



# EVN Proposal Tool (NorthStar)

Bob Campbell, JIVE

- Briefest of histories
- Basic Operations
  - Recent lessons learned
- Solar Activity

# EVN NorthStar Proposal Tool History

- NorthStar..... as in?
- (X) Polaris
- (X) Minnesota's (ex-)NHL team



[www.northstarshockey.com/71run.htm](http://www.northstarshockey.com/71run.htm)

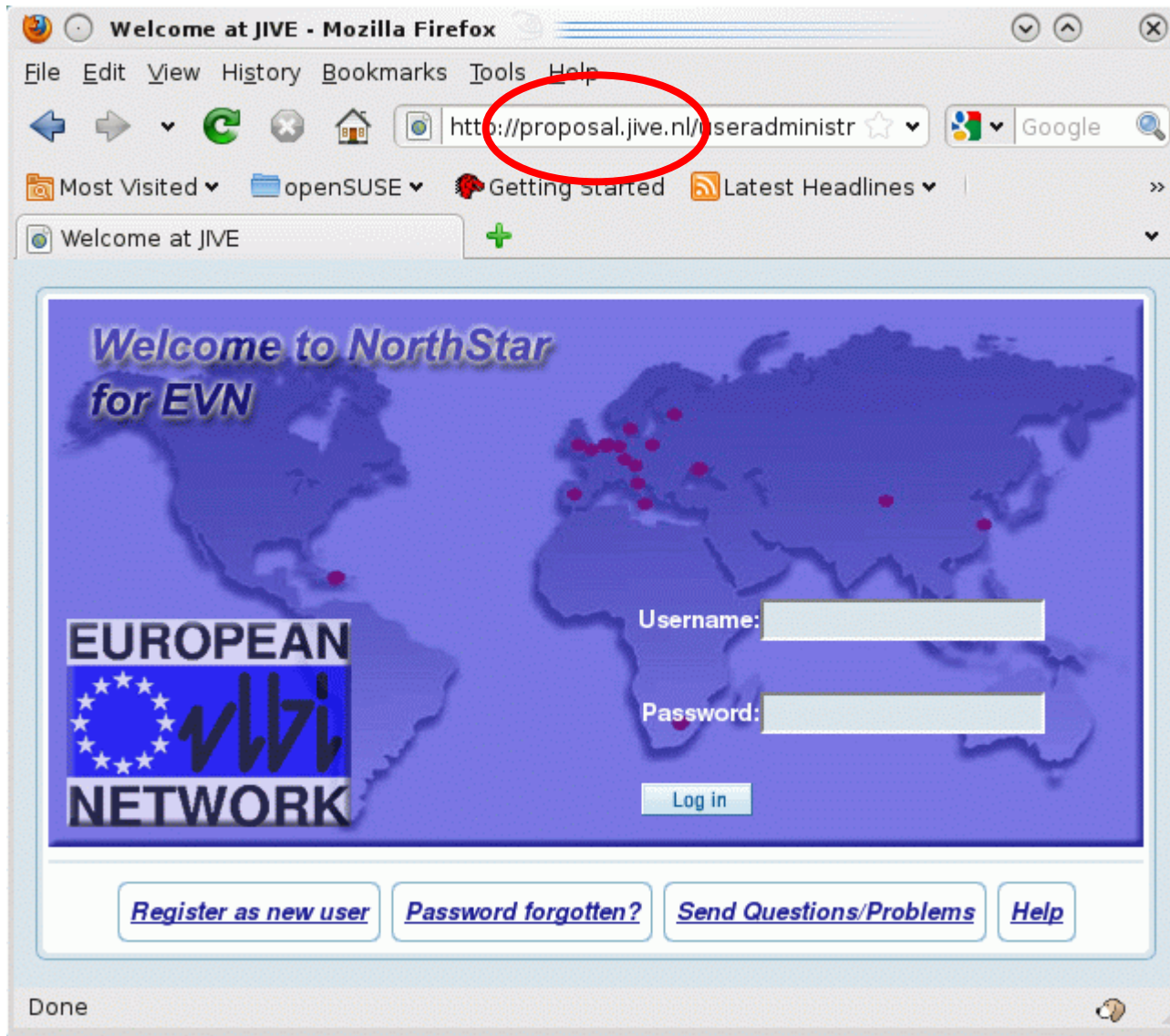


[sportsillustrated.cnn.com/vault/gallery/featured/GAL1139264/1/index.htm](http://sportsillustrated.cnn.com/vault/gallery/featured/GAL1139264/1/index.htm)

