{m}^2$)
η_a	aperture efficiency (0.80 @ 3mm, 0.75 @ 2mm, 0.65 @ 1mm)
η_j	instrumental decorrelation $\eta_j = e^{-\sigma_j^2/2}$ (0.90 to 0.98)
η_C	correlator efficiency ($\eta_C = 0.88$)
k	Boltzmann constant
$\langle T_{sys} \rangle$	average system temperature [K]
η_p	atmospheric decorrelation $\eta_p = e^{-\sigma_p^2/2}$ (0.6 to 0.98)
N	Number of antennas (6)
$\delta\nu$	Spectral Bandwidth [Hz] (39 kHz to 2 GHz, 2 MHz to 3.6 GHz)
$t_{\rm on}$	On-source integration time [s], $t_{\rm obs} = 1.6\, t_{\rm on}$
$N_{\rm pol}$	Number of polarizations (1 or 2)
$\frac{2k}{\eta_a A \cdot \eta_j \eta_C}$	$= J_{pk}$: Conversion factor Kelvin to Jansky 22 Jy/K @ 3mm, 26 Jy/K @ 2mm, 35 Jy/K @ 1mm

NB

WideX

Brightness sensitivity (I)

The brightness sensitivity is related to the point source sensitivity by

$$\delta T = \frac{\lambda^2}{2\,k\,\Omega} \cdot \delta S = \rho \frac{\lambda^2}{\Theta_1 \Theta_2} \cdot \delta S$$

δT	brightness sensitivity [K]
λ	observing wavelength [mm]
k	Boltzmann constant
Ω	synthesized beam solid angle [sr]
ρ	≈ 15 [K Jy $^{-1}$ (arcsec/mm)$^{-2}$] for untapered maps and natural weighting
Θ_1, Θ_2	axes of synthesized beam [arcsec]

Brightness sensitivity depends on angular resolution!

Brightness sensitivity (II)

Expected line brightness sensitivities in 8 hours (12h track)

1km/s bandwidth, dual polarization:

- @ 100 GHz in a beam of $1'' \times 1''$: $\delta T \approx 434\,\mathrm{mK}$
  $5'' \times 5''$: $\delta T \approx 17\,\mathrm{mK}$
- @ 150 GHz in a beam of $0.6'' \times 0.6''$: $\delta T \approx 916\,\mathrm{mK}$
  $3.3'' \times 3.3''$: $\delta T \approx 30\,\mathrm{mK}$
- @ 230 GHz in a beam of $0.3'' \times 0.3''$: $\delta T \approx 2000\,\mathrm{mK}$
  $2.2'' \times 2.2''$: $\delta T \approx 40\,\mathrm{mK}$

When?

- **Summer:**
  compact configurations (C and D)
  => Low resolution studies, detection experiments at 3mm and 2mm,
  only 5 antennas available in D-configuration from May to September/October

- **Winter offer best observing conditions:**
  Best atmosphere (transparency, phase stability)
  All four configurations (compact to extended)
  All 6 antennas available

- **Observations at 1.3mm:**
  only possible from September to April

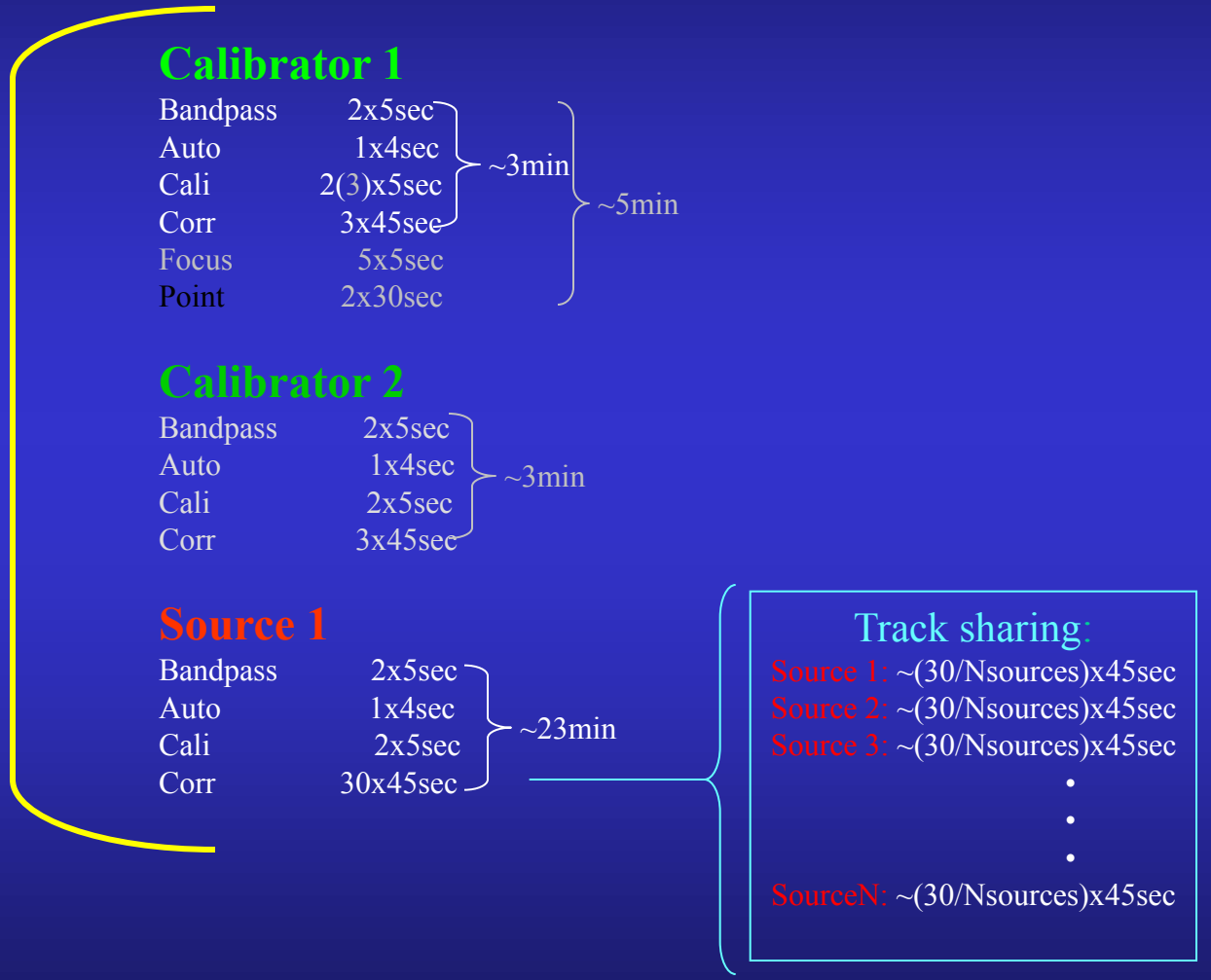
Sensitivity considerations

- **Caution:**
  At 115GHz the atmospheric O_2 line degrades sensitivity by about 40% already in good observing conditions

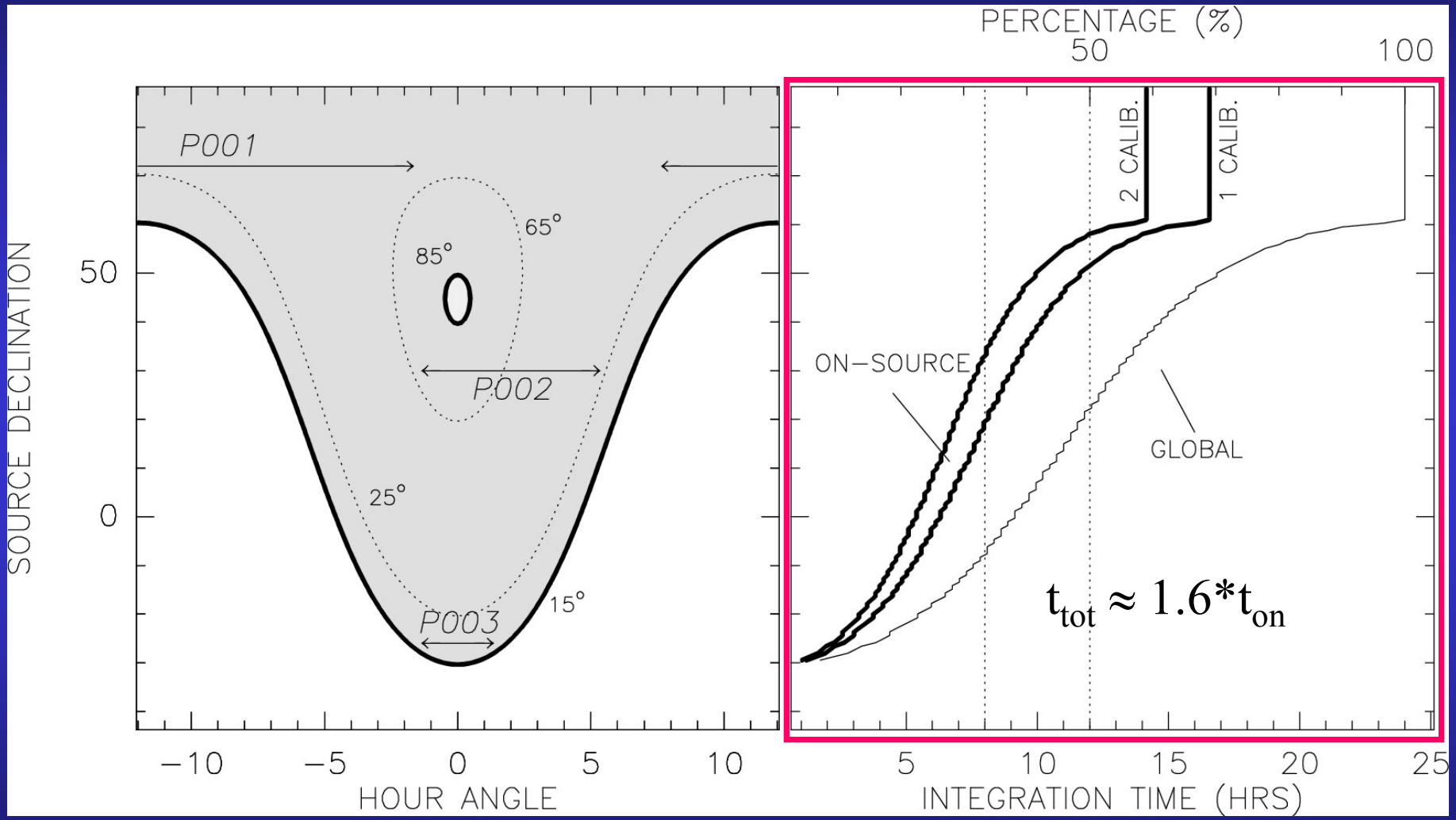
- **Request a configuration for mapping**
  e.g. AB configuration = 2 tracks (8hrs each)
  … but evaluate the sensitivity as well!

- **Request a point source sensitivity for detection**
  … but evaluate the integration time as well!

