

ECSV Discussion
28 August 2012, 10am in room 317

Attendees:

Sanjay Bhatnagar, Bryan Butler, Barry Clark, Eric Greisen, Miller Goss, Jeff Kern, Josh Marvil, Minnie Mao, Amy Mioduszewski, Emmanuel Momjian, Steve Myers, Susan Neff, Kristina Nyland, Nurur Rahman, Nirupam Roy, Michael Rupen, Bob Sault, Deb Shepherd, Lorant Sjouwerman, Ken Sowinski, Gustaaf Van Moorsel, Joan Wrobel, Hsi-Wei Yen

Minutes:

News:

- Susan Neff has arrived. She will be working with Frazer, Ravi Subrahmanyam and Nurur Rahman on P-band commissioning.
 - Note: the next 4-band test campaign will start 24sep, in the move.
- Bob Sault is looking at the issues where we have phase offsets and varying amps (1-few %) that are baseline dependent and therefore non-closing. He will also be working with Nurur on linear polarization issues in the comparison between CASA and Miriad.
- New and soon-to-be-here RSROs:
 - Dave Roberts came 26 August (sitting in the office next to Ravi). He will be here until 20 December.
 - Bob Mutel will be here 3 Sept, and staying through Oct & Nov working on phased array commissioning with Vivek, Jon, Amy and Walter. Bob will be working 2/3 RSRO and 1/3 visiting scientist.
 - Nissim Kanekar will likely be here in mid- to late-October to work with Frazer on low-band. Still under discussion.
- Joe Lazio will be here at the end of September
- RSROs who have just left:
 - Betsy Mills left on Monday
 - Joanna Corby left last Friday

Correlator and general system health (Michael)

- We have had recent problems with Baseline Board (BLB) stacking and recirculation. We believe we have BLB stacking issues solved (this was a Configuration Mapper problem) but recirculation still has issues that relate to constraints of how we use the recirc chips in the correlator. We still need to test more thoroughly BLB stacking before it is ready to try. No rush, we have no programs right now that need BLB stacking.
- 3-bit –
 - We have made good progress on post processing. Vivek will report next week.

- Really good news: there are many more pretty-good teledynes than we thought now that we have been fine tuning them and giving them appropriate power levels, etc...
- Some updates to the executor have been made that means we should be able to get by with a bit less hand-editing of the SBs. This is in preparation for auto-OPT setup for 3-bit SBs.
- Recent changes in the software mean that gain-slope equalization and attenuator settings are faster – few to 1 min versus 10 min. Major improvement. We can see the light at the end of the tunnel.
- Phasing and VLB-related activity:
 - Amy has been testing single sub-band phasing for VLB phasing. The phased VLA seems to work. We need to make sure that this is easier and more obvious for the user to set this up in the OPT.
 - We had a VLB test last week. The test was to check all the sub-band bandwidths that we are offering for the spring – the data hasn't been correlated yet.
 - New code has been put in the production executor for wide-band phasing and this is now ready for Barry to look at.
- Michael, Ken & Vivek are trying to increase the flexibility in the correlator (e.g., allowing mixed recirculation and BLB stacking). This requires that we change some things in the depths of the correlator. We are making good progress, still work to be done.
- Sub-arrays:
 - We are running into Correlator Back End (CBE) issues, Martin is looking into it still.

Software status (Bryan):

- There have been no missing BDFs (Binary Data Files) for quite some time.
- The next OPT version, 1.14, has been pushed to webtest and is ready for general testing.
 - The next release is focused on VLBA phasing. If you are asked to help test, please do so. We are trying to do more incremental releases.
- The Archive tool is still 'fragile' - Conversions to uvfits and to measurement sets are both failing and there have been some hardware failures as well. Bryan and John Benson will be working on this with higher priority.
- The scheduling tool has been doing very well. There have been very few gaps in the observing schedule and what is scheduled is reasonable says Barry.
- Mosaicing – we need to revisit where mosaicing fits into our plans and how we move forward (don't want to use Andreas' CASA tool).
 - In A config we have a lengthy project for mosaicing (COSMOS field). Pointed field (not OTF).
- We are fully responsible for the PST for the next proposal call.
 - We have to get rid of the GOST, SRCT and TOOL – this should all be integrated into the PST.

Proposals and Observing (Joan):

- We are preparing for the proposal evaluation – technical reviews and TAC meeting are up coming.
 - **Technical reviews are due 17 September.**
 - **The reviews are more complex than in previous years. Start early!**
 - **We may want to have a meeting or e-mail in a week or two to give tips on how to do good technical evaluations.**
- Observers have been notified about their BnA programs and asked to put in their SBs.
- There are 3 approved A-array ECSO and RSRO programs.

CASA (Jeff) -

- We have a new version of CASA test out.
 - This includes per-plane restoring beam generated in CLEAN.
 - **This will need heavy user testing (this is to be coordinated by Juergen) in CLEAN and image analysis tasks that heavily depend on the shape of the restoring beam.**
 - Please consider volunteering and get back with Deb!
- Testing of the parallel clean (pclean) was done by Joanna. See Joanna's report from last week.
 - 3000x3000 with 5K components in the clean takes about an hour to do in parallel clean.
- A freeze of the CASA code for the next release CASA 4.0 is slated for 15 Sept.
 - In principle, CASA 4.0 will only need component lists for flux calibrator models. This may help Amy with developing L-band models that have confusing sources in the outer primary beam and side-lobes.
- Amy has been working on new S-band data models but she needs A configuration data so the model development is on hold right now.
 - She will put SBs into the queue soon. Joan would like to schedule this observation very early in A config.
 - Amy needs to do some testing on how to develop models for sources with confusing sources in CASA in order to create new L-band models. It may be best for her to test component list models will be needed.
- Gain curve creation:
 - Rick has just supplied Bryan with new numbers (elint coefficients) based on a test that he did on Friday.
 - Bryan will then work out the proper gain curve files needed for CASA and AIPS. He expects to get to this next week (after he works on an issue in the setjy correction for ALMA data).
- Betsy has made the casaguides more organized and user-friendly. She is asking for people to review this. Please look at what she has done:
 - She created a new front page:
<http://casaguides.nrao.edu/index.php?title=NewPage>

- She also made slight organizational changes to the following pages:
<http://casaguides.nrao.edu/index.php?title=HTT2> (hints tips and tricks)
<http://casaguides.nrao.edu/index.php?title=UST2> (User scripts and tasks)
- And created a list of all tutorials:
<http://casaguides.nrao.edu/index.php?title=List of All Tutorials>
- Hsi-Wei has been working on the commissioning of switched power application under the direction of Vivek. He is using CASA. There are some scaling factors between 3 and 8-bit and he is looking into some issues with Vivek. Note: AIPS doesn't try to do 3-bit calibration so there can be no comparison between CASA and AIPS here.
 - Hsi-Wei needs to understand how to edit bad switched power data before application to the source data. Urvashi knows how to do this and Hsi-Wei will check in with Urvashi after the meeting to find out how to edit bad switched-power values. Then he will check with Jeff Kern to get the name of someone in ESO that he can work with on this while Urvashi is traveling.