# EVN NorthStar Proposal Tool History

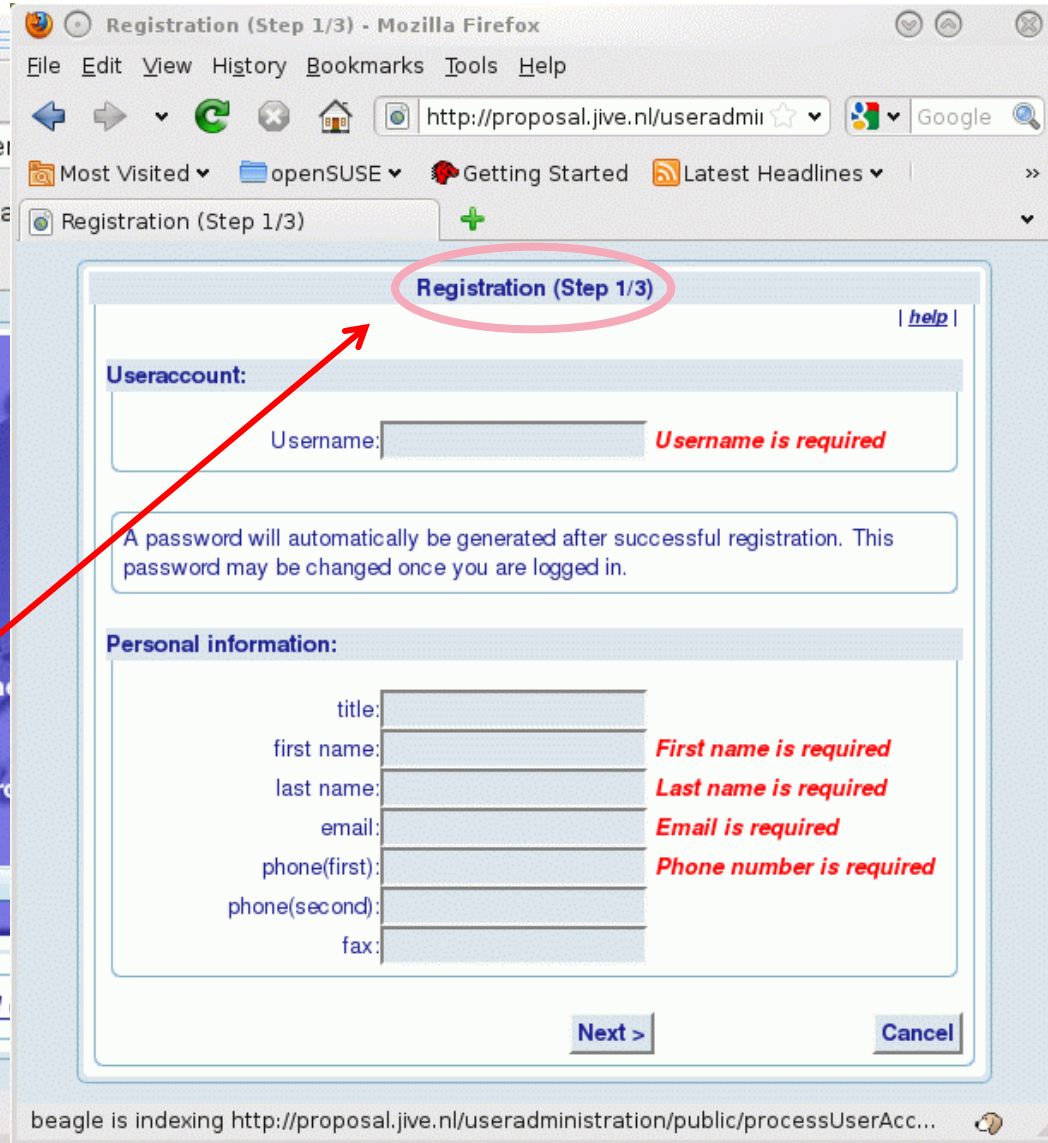
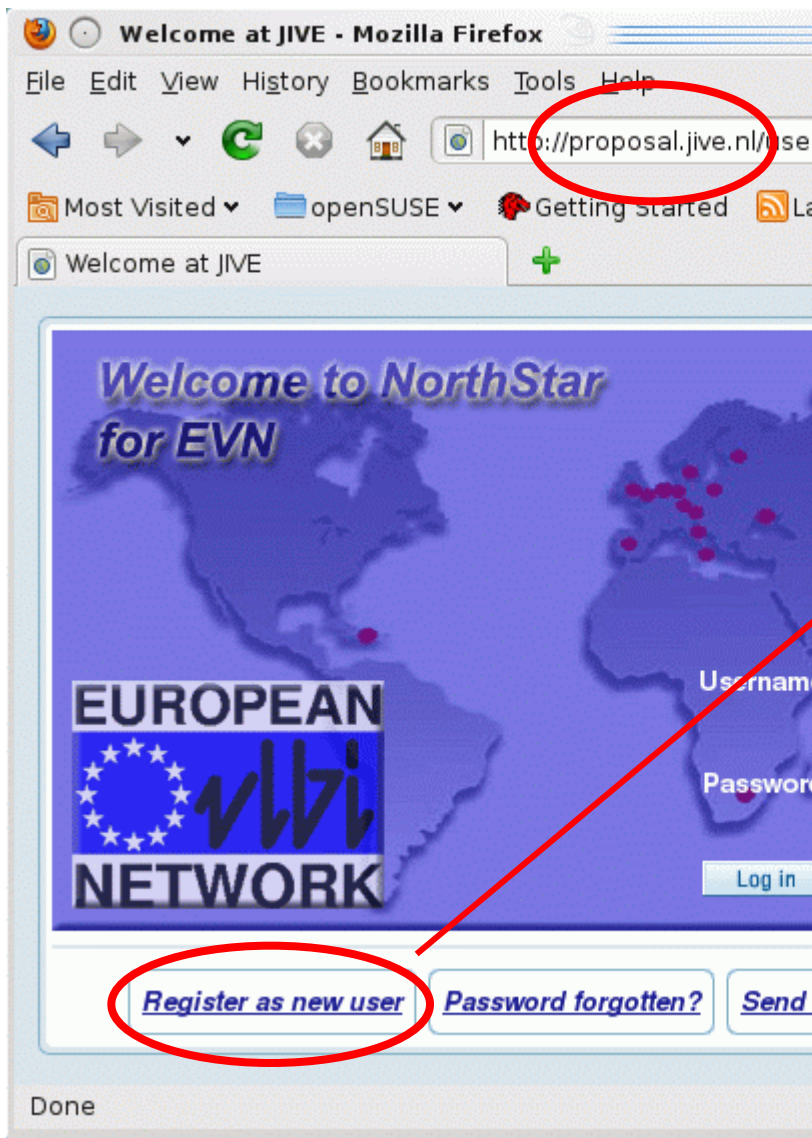
- Results from FP6 RadioNet *Synergy* N.A.
  - Common kernel, different applications
  - Developed primarily in ASTRON
  - Radio: MERLIN, WSRT, LOFAR, Efflesberg
  - Sum-mm/IR: JCMT, UKIRT
  - Optical: ING (WHT, INT), OPTICON
- And of course, the EVN
  - 1<sup>st</sup> use for EVN proposals = 1 feb 2007 deadline
  - All EVN+MERLIN, e-EVN, & Global (EVN+NRAO)
  - Not used for ToO, short-observation proposals
- Don't have to wait until due-date for help