(standard) Observing sequence

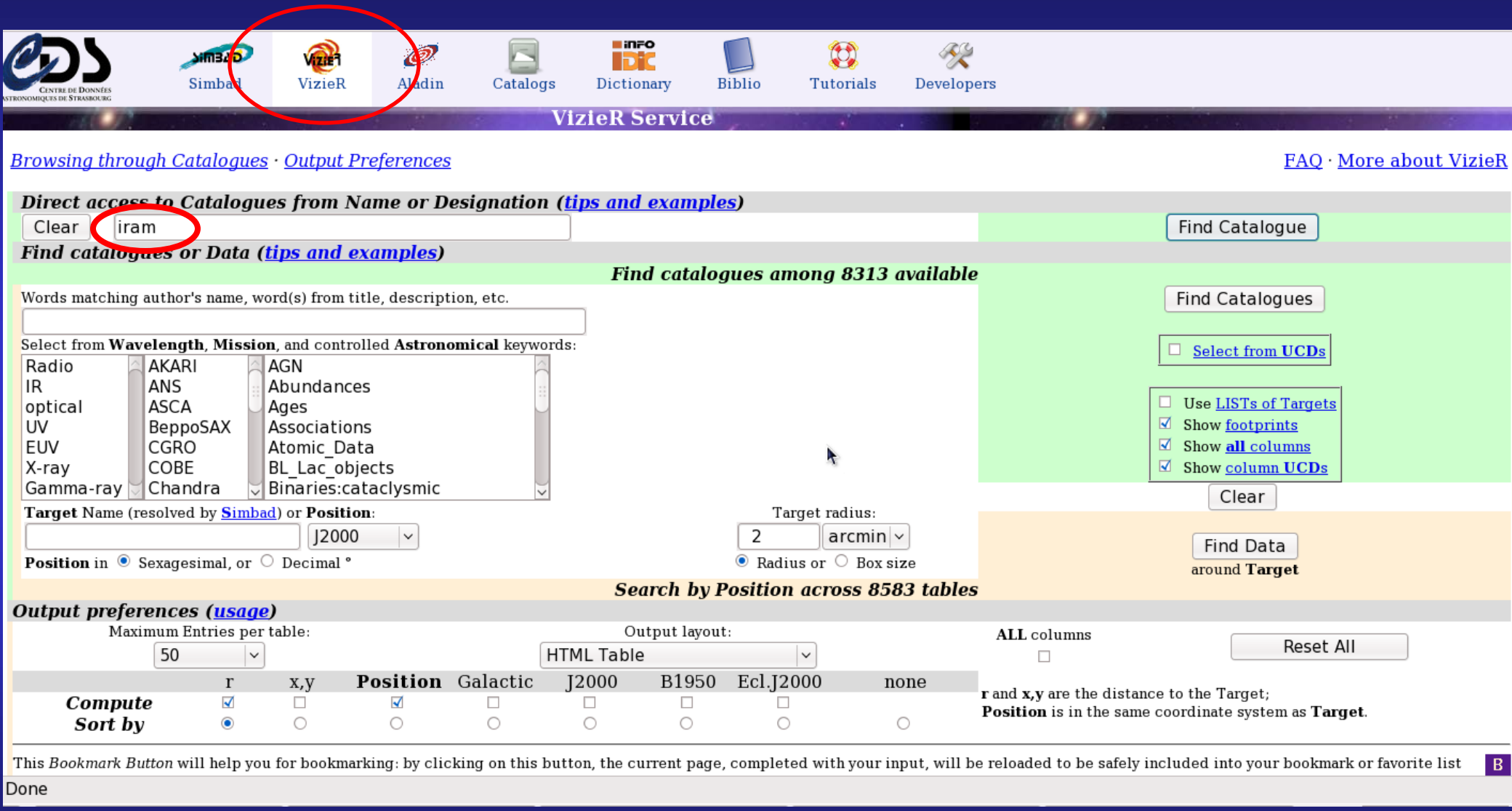


Observing time



Has my object already been observed?

- Consult the CDS (Strasbourg)
- Consult the Science Operation Group (SOG; sog@iram.fr)
- The raw data archive is not (yet) public


Simbad
VizieR
Aladin
Catalogs
Dictionary
Biblio
Tutorials
Developers
VizieR Service
Browsing through Catalogues · Output Preferences
FAQ · More about VizieR
Direct access to Catalogues from Name or Designation (tips and examples)
Clear
iram
Find Catalogue
Find catalogues or Data (tips and examples)
Find catalogues among 8313 available
Words matching author's name, word(s) from title, description, etc.
Find Catalogues
Select from Wavelength, Mission, and controlled Astronomical keywords:
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IR
optical
UV
EUV
X-ray
Gamma-ray
AKARI
ANS
ASCA
BeppoSAX
CGRO
COBE
Chandra
AGN
Abundances
Ages
Associations
Atomic_Data
BL_Lac_objects
Binaries:cataclysmic
Select from UCDs
Use LISTs of Targets
Show footprints
Show all columns
Show column UCDs
Clear
Target Name (resolved by Simbad) or Position:
J2000
Target radius:
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arcmin
Position in Sexagesimal, or Decimal °
Radius or Box size
Find Data
around Target
Search by Position across 8583 tables
Output preferences (usage)
Maximum Entries per table:
50
Output layout:
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ALL columns
Reset All
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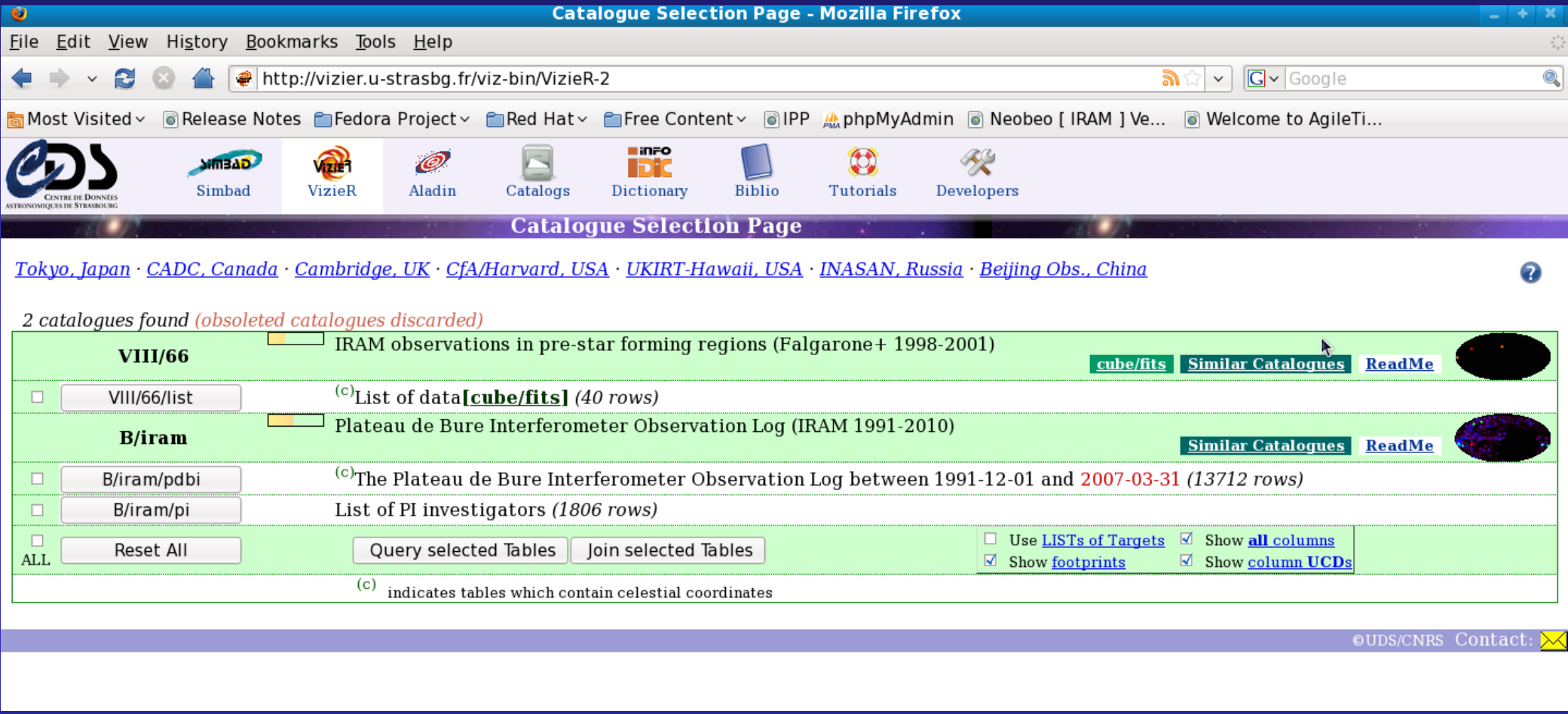
Compute
Sort by
r and x,y are the distance to the Target;
Position is in the same coordinate system as Target.
This Bookmark Button will help you for bookmarking: by clicking on this button, the current page, completed with your input, will be reloaded to be safely included into your bookmark or favorite list
Done