# First Screen





# First Screen



# Start Screen

Proposal List - Mozilla Firefox

File Edit View History Bookmarks Tools Help

http://proposal.jive.nl/proposal/setupProposalList.do?browser=gecko

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Proposal List

Do you want Firefox to remember the password for "campbell" on jive.nl?

Remember Never for This Site Not Now

My Account

RadioNet  
jive  
JOINT INSTITUTE FOR VLBI IN EUROPE

This version of NorthStar is for the submission of proposals to the EVN and Global VLBI network.

More information on upcoming proposal deadlines can be found in the [EVN call for proposals](#).

- The next EVN deadline is 1 October 2010 at 23:59:59 UTC
- Be aware: Fontsizes must be >= 10 in uploaded justification files.

[Read me first!](#)

Telescopes : ☒ EVNandMERLIN ☒ eEVN ☒ GLOBAL

Show reviewed proposals : ☐ Yes ☒ No

Proj_ID	PI	Title	Community	Category	Status	Options
R09A003	Frey	Is there a symmetric object...	Everyone	regular	under review	<a href="#">Copy</a> <a href="#">View</a>

[Create new proposal](#)

NorthStar version v3.2.8d (2010-09-02)

First choice to make = category of proposal:

EVN+MERLIN

e-EVN

Global

# Initial Screen (Applicants Tab)

The screenshot shows a web browser window with the URL <https://proposal.jive.nl/proposal/setupApplicants.do>. The page features the European Network logo and the text "EVN Proposal". A navigation bar contains four tabs: "Applicants", "Justification", "Observing Request", and "Additional Issues". The "Applicants" tab is highlighted with a red circle. Below the tabs is a table with the following data:

Active Participant	Contact Author	PI	Name	Affiliation	Country	Email	Potential Observer
yes			Dr. Bob Campbell	JIVE (Science Ops & Support)	Netherlands	<a href="mailto:campbell@jive.nl">campbell@jive.nl</a>	<input type="checkbox"/>

Below the table are buttons for "Add applicant", "Save and Continue", "Save and Preview", "Save and Exit", "Save and Submit", and "Quit without saving". A status bar at the bottom indicates "NorthStar version v3.2.8 (2008-07-21)".

4 Different "tabs" to complete  
(start initially in "Applicants")



# Adding Applicants

Firefox browser window: Add/edit Applicant - Mozilla Firefox

Firefox browser window: Applicants - Mozilla Firefox

URL: <http://proposal.jive.nl/proposal/processApplicants.do>

Logos: EUROPEAN NETWORK, EVN Proposal, RadioNet jive

Help Index, Community: Everyone, Category: regular, Semester: 10C

Buttons: Applicants, Justification, Observing Request, Additional issues

Red text: **Contact vs. PI**

Red text: **Make sure PI is a registered user.**

Active Participant	Contact Author	PI	Name	Affiliation	Country	Email	Potential Observer	
yes	<input checked="" type="radio"/>	<input type="radio"/>	Dr. Bob Campbell	JIVE (Science Ops & Support)	Netherlands	<a href="mailto:campbell@jive.nl">campbell@jive.nl</a>	<input type="checkbox"/>	
invited after next save	<input type="radio"/>	<input checked="" type="radio"/>	Carl Yastrzemeski	Fenway U.	Redsoxia	<a href="mailto:dev.null@jive.nl">dev.null@jive.nl</a>	<input type="checkbox"/>	<a href="#">Edit</a>
invited after next save	<input type="radio"/>	<input type="radio"/>	Boog Powell	Memorial Obs.	Balmerland	<a href="mailto:dev.null2@jive.nl">dev.null2@jive.nl</a>	<input type="checkbox"/>	<a href="#">Edit</a> <a href="#">Delete</a>