Catalogue Selection Page - Mozilla Firefox
File Edit View History Bookmarks Tools Help
http://vizier.u-strasbg.fr/viz-bin/VizieR-2
Google
Most Visited Release Notes Fedora Project Red Hat Free Content IPP phpMyAdmin Neobeo [IRAM] Ve... Welcome to AgileTi...
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2 catalogues found (obsoleted catalogues discarded)
VIII/66
IRAM observations in pre-star forming regions (Falgarone+ 1998-2001)
cube/fits
Similar Catalogues
ReadMe
VIII/66/list
(c) List of data [cube/fits] (40 rows)
B/iram
Plateau de Bure Interferometer Observation Log (IRAM 1991-2010)
Similar Catalogues
ReadMe
B/iram/pdbi
(c) The Plateau de Bure Interferometer Observation Log between 1991-12-01 and 2007-03-31 (13712 rows)
B/iram/pi
List of PI investigators (1806 rows)
ALL
Reset All
Query selected Tables
Join selected Tables
Use LISTs of Targets
Show all columns
Show footprints
Show column UCDs
(c) indicates tables which contain celestial coordinates
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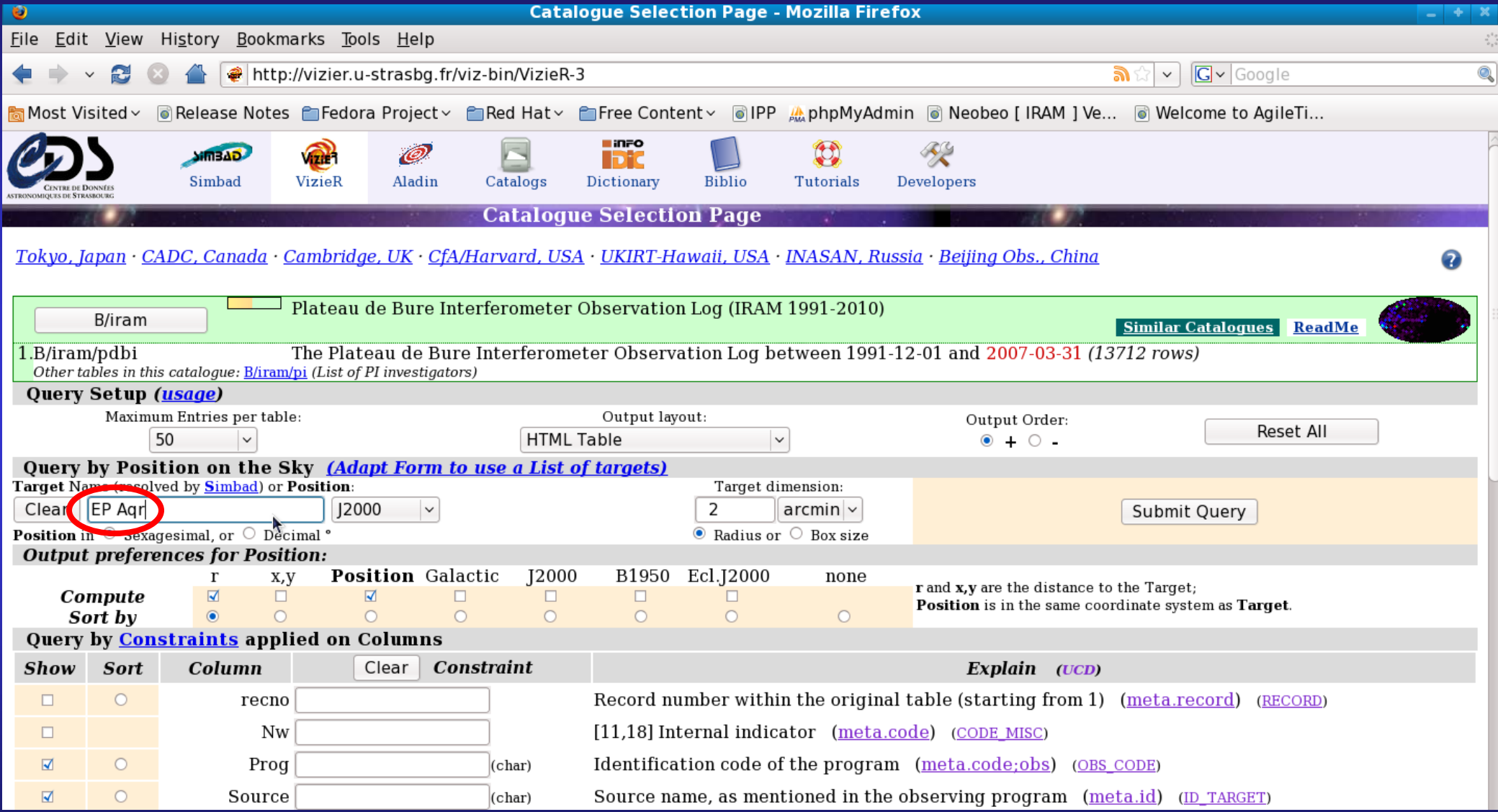
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http://vizier.u-strasbg.fr/viz-bin/VizieR-3
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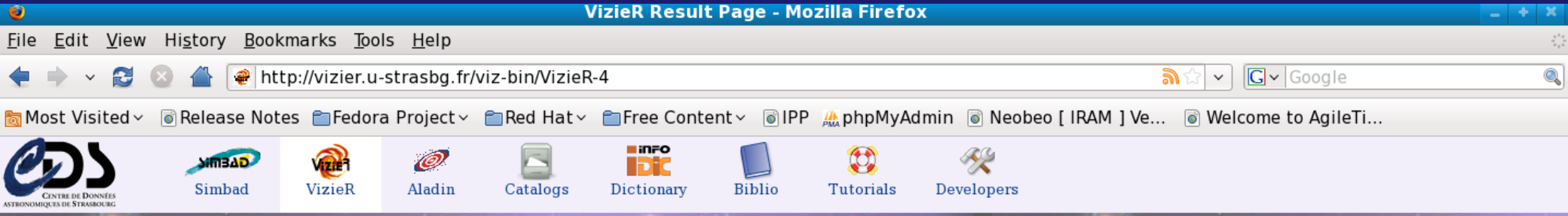
B/iram
Plateau de Bure Interferometer Observation Log (IRAM 1991-2010)
Similar Catalogues ReadMe
1.B/iram/pdbi The Plateau de Bure Interferometer Observation Log between 1991-12-01 and 2007-03-31 (13712 rows)
Other tables in this catalogue: B/iram/pi (List of PI investigators)
Query Setup (usage)
Maximum Entries per table: 50
Output layout: HTML Table
Output Order: + -
Reset All
Query by Position on the Sky (Adapt Form to use a List of targets)
Target Name (resolved by Simbad) or Position:
Clear EP Aqr J2000
Position in Sexagesimal, or Decimal °
Target dimension: 2 arcmin
Radius or Box size
Submit Query
Output preferences for Position:
r x,y Position Galactic J2000 B1950 Ecl.J2000 none
Compute
Sort by
r and x,y are the distance to the Target;
Position is in the same coordinate system as Target.
Query by Constraints applied on Columns
Show Sort Column Clear Constraint Explain (UCD)
recno Record number within the original table (starting from 1) (meta.record) (RECORD)
Nw [11,18] Internal indicator (meta.code) (CODE_MISC)
Prog (char) Identification code of the program (meta.code;obs) (OBS_CODE)
Source (char) Source name, as mentioned in the observing program (meta.id) (ID_TARGET)



Result of VizieR Search within **2'** of **EP Aqr** (J2000=21:46:31.8-02:12:46)
ordered by increasing **_r**

Modify the Query

Max. Entries: 50 | Output layout: HTML Table | **ALL** columns | ReSubmit | B

B/iram/pdbi

Plateau de Bure Interferometer Observation Log (IRAM 1991-2010)
The Plateau de Bure Interferometer Observation Log between 1991-12-01 and 2007-03-31 *(13712 rows)*

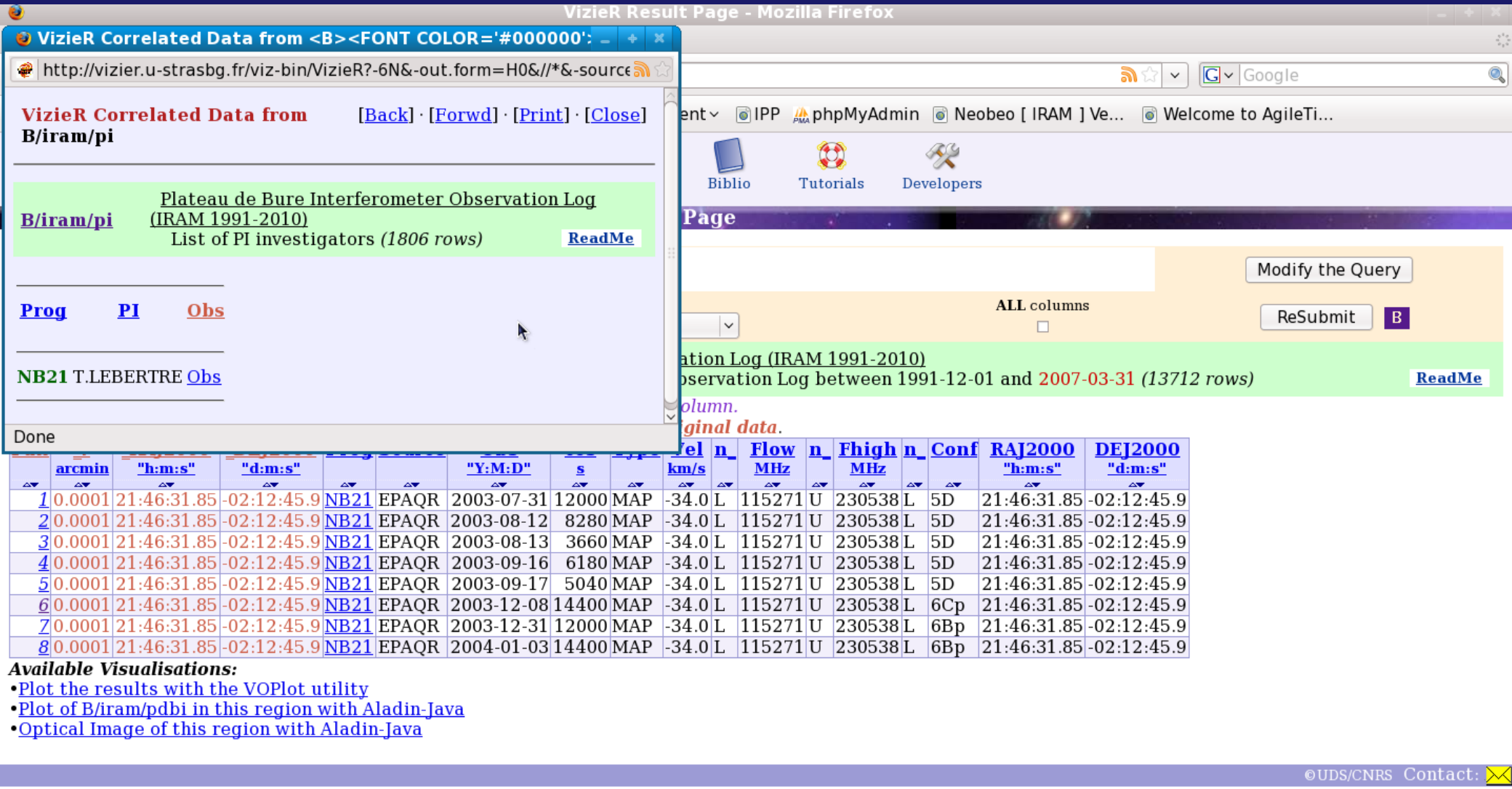
ReadMe

To get all details for a row, just click on the row number in the leftmost `Full' column.
The 3 columns in ***color*** are computed by VizieR, and are ***not part of the original data***.

Full	_r arcmin	_RAJ2000 "h:m:s"	_DEJ2000 "d:m:s"	Prog	Source	Obs "Y:M:D"	tos s	Type	Vel km/s	n_	Flow MHz	n_	Fhigh MHz	n_	Conf	RAJ2000 "h:m:s"	DEJ2000 "d:m:s"
1	0.0001	21:46:31.85	-02:12:45.9	NB21	EPAQR	2003-07-31	12000	MAP	-34.0	L	115271	U	230538	L	5D	21:46:31.85	-02:12:45.9
2	0.0001	21:46:31.85	-02:12:45.9	NB21	EPAQR	2003-08-12	8280	MAP	-34.0	L	115271	U	230538	L	5D	21:46:31.85	-02:12:45.9
3	0.0001	21:46:31.85	-02:12:45.9	NB21	EPAQR	2003-08-13	3660	MAP	-34.0	L	115271	U	230538	L	5D	21:46:31.85	-02:12:45.9
4	0.0001	21:46:31.85	-02:12:45.9	NB21	EPAQR	2003-09-16	6180	MAP	-34.0	L	115271	U	230538	L	5D	21:46:31.85	-02:12:45.9
5	0.0001	21:46:31.85	-02:12:45.9	NB21	EPAQR	2003-09-17	5040	MAP	-34.0	L	115271	U	230538	L	5D	21:46:31.85	-02:12:45.9
6	0.0001	21:46:31.85	-02:12:45.9	NB21	EPAQR	2003-12-08	14400	MAP	-34.0	L	115271	U	230538	L	6Cp	21:46:31.85	-02:12:45.9
7	0.0001	21:46:31.85	-02:12:45.9	NB21	EPAQR	2003-12-31	12000	MAP	-34.0	L	115271	U	230538	L	6Bp	21:46:31.85	-02:12:45.9
8	0.0001	21:46:31.85	-02:12:45.9	NB21	EPAQR	2004-01-03	14400	MAP	-34.0	L	115271	U	230538	L	6Bp	21:46:31.85	-02:12:45.9

Available Visualisations:

- Plot the results with the VOPlot utility
- Plot of B/iram/pdbi in this region with Aladin-Java
- Optical Image of this region with Aladin-Java



	arcmin	"h:m:s"	"d:m:s"			"Y:M:D"	s		Vel km/s	n_	Flow MHz	n_	Fhigh MHz	n_	Conf	RAJ2000 "h:m:s"	DEJ2000 "d:m:s"
1	0.0001	21:46:31.85	-02:12:45.9	NB21	EPAQR	2003-07-31	12000	MAP	-34.0	L	115271	U	230538	L	5D	21:46:31.85	-02:12:45.9
2	0.0001	21:46:31.85	-02:12:45.9	NB21	EPAQR	2003-08-12	8280	MAP	-34.0	L	115271	U	230538	L	5D	21:46:31.85	-02:12:45.9
3	0.0001	21:46:31.85	-02:12:45.9	NB21	EPAQR	2003-08-13	3660	MAP	-34.0	L	115271	U	230538	L	5D	21:46:31.85	-02:12:45.9
4	0.0001	21:46:31.85	-02:12:45.9	NB21	EPAQR	2003-09-16	6180	MAP	-34.0	L	115271	U	230538	L	5D	21:46:31.85	-02:12:45.9
5	0.0001	21:46:31.85	-02:12:45.9	NB21	EPAQR	2003-09-17	5040	MAP	-34.0	L	115271	U	230538	L	5D	21:46:31.85	-02:12:45.9
6	0.0001	21:46:31.85	-02:12:45.9	NB21	EPAQR	2003-12-08	14400	MAP	-34.0	L	115271	U	230538	L	6Cp	21:46:31.85	-02:12:45.9
7	0.0001	21:46:31.85	-02:12:45.9	NB21	EPAQR	2003-12-31	12000	MAP	-34.0	L	115271	U	230538	L	6Bp	21:46:31.85	-02:12:45.9
8	0.0001	21:46:31.85	-02:12:45.9	NB21	EPAQR	2004-01-03	14400	MAP	-34.0	L	115271	U	230538	L	6Bp	21:46:31.85	-02:12:45.9

Available Visualisations:

- Plot the results with the VOPlot utility
- Plot of B/iram/pdbi in this region with Aladin-Java
- Optical Image of this region with Aladin-Java

Configurations

- **Four configurations are needed to take properly into account baseline range and operation with 6 antennas**

Configuration	Stations
D	W08 W05 E03 N02 N07 N11
C	W12 W09 E04 E10 N11 N17
B	W27 W12 E12 E23 N20 N46
A	W27 E04 E24 E68 N29 N46

- **The A and B configurations are scheduled during the winter period only**

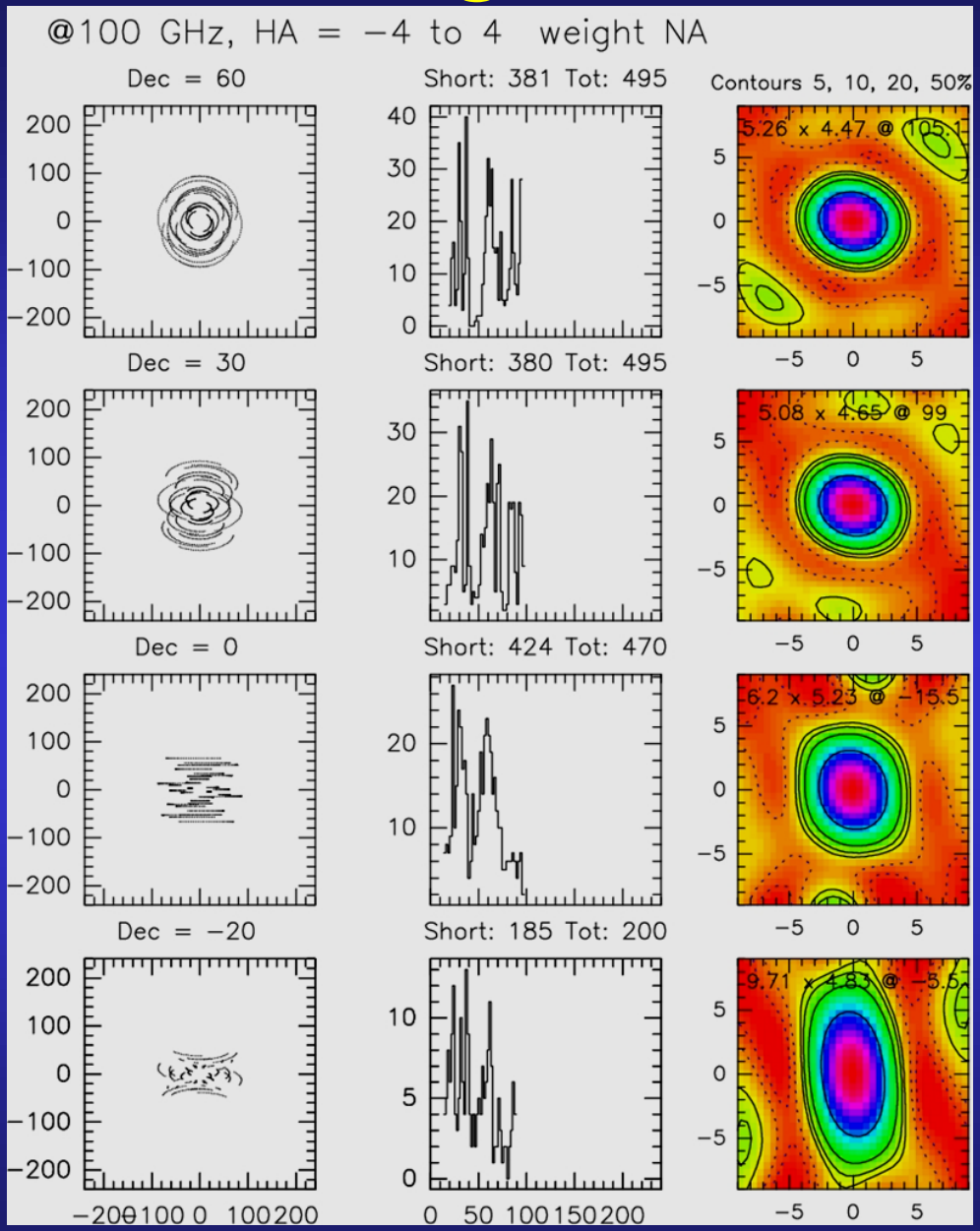

E68
N46
N29
E24
E04
768m => 0.3”@230 GHz
W27

Which configuration is appropriate?

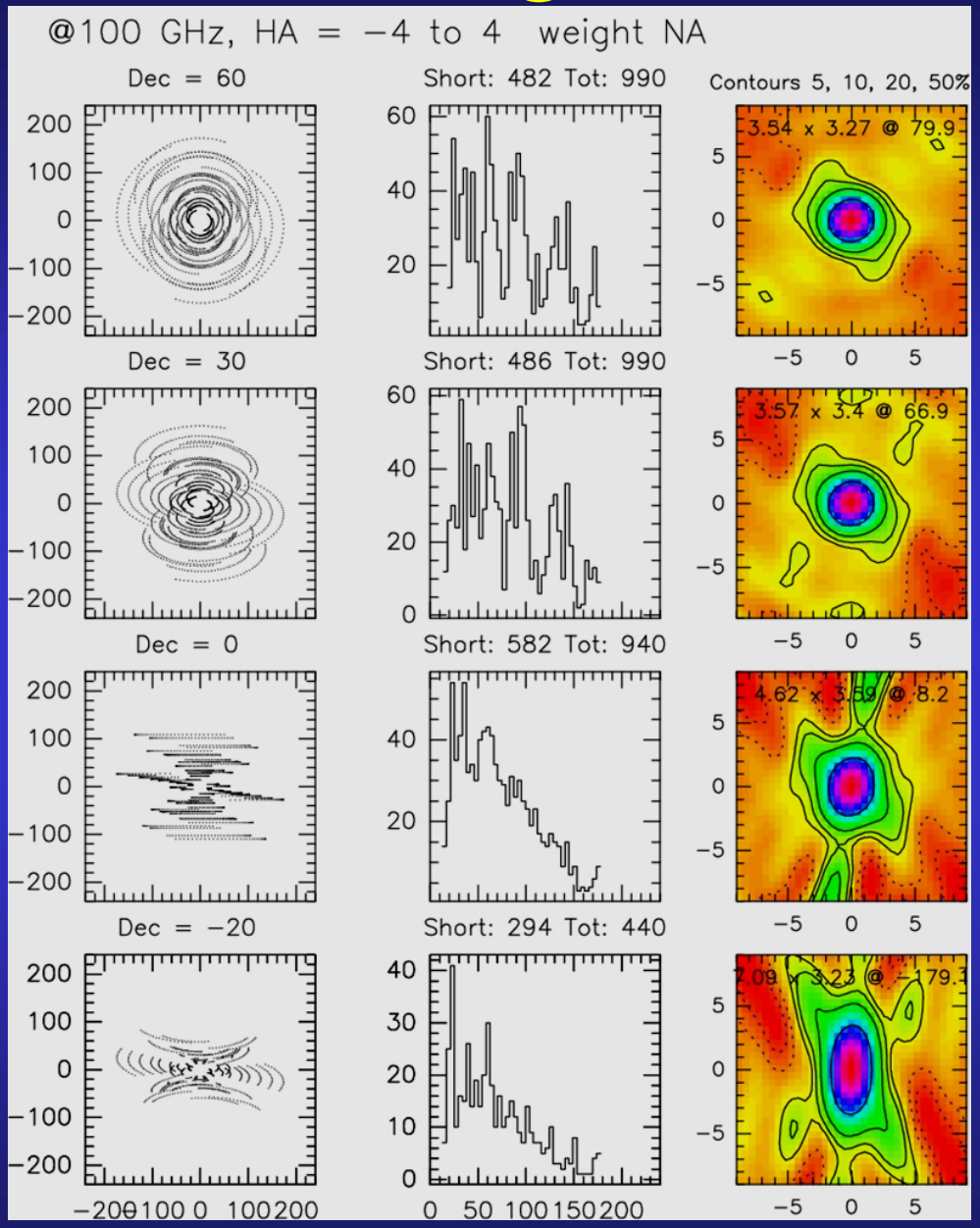
Standard sets of configurations are:

Set	Purpose
D	detection/lowest resolution
CD	3.5” @ 100 GHz
BC	1.7” @ 100 GHz
AB	0.95” @ 100 GHz
A	0.82” @ 100 GHz