Buttons: Add applicant, Save and Continue, Save and Preview, Save and Exit, Save and Submit, Quit without saving



# Justification Tab

Justification - Mozilla Firefox

File Edit View History Bookmarks Tools Help

http://proposal.jive.nl/proposal/setupJustification.do

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Justification

EUROPEAN NETWORK

e-EVN Proposal

RadioNet jive JOINT INSTITUTE FOR VLIN IN EUROPE

Help Index

Community: Everyone  
Category: regular  
Semester: 10C

Help

Applicants **Justification** Observing Request Additional issues

Title (Max characters: 80) : The universe: what's up with that? (Characters entered: 35 ) \*

Abstract (Max words: 200) : We propose to use the features of the e-EVN to determine all aspects of the universe empirically once and for all. On the off chance that analysis of the proposed epochs still leave anything not completely understood, we will come back with a more targeted follow-up proposal. After that, we should all be able to go surfing for an extended period of time. (Words entered: 65 ) \*

Justification File(s):  
Instructions for preparation

First Justification File (mandatory) : None uploaded \* Upload  
Uploaded :

Second Justification File (optional) : None uploaded Upload  
Uploaded :

Figure(s) File (optional) : None uploaded Upload  
Uploaded :

Save and Continue Save and Preview Save and Exit Save and Submit Quit without saving

NorthStar version v3.2.8d (2010-09-02)

Length monitored.

4-page total limit:  
2 text + 2 figs  
Other considerations in help

# Additional Issues Tab

The image shows a screenshot of the EVN Proposal system interface in a Mozilla Firefox browser. The main window is titled 'Additional Issues - Mozilla Firefox' and displays the 'Additional issues' tab. A red circle highlights the 'Add New Student' button, with a red arrow pointing to a modal window titled 'Add/edit Thesis'.

**Main Window: Additional Issues**

- URL: <http://proposal.jive.nl/proposal/processAdditionalIssues.do>
- Navigation: Applicants, Justification, Observing Request, **Additional issues**
- Section: Information about all Students involved :
  - Add New Student** (highlighted)
- Form Fields:
  - Are there linked proposals submitted to this TAC?: ☒ Yes ☐ No
  - Provide details: RSC99, EC123, EC666
  - Are there linked proposals submitted to other TACs?: ☐ Yes ☒ No
  - Are there relevant previous allocations?: ☒ Yes ☐ No
  - Provide details: EC666 probed the enormity of the universe; observations successful & analysis almost complete (initially underestimated its magnitude)
  - Additional Remarks:
- Buttons: Save and Continue, Save and Preview, Save and Exit, Save and Submit, Quit without saving

**Modal Window: Add/edit Thesis**

- URL: <http://proposal.jive.nl/proposal/setUpThesis.do>
- Form Fields:
  - Is the student an applicant?: ☒ Yes ☐ No
  - Student: Boog Powell
  - Student Level: Doctor
  - Is the supervisor an applicant?: ☒ Yes ☐ No
  - Supervisor: Dr. Bob Campbell
  - Data required for completion assignment?: ☒ Yes ☐ No
  - Expected completion Date: 2012/06 yyyy/mm
- Buttons: Ok, Cancel

beagle is indexing <http://proposal.jive.nl/proposal/setUpThesis.do>

# Observing Request Tab (0)

Observing Request - Mozilla Firefox

File Edit View History Bookmarks Tools Help

http://proposal.jive.nl/proposal/vlbi/setupObservingRequest.do

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Observing Request

**EUROPEAN NETWORK** **GLOBAL Proposal** **NRAO** **RadioNet jive** **JOINT INSTITUTE FOR VLBI IN EUROPE**

[Help Index](#)

Community: Everyone  
Category: regular  
Semester: 10C

[Help](#)

Applicants Justification **Observing Request** Additional issues

You must specify target sources setup here.

[Specify a new target/observation](#)

Choose a scientific category : -- None Specified --

Scheduling Assistance Required : -- None Specified --

Choose a rapid response science category : -- None Specified --

Save and Continue Save and Preview Save and Exit Save and Submit Quit without save

NorthStar version v3.2.8d (2010-09-02)

Done

Specific to Globals

# Observing Request Tab (Array)

Observation - Mozilla Firefox

File Edit View History Bookmarks Tools Help

http://proposal.jive.nl/proposal/Vlbi/setupObservation.do

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Observation

Save and Return Save and Continue Help

Waveband requested: 18 cm

Global Network standard bands Special frequencies (including spectral-line observations)

Specify Special frequencies: OH 1665/7 at z=0.02, thus 1632.75/1634.67

Available networks:

Network	Available Telescopes	Total time (hrs per epoch)	Covering GST range
<input checked="" type="checkbox"/> EVN	<input checked="" type="checkbox"/> Jb-1 <input type="checkbox"/> Jb-2 <input type="checkbox"/> Cm <input checked="" type="checkbox"/> Wb <input checked="" type="checkbox"/> Ef <input checked="" type="checkbox"/> Mc <input type="checkbox"/> Nt <input type="checkbox"/> On-85 <input type="checkbox"/> Sh <input type="checkbox"/> Ur <input checked="" type="checkbox"/> Tr <input type="checkbox"/> Hh <input checked="" type="checkbox"/> Sv <input type="checkbox"/> Zc <input type="checkbox"/> Bd	8	2130-0530
<input type="checkbox"/> MERLIN	<input checked="" type="checkbox"/> Ar	2.5	0300-0530
<input checked="" type="checkbox"/> Arecibo	<input checked="" type="checkbox"/> Ro-70	8	2130-0530
<input checked="" type="checkbox"/> EVN affiliates	<input type="checkbox"/> Br <input type="checkbox"/> Fd <input checked="" type="checkbox"/> Hn <input type="checkbox"/> Kp <input type="checkbox"/> La <input type="checkbox"/> Mk <input checked="" type="checkbox"/> NI <input type="checkbox"/> Ov <input type="checkbox"/> Pt <input checked="" type="checkbox"/> Sc	5	0030-0530
<input checked="" type="checkbox"/> VLBA	<input checked="" type="checkbox"/> GBT <input type="checkbox"/> Y1 <input type="checkbox"/> Y27 (Y1 and Y27 are mutually exclusive)	5	0030-0530
<input type="checkbox"/> Other			

Preferred VLBI session or range of dates for scheduling, and why. :

Dates which are NOT acceptable, and why. :

beagle is indexing http://proposal.jive.nl/proposal/Vlbi/setupObservation.do



# Observing Request Tab (Format)

Observation - Mozilla Firefox

File Edit View History Bookmarks Tools Help

http://proposal.jive.nl/proposal/vbi/setupObservation.do

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Observation

**Recording format:**

- Aggregate bitrate : 512 Mbps
- Number of polarizations : 2
- Number of subbands per polarization : 8
- Bandwidth per subband : 8 MHz
- Oversampling : 1
- Number of bits : 2
- Number of basebands : 16
- Number of Msamples per second : 16

**Edit Recording Format**

Multi-epoch observation? : ☒ Yes ☐ No

**Multi-epoch observation:**

3 epochs separated by 2 session(s)

**Processor information:**

- Number independent correlator passes : 2
- Choose processor : JIVE
- Maximum number of antennas to be correlated : 12
- Averaging time : .5
- Spectral channels per Baseband channel : 512
- Choose special processing : ☐ XPol ☐ Multiple Fields
- Other special processing? : ☒ Yes ☐ No
- Other special processing description : separate continuum (32 frq.pt, 0.5s) / line passes (512 frq.pt, 1s)

beagle is indexing http://proposal.jive.nl/proposal/vbi/setupObservation.do

Edit Recording Format - Mozilla Firefox

File Edit View History Bookmarks Tools Help

http://proposal.jive.nl/proposal

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Edit Recording Format

**Edit Recording Format**

☐ Specify aggregate bitrate (use network defaults) ☒ Specify detailed setup

**Detailed setup**

- Number of polarizations : 2
- Number of subbands per polarization : 16
- Bandwidth per subband : 8 MHz
- Oversampling : 1
- Number of bits : 2

Calculated aggregate bitrate : 1024 Mbps

Number of baseband converters : 32

Number of Msamples per second : 16

**Special Issues :**

**Ok** **Cancel**

beagle is indexing http://proposal.jive.nl/proposal/vbi/processRecordingFormat.do

Some impossibilities  
pass undetected

# Observing Request Tab (Sources)

Observation - Mozilla Firefox

File Edit View History Bookmarks Tools Help

http://proposal.jive.nl/proposal/Vbi/setupObservation.do

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Observation

More than 30 sources in this observation? : ☐ Yes ☒ No

Target Sources :

Source	RA	Dec	Equinox	total flux	corr. flux	peak/RMS	F.o.V.
CGU11	00:00:01.234	15:14:13.121	J2000	0.2	67	1000	6

1<sup>st</sup> target already entered

New Target Source :

Source name : WT Dor  NB: proposers should check coordinates

RightAscension : 00:12:21.12 hh:mm[:ss.sssss]

Declination : 10:55:55.55 [+|-] dd:mm[:ss.sssss]

Equinox : J2000

Total flux density (Jy) : 0.05

Correlated flux density (mJy) : 40

Peak/RMS needed : 50

Field of View (arcsec) : 3

Phase Reference Sources? ☒ Yes ☐ No

Phase Reference Sources :

List of phase reference sources is empty

New Phase Reference Source :

Reference source name :