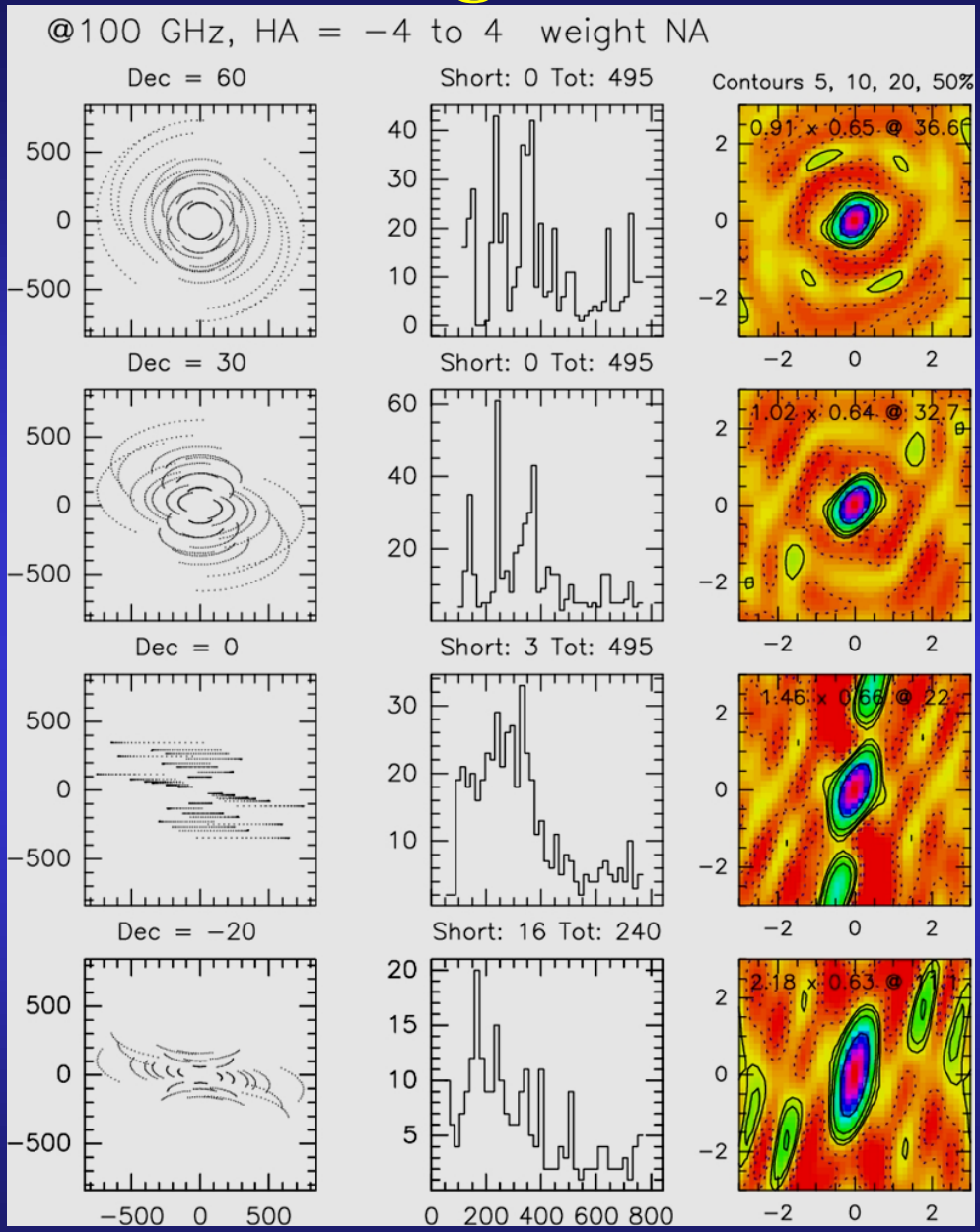
D configuration



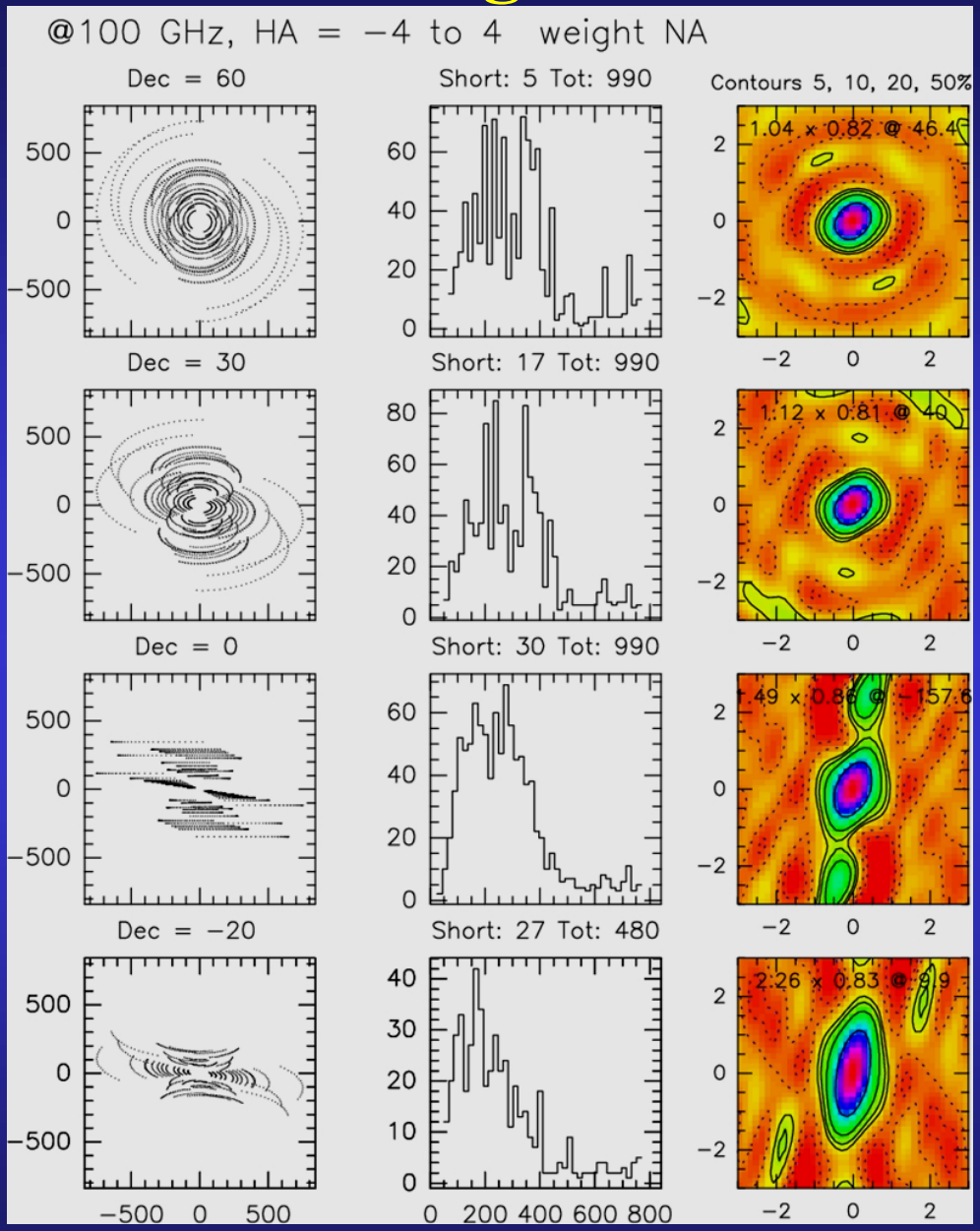
CD configuration



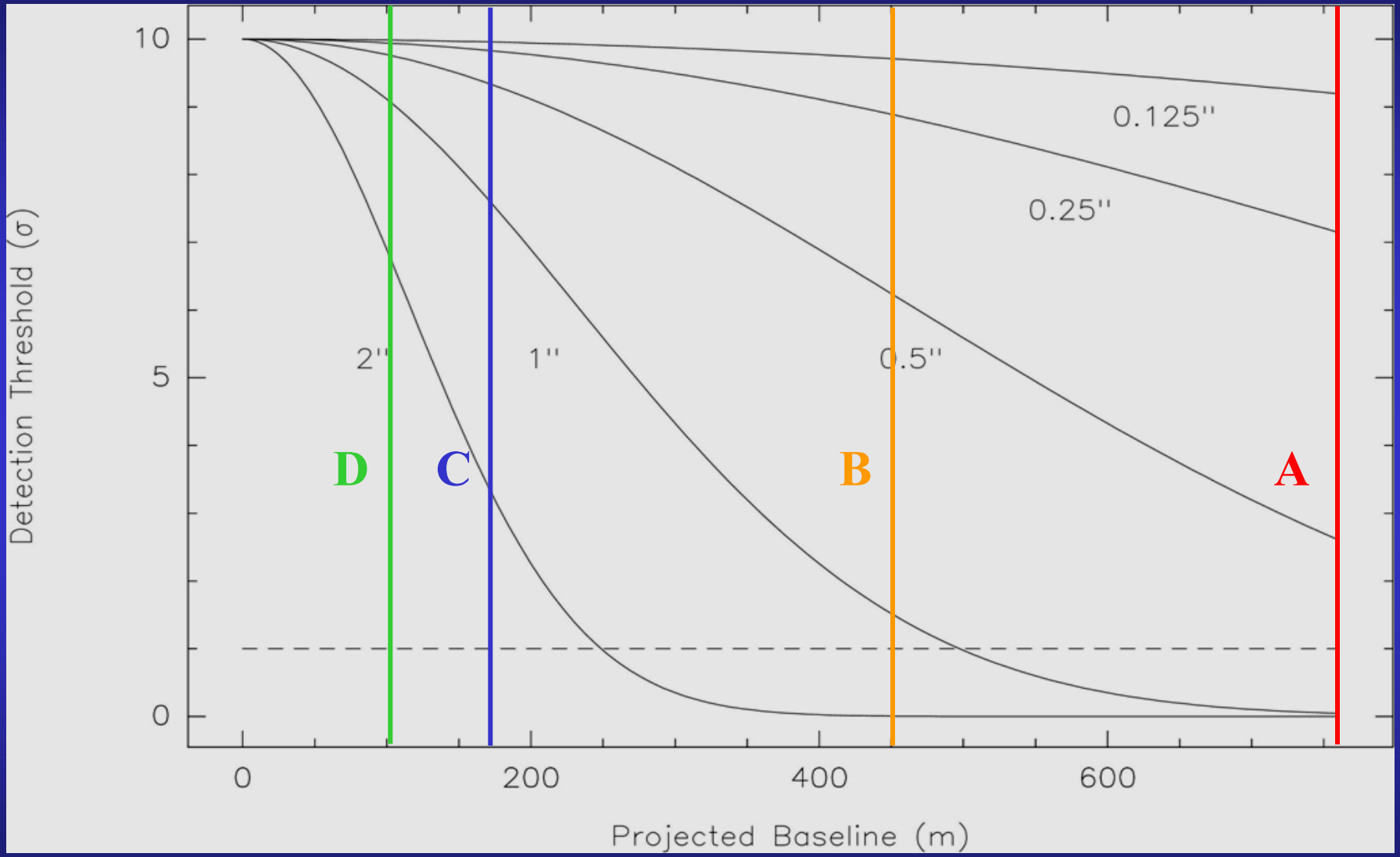
A configuration



AB configuration



Resolution effect



Correlators (I)

Narrow-Band correlator: 8 units, 2x1GHz, spectral resolution 39kHz-2.5MHz

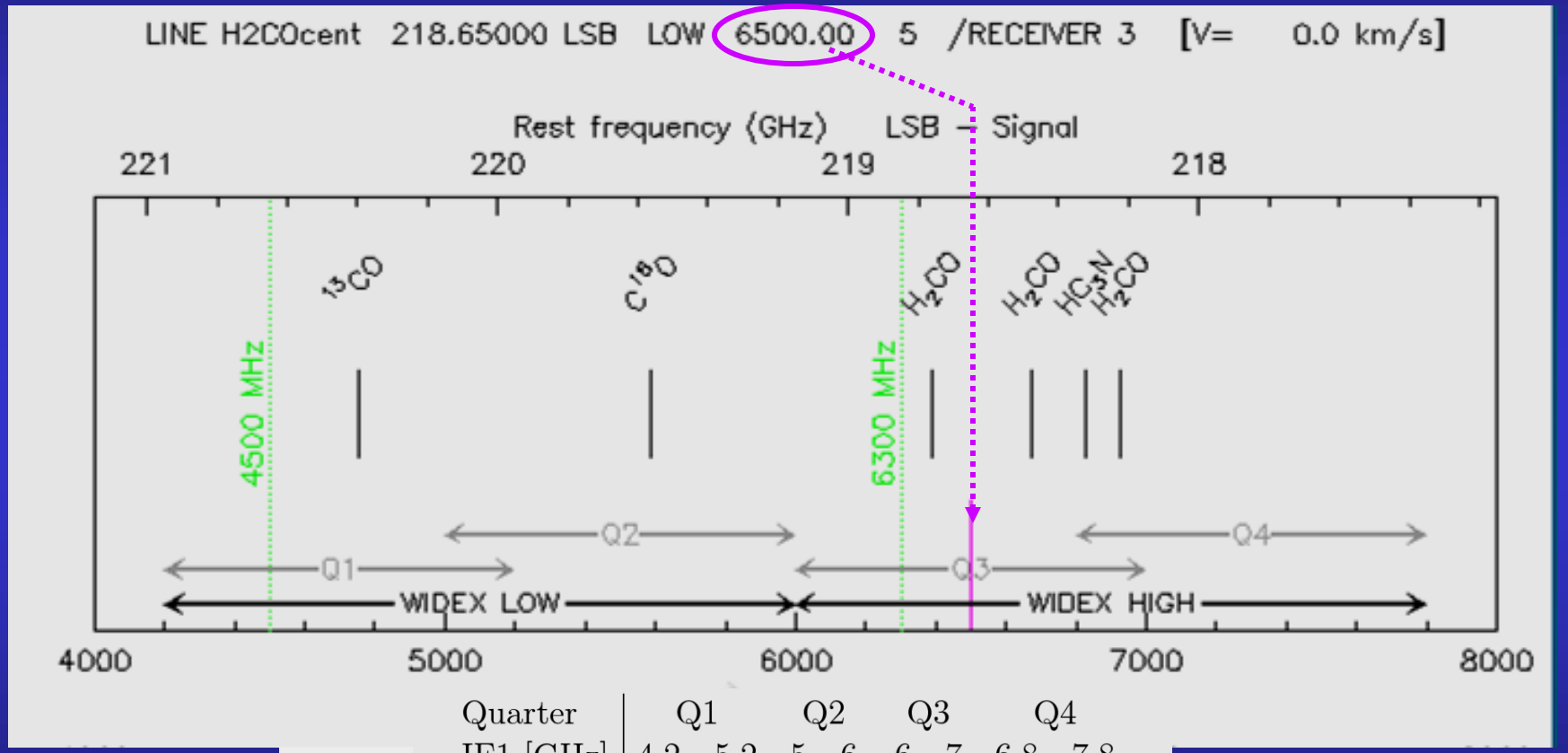
Correlators (II)

WideX: 4 units, 2x3.6 GHz (dual polar, fixed spectral resolution 2 MHz)

Spectral settings (I)

•Use the ASTRO command LINE:

ASTRO> LINE H2COcent 218.65 LSB



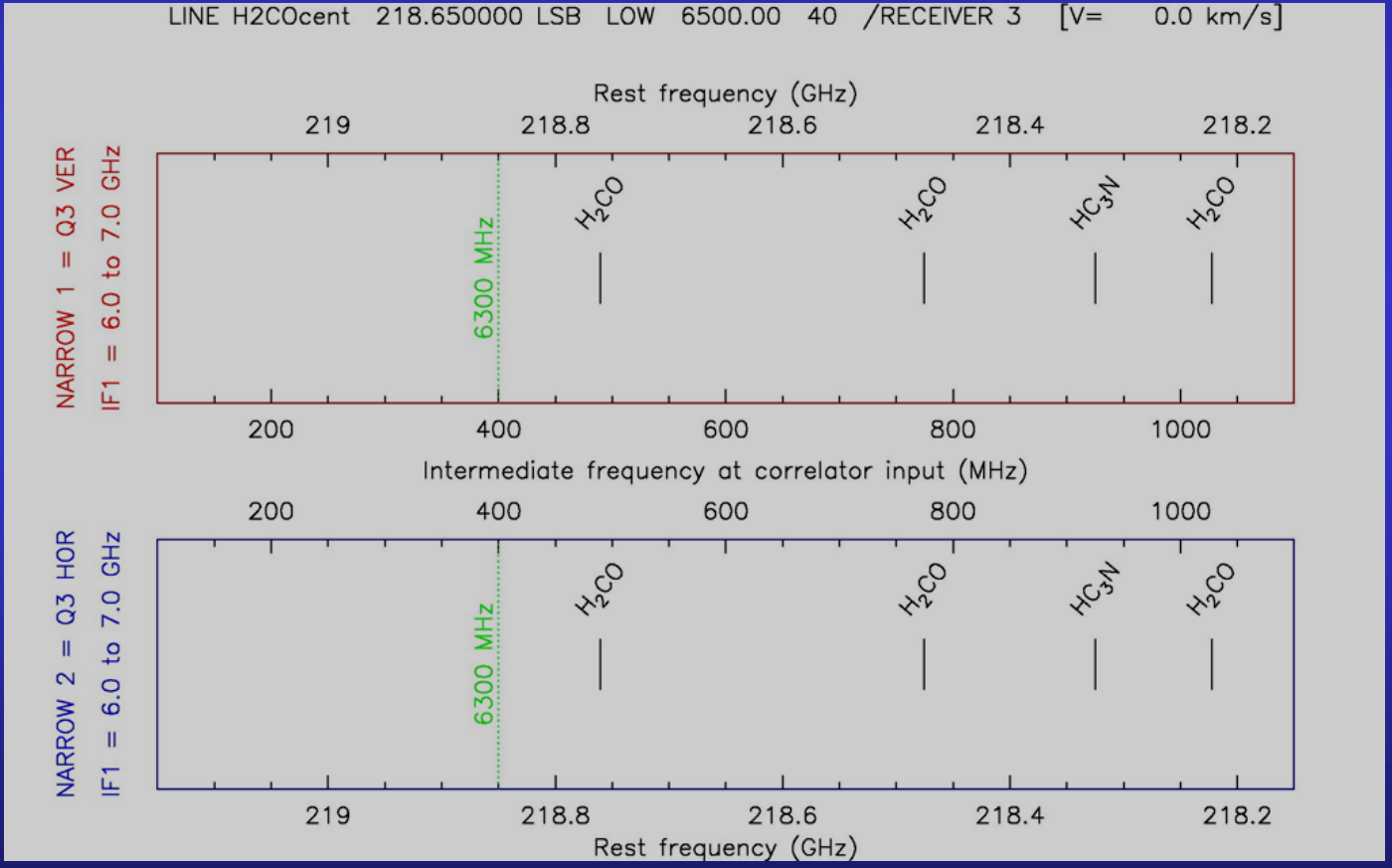
NB:

Quarter	Q1	Q2	Q3	Q4
IF1 [GHz]	4.2 - 5.2	5 - 6	6 - 7	6.8 - 7.8
input 1	HOR	HOR	VER	VER
input 2	VER	VER	HOR	HOR

Spectral settings (II)

- Make use of IF processor and NB correlator flexibility
- NB correlator can process 2 x 1GHz (100MHz to 1100MHz)

ASTRO> NARROW Q3 Q3



NB Correlator Modes

http://www.iram.fr/IRAMFR/TA/backend/cor6A/index.html

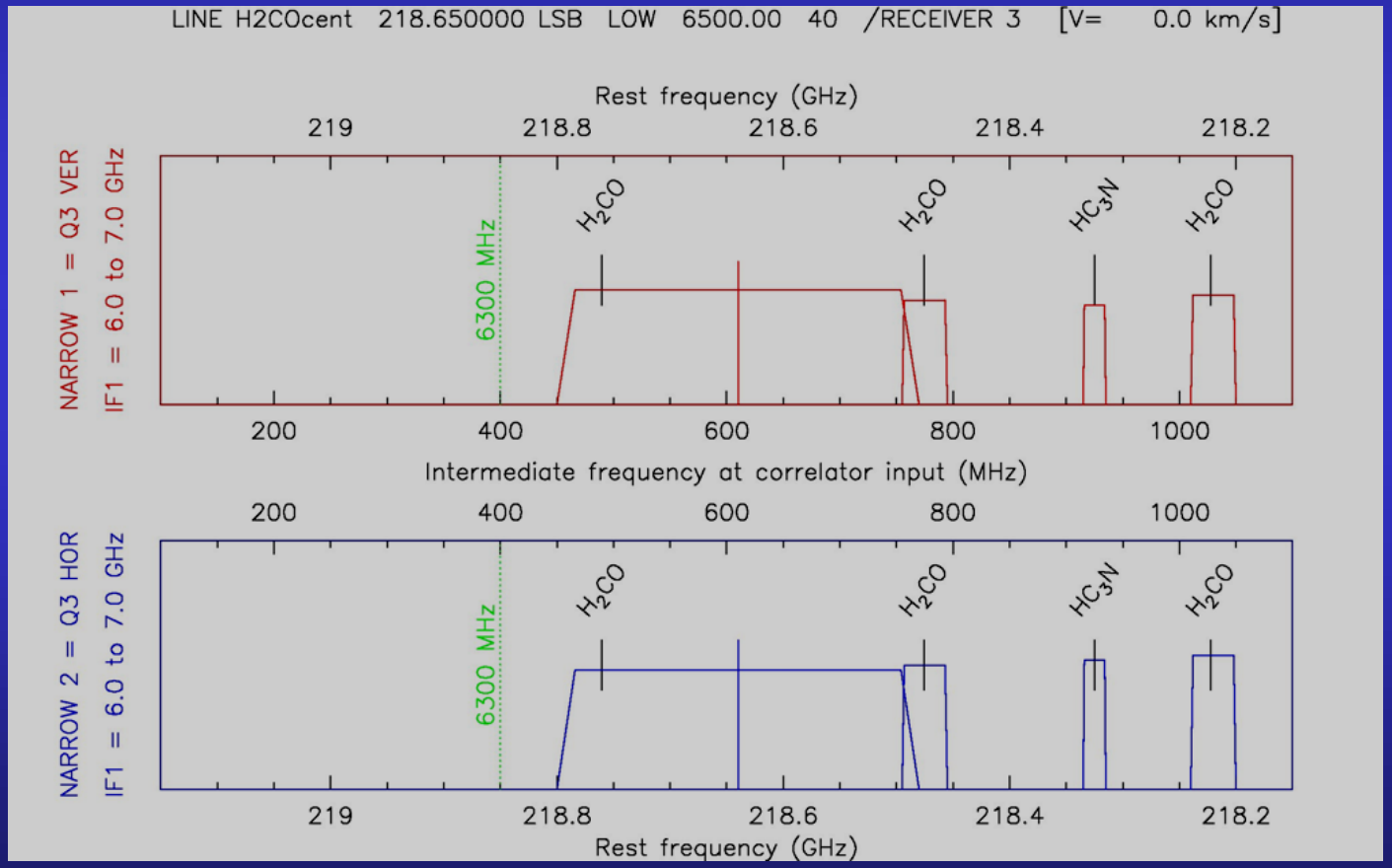
- **Beware of Gibbs Phenomenon:** (perturbs the central channels in DSB mode)

Avoid line in subband center (320, 160, 80)

Bandwidth	Subband	Channels	Spacing
320 MHz	DSB	2 x 64	2.5 MHz
160 MHz	SSB	1 x 128	1.25 MHz
160 MHz	DSB	2 x 128	0.625 MHz
80 MHz	SSB	1 x 256	0.312 MHz
80 MHz	DSB	2 x 256	0.156 MHz
40 MHz	SSB	1 x 512	0.078 MHz
20 MHz	SSB	1 x 512	0.039 MHz

Spectral settings (III)

	unit	BW	cent_IF	correlator input
Astro> SPECTRAL 1		320	610	/NARROW 1
Astro> SPECTRAL 2		40	775	/NARROW 1
Astro> SPECTRAL 3		20	925	/NARROW 1
Astro> SPECTRAL 4		40	1030	/NARROW 1



Can my object be observed at any time? (I)

- Watch the IRAM Web or Newsletter for the submission deadlines

  - March deadline: June 1 to November 30
    Committee meets 2nd half of April

  - September deadline: December 1 to May 31
    Committee meets 2nd half of October

  - Urgent? Submit ToO/DDT proposal (email to ddt@iram.fr)

  - Interested in global 3mm-VLBI observations?
    Two sessions per year:
    5 days May, 5 days in October
    deadlines: October 1st, February 1st

Can my object be observed at any time? (II)