RightAscension :  hh:mm[:ss.sssss] RA Error (mas) : 2.360

Declination :  [+|-] dd:mm[:ss.sssss] Dec Error (mas) : 2.130

Equinox : J2000

Correlated flux density (mJy) :

Separation from target source (deg) :

1<sup>st</sup> target already entered

Entering 2<sup>nd</sup> target

Upload target list - Mozilla Firefox

File Edit View History Bookmarks Tools Help

http://proposal.jive.nl/proposal/Vbi/setupTargetFile.do

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Upload target list

Upload target list

Template setup to be used for uploaded target list :

Total\_flux (Jy) : 0.0

Corr\_flux (mJy) : 0.0

Peak\_RMS : 0.0

Field of View (arcsec) : 0.0

Format reminder:

Fieldname RA Dec Equinox [Total\_flux [Corr\_flux[Peak\_RMS [Field of View]]]

An example:

m35 06:45:59.93 -20:45:15.1 j2000 100 80 50 25

Upload targets file :

# Observing Request Tab (I)

Observing Request - Mozilla Firefox

File Edit View History Bookmarks Tools Help

http://proposal.jive.nl/proposal/Vlbi/setupObservingRequest.do

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Observing Request

GLOBAL Proposal

NETWORK

Community: Everyone  
Category: regular  
Semester: 10C

Applicants Justification Observing Request Additional issues

Help

Observation No	Number of targets	Network	Hours	Waveband	
1	2 target(s)	EVN, Arecibo, VLBA, Other NRAO	4.0, 4.0, 4.0, 4.0	6 cm	Edit  Copy  Delete

Specify a new target/observation

Choose a scientific category : -- None Specified --

Scheduling Assistance Required : -- None Specified --

Choose a rapid response science category : -- None Specified --

Save and Continue Save and Preview Save and Exit Save and Submit

Quit without save

beagle is indexing http://proposal.jive.nl/proposal/Vlbi/setupObservingRequest.do