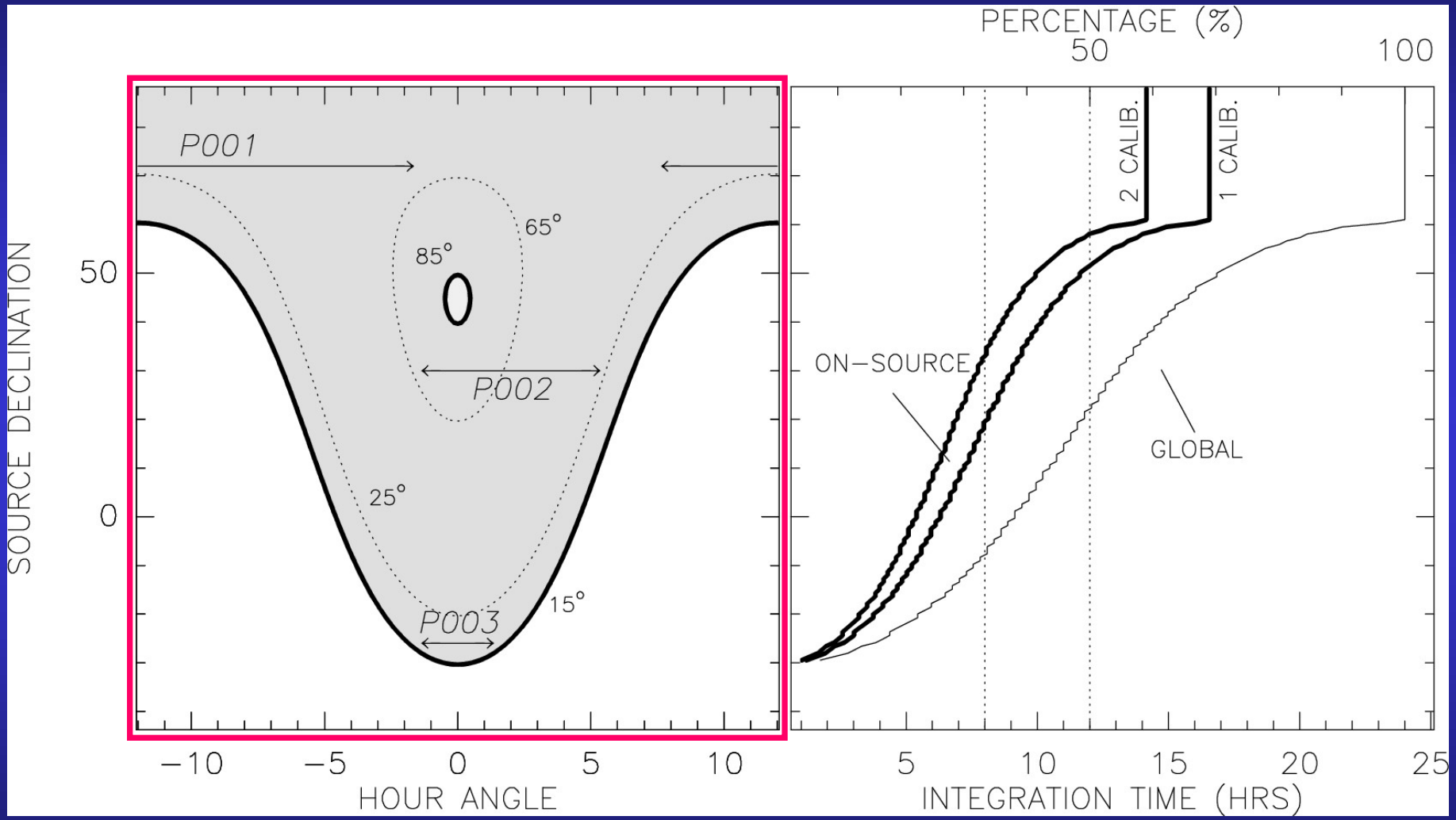
- **Watch out for sun avoidance period (35^0)**

  ASTRO> catalogue mysource.sou
  ASTRO> horizon /sou
  IRC+10216 : Sun distance 49.8 ; avoidance 11-JUL-2011 to 24-SEP-2011

- **Self-calibration on strong (300mJy and more) continuum feasible? Ideal time filler for periods where the atmospheric phase stability is poor!**

- **Check declination of the object: Galactic center is at the very limit**

Observing time



Detection

- Choose compact configuration

  - lower phase noise
  - source is unresolved: no flux is lost, all baselines are used

  - if you have a detection, do not over-interpret it. A 5σ detection is not a map; CLEANing is not helpful

Mapping/Imaging

- **Single field:**
  - **Do not forget to correct for primary beam attenuation when comparing maps**

- **Mosaics:**
  - **Fully sample the mosaic to be sensitive to large scales**

- **Adding short spacings:**
  - **good calibration required at single dish**
  - **good sensitivity**
  - **should cover at least the field mapped by the interferometer**

(see IRAM Memo 2008-2 by Rodríguez-Fernández, Pety & Gueth)

Other observations

- **Size measurements:**
  - **Requires good SNR, not a 5σ detection**
  - **Compare to point source (calibrator)**

- **Position measurements:**
  - **absolute astrometric precision < 0.3”**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Plateau de Bure interferometer
7th IRAM millimeter interferometry school
The Plateau de Bure Interferometer (PdBI) is currently the most advanced millimeter array in the world. Situated on the Plateau de Bure at 2550m altitude in the French Alps, the geographical position of its phase center is
Longitude: 05:54:28.5 East, Latitude: 44:38:02.0
During its history, the PdBI underwent several track extensions, received additional antennas (all of 15m diameter and similar construction as the first ones) and technical upgrades. From a three antenna interferometer with a maximum baseline of 288 meters in 1988, it has evolved to a six-antenna array with baselines up to 760 meters in 2005. A new generation of powerful dual-polarisation receivers for the 3mm and 1mm observing bands was installed in 2006, and extended to the 2mm observing band in late 2007.
The antennas of the IRAM interferometer can move on rail tracks up to a maximum separation of 760 m in the E-W direction and 368 m in the N-S direction, corresponding to a resolution of 0.5 arcsecs at an observing wavelength of 1.3 mm (230 GHz).
Since 1990, the interferometer is open to the world-wide scientific community, and issues twice a year a call for observing proposals. Because of its complexity and to make it attractive to the wide community, observations at the PdBI are not performed by the astronomers who propose them, but by the telescope operators and IRAM staff astronomers, who also provide assistance at various stages of the data
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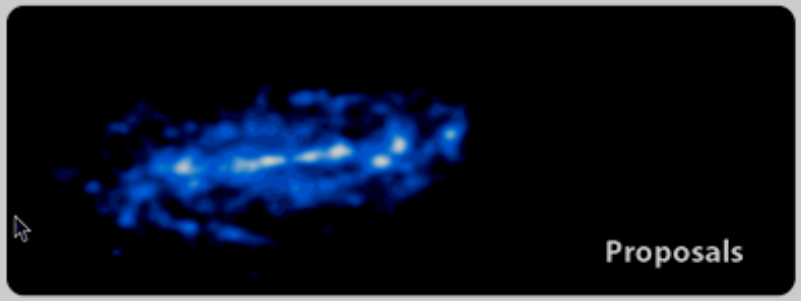
Proposals

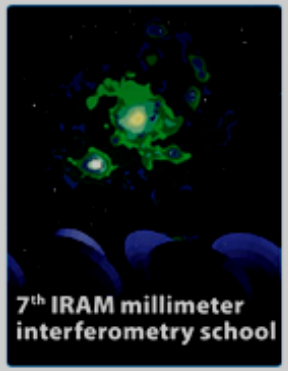
- Call for proposals
- Director's discretionary time proposals
- Proposal templates
- Preparing proposal submission
- Submitting proposals
- Program committee recommendations



Proposals for observation with the IRAM telescopes may be submitted twice per year to the

IRAM Scientific Secretariat
Domaine Universitaire de Grenoble
300, rue de la Piscine
F-38406 St. Martin d'Hères, France

Submission can be made through letter, fax (+33-476-425469), or electronically through the Electronic proposal submission facility. The facility is opened about three weeks before a deadline. Submission deadlines are currently around mid of March and mid of September each year for the summer (01 June - 30 November) and winter (01 December - 31 May) scheduling periods. Exact dates and all other relevant information are given in a separate Call for proposals published on the web and in the IRAM Newsletter usually about a month ahead of the deadline. Additional detailed technical information can be found on the web pages for the interferometer and for the 30m telescope.



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Calendar
Semester: 01 December 2010 - 31 May 2011
Submission deadline
14 September 2010 at 17:00 CET (UT+2 hour)
Opening of proposal submission facility
CLOSED NOW
Program committee meeting
14 /15 October 2010
Publication of PC grades
early November 2010
Submission by ordinary mail or by fax is still possible under certain circumstances, but generally non-electronic submission is discouraged. Submission by Email is not possible. Shortly after a submission deadline the scientific secretariat sends acknowledgements of receipt to the principal investigators of all proposals received. These receipts are sent by Email and contain the official registration number of the proposal.
Proposals are evaluated at the next meeting of the IRAM program committee and recommendations are made to the IRAM Direction. Proposals are rated A (accepted), B (backup, scheduled under certain favourable conditions), or C (rejected). The program committee has twelve non-IRAM members plus the ex-officio members: IRAM direction, 30m station manager and 30m scheduler and the coordinator of the interferometer.
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Observing with ALMA
Early Science
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[Microsoft PowerPoint -...

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http://www.iram.fr/GENERAL/submission/submission.html

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Home | Electronic proposal submission | Proposal forms | Program committee recommendations

Electronic Proposal Submission

Astronomers who wish to submit a proposal for one of the IRAM telescopes should read the following general information:

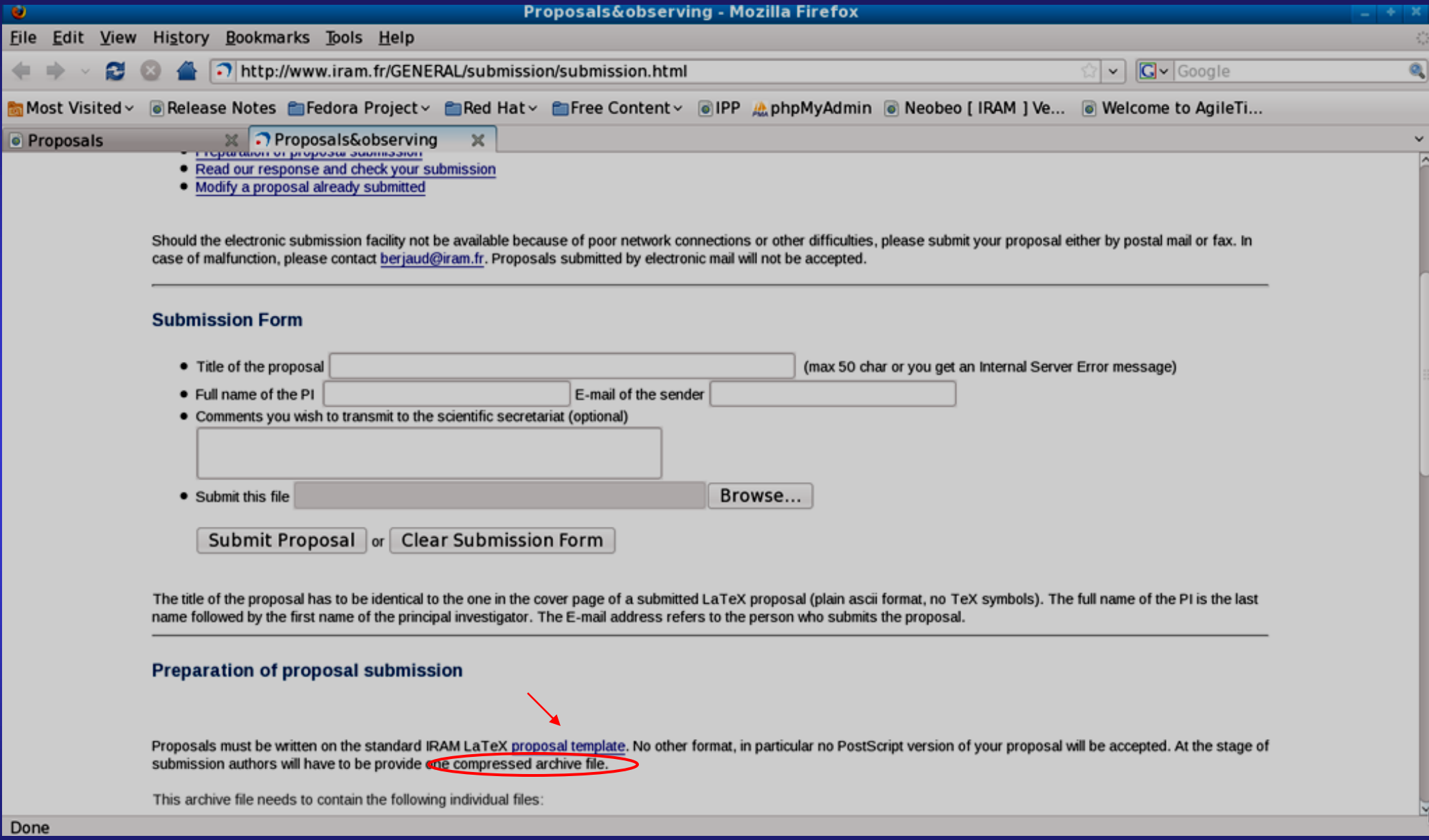
- Preparation of proposal submission
- Read our response and check your submission
- Modify a proposal already submitted

Should the electronic submission facility not be available because of poor network connections or other difficulties, please submit your proposal either by postal mail or fax. In case of malfunction, please contact berjaud@iram.fr. Proposals submitted by electronic mail will not be accepted.