xv controls

Now you have one observation defined

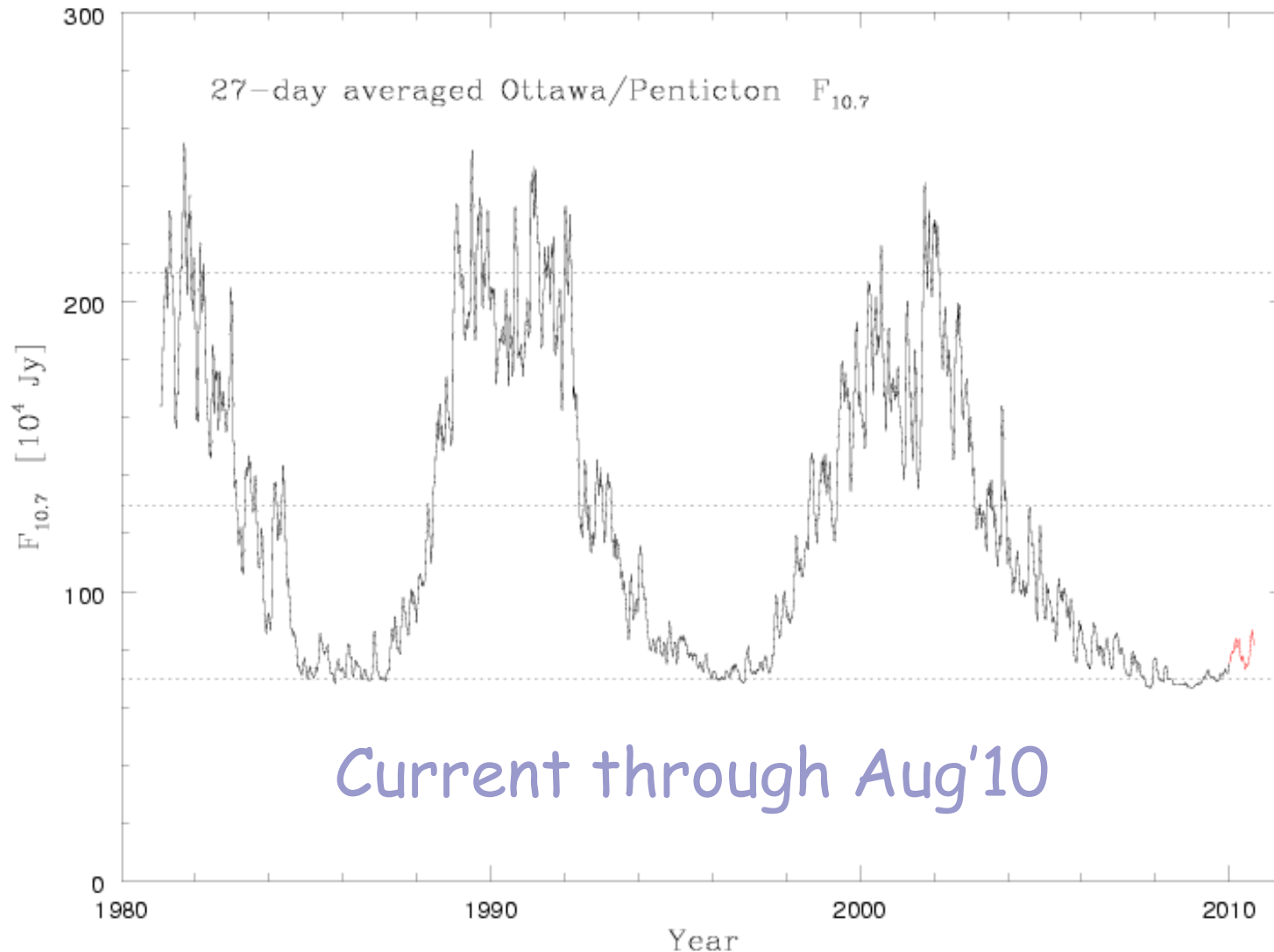
Can start another one

# Multiple "Observations"

- Examples of what may comprise an **Observation**
  - Multiple frequency bands → separate obs
    - Simultaneous  $S/X = 1$  band
  - Multiple epochs → 1 obs (use "multiple epochs" box)
    - Multiple epochs for kinematics or structure monitoring
  - Multiple full-tracks on 1 source → 1 obs
    - Multiple tracks to build up sensitivity
  - Multiple-source full-tracks → separate obs (per  $\Delta GST$ )
  - Multiple-source snapshots in 1  $\Delta GST$  → 1 obs
  - Multiple  $\alpha$ -grouped sources → separate obs (per  $\Delta GST$ )
- **"Total time"**: typically  $\Sigma\{t_{(obs, tracks)}\}$  (but not  $\Sigma_{epochs}$ )

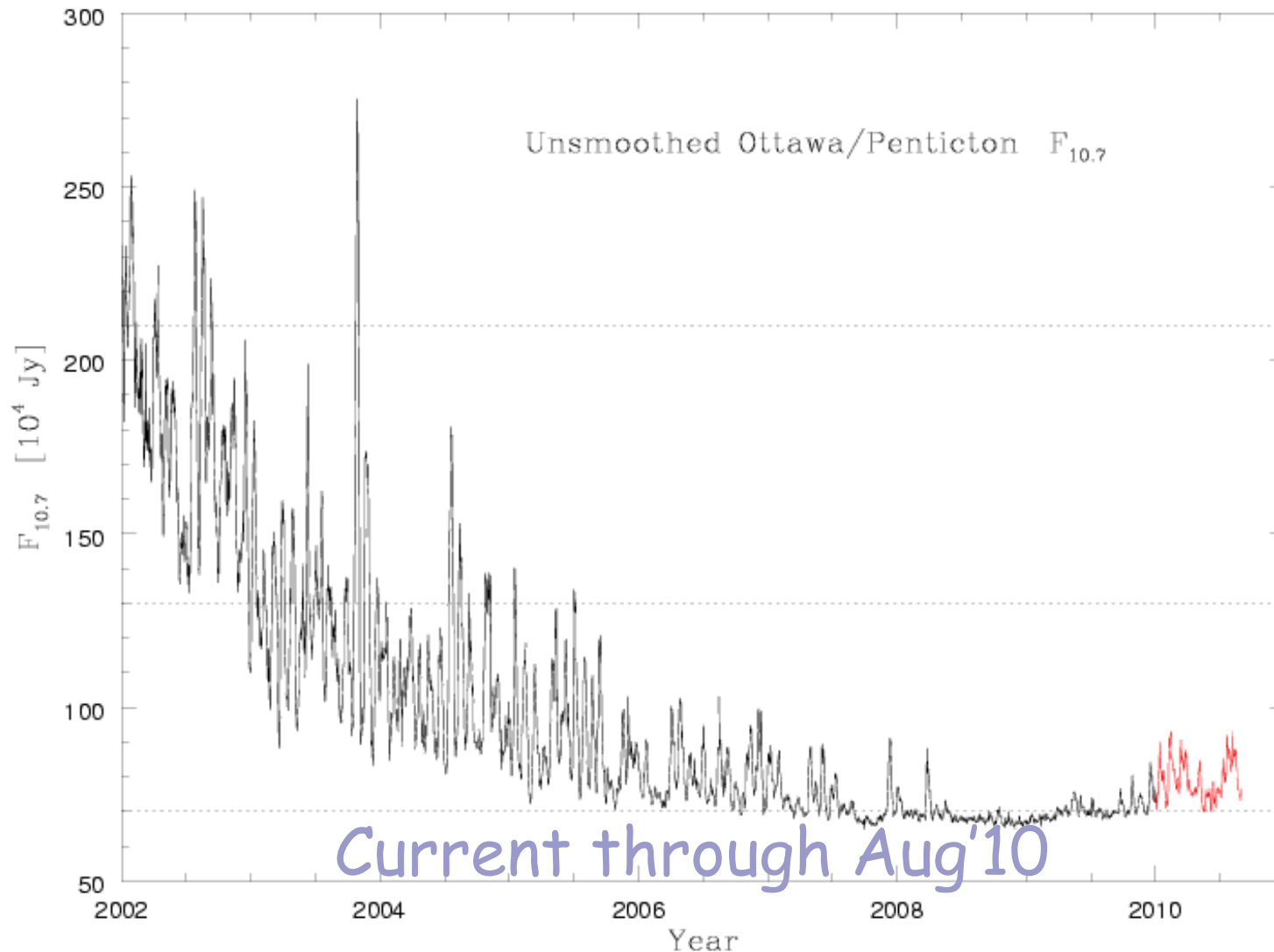


# Solar Activity



The near solar-min conditions continue to linger; the upswing to the next solar-max seems to be trying to wake up...

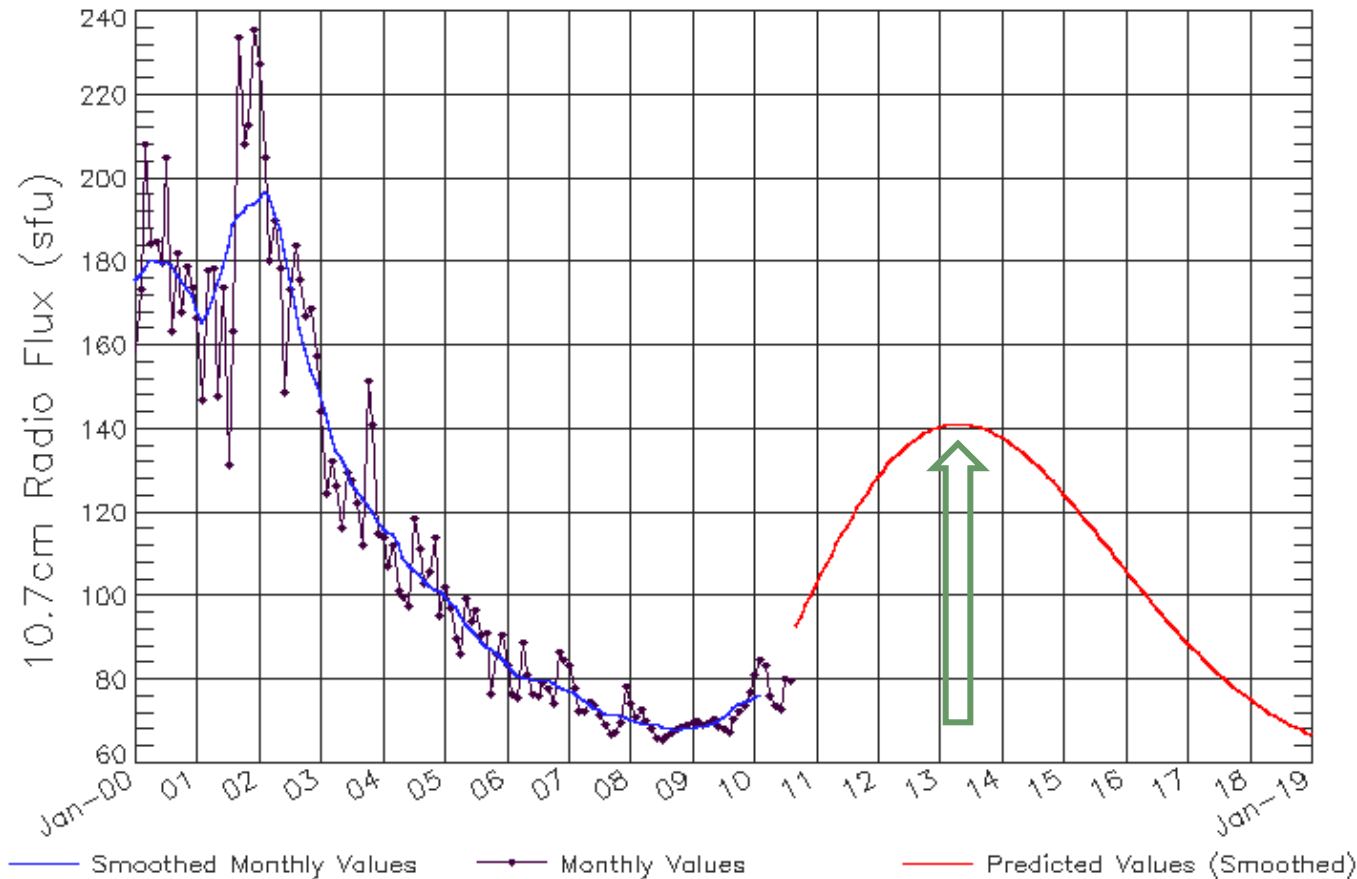
# Solar Activity



The near solar-min conditions continue to linger; the upswing to the next solar-max seems to be trying to wake up...

# Predictions for this Solar Cycle

ISES Solar Cycle F10.7cm Radio Flux Progression  
Observed data through Aug 2010



Smoothing =  
13-month

Sep'08 pred:  
solar max.  
expected in  
mid-2012.

ref: Space  
Weather  
Prediction  
Center, via

[www.sec.noaa.gov](http://www.sec.noaa.gov)

Updated 2010 Sep 7

NOAA/SWPC Boulder, CO USA