Submission Form

- Title of the proposal (max 50 char or you get an Internal Server Error message)
- Full name of the PI E-mail of the sender
- Comments you wish to transmit to the scientific secretariat (optional)

Done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Modify a proposal already submitted
Should the electronic submission facility not be available because of poor network connections or other difficulties, please submit your proposal either by postal mail or fax. In case of malfunction, please contact berjaud@iram.fr. Proposals submitted by electronic mail will not be accepted.
Submission Form
Title of the proposal
(max 50 char or you get an Internal Server Error message)
Full name of the PI
E-mail of the sender
Comments you wish to transmit to the scientific secretariat (optional)
Submit this file
Browse...
Submit Proposal
or
Clear Submission Form
The title of the proposal has to be identical to the one in the cover page of a submitted LaTeX proposal (plain ascii format, no TeX symbols). The full name of the PI is the last name followed by the first name of the principal investigator. The E-mail address refers to the person who submits the proposal.
Preparation of proposal submission
Proposals must be written on the standard IRAM LaTeX proposal template. No other format, in particular no PostScript version of your proposal will be accepted. At the stage of submission authors will have to be provide one compressed archive file.
This archive file needs to contain the following individual files:
Done

Proposal Forms

A LaTeX style file, proposal.sty, is provided in this directory for preparing IRAM proposals, both for the 30m telescope and the interferometer. To get and save this file, first click on the link, then click "File" and "Save As..." on your browser. Two template files, prop-30m.tex and prop-pdb.tex are available as starting points for writing your 30m or interferometer proposals. For the preparation of your proposal, we ask you to follow the guidelines for the electronic proposal submission.

NOTE: These files have been updated for the next deadline (September 14, 2010 at 17:00 CET (UT+2 hours) for the observing period December 01, 2010 - May 31, 2011); please use the new versions of proposal.sty AND prop-30m.tex or prop-pdb.tex. **Do not mix them with older versions.**

Local contacts - Mozilla Firefox

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- Archive
- Data reduction
  - Visiting astronomers
    - Visitor Schedule
    - Travel to Grenoble
    - Financial support for visiting astronomers
  - Local contacts
  - Data publication policies
  - Data reduction and analysis software
- Documentation
- Contact the SOG

Local Contacts

An IRAM staff astronomer is appointed as Local Contact to every A and B rated project without IRAM internal collaborator. He/she will assist you from the beginning to the end of your project should no IRAM astronomer be collaborating with you. Feel free to contact him after you get the project report with the recommendations of the program committee.

The role of the local contact is to help you set up the observing procedures. You should check the source coordinates and offsets for mosaics, the source velocity, the spectral configuration of the correlator and the observing frequencies. The local contact also helps you to arrange your stay in Grenoble and get started with data reduction. He will keep an eye on the data reduction and verify the data quality. His and your feedback are very important to improve on the system. Note also, that the IRAM interferometer is operated as a service instrument by the IRAM staff. Observations are in general carried out without your presence on the site (in absentee).

Local contacts for the current and previous periods are:

June 2010 - November 2010

December 2009 - May 2010

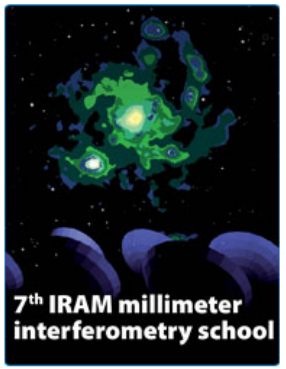
June 2009 - November 2009

December 2008 - May 2009

June 2008 - November 2008

December 2007 - May 2008

June 2007 - November 2007



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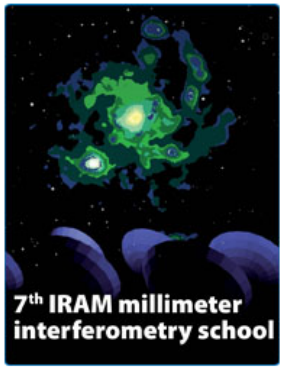
Observing schedule

List of recently scheduled projects with links to all previous observations, and a complete overview of the status of ongoing projects.



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U01E	Lisenfeld	Castro-Carrizo	D	C	27-aug / 02-nov	A	Started
U020	Guillard	Libert	D			A	Completed
UA21	Walter	Krips	D			A	Completed
UB21	Walter	Krips		D	04-jul / 28-aug		Withdrawn
UA26	Feruglio	Neri		C		A	
UB26	Feruglio	Neri	D	C		B	Started
U027	Nesvadba			C	05-mar / 15-may	B	
UB2A	Maiolino		D		02-mar / 14-may	A	Completed
UC2A	Maiolino		D			A	Completed
UF2A	Maiolino		D		04-feb / 15-apr	A	Completed
U02D	Schinnerer	Winters		C	19-jul / 29-sep	B	
UA30	Riechers	Krips	D			A	Reduced

Data publication policies - Mozilla Firefox

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Data publication policies

The following footnote should appear on the first page of papers based on observations made with the PdBI:

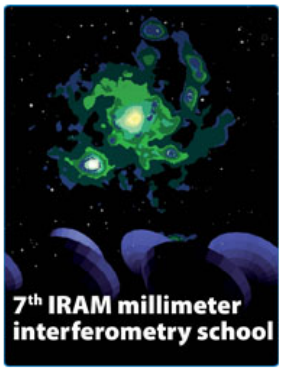
"Based on observations carried out with the IRAM Plateau de Bure Interferometer. IRAM is supported by INSU/CNRS (France), MPG (Germany) and IGN (Spain)."

In addition, publications that arise from work supported by the European Community funded RadioNet project should include the following acknowledgement:

"This work has benefited from research funding from the European Community's Seventh Framework Programme."

IRAM welcomes an acknowledgement to the IRAM staff for help provided during the observations and for data reduction.

IRAM provides preprints free of charge for publication based on IRAM observations. Papers which are accepted in refereed journals and addressed to the IRAM librarian will be published as IRAM preprints.



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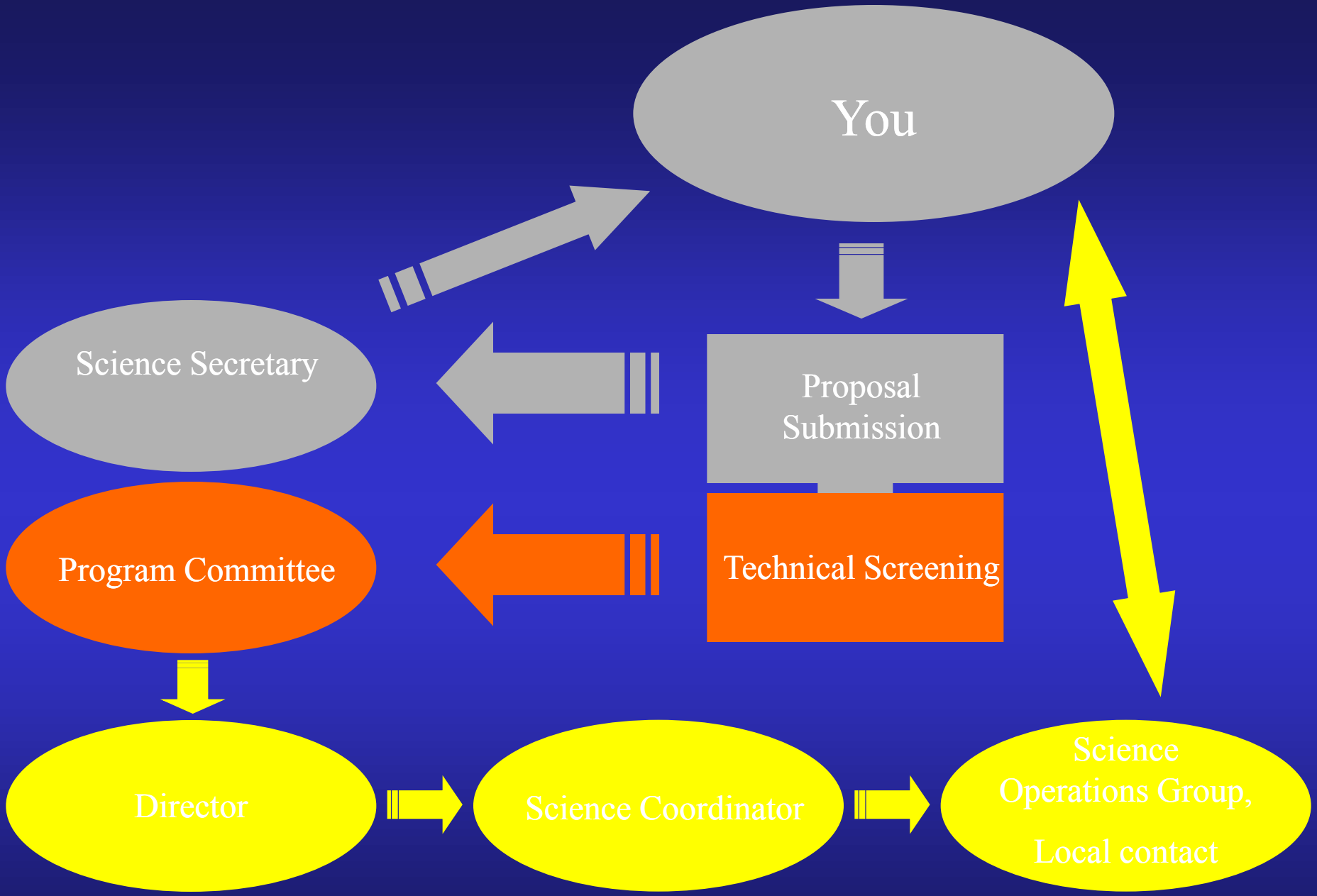
You
Science Secretary
Proposal Submission
Program Committee
Technical Screening
Director
Science Coordinator
Science Operations Group,
Local contact

Any questions on how to request time for the Plateau de Bure array?

- **Check the IRAM Web pages**
- **Ask the Science Operations Group (sog@iram.fr)**

Looking forward to YOUR proposals next March!