

ECSV Discussion

10 July 2012, 10am in room 317

Attendees:

Bryan Butler, Barry Clark, Joanna Corby, Vivek Dhawan, Dale Frail, Eric Greisen, Miller Goss, Cornelia Lang, Ann Mao, Heidi Medlin, Betsy Mills, Emmanuel Momjian, Juergen Ott, Frazer Owen, Rick Perley, Nurur Rahman, Nirupam Roy, Kristina Nyland, Susie Schmidt (U of Iowa), Deb Shepherd, Lorant Sjouwerman, Ken Sowinski, Ravi Subramanya, Kathryn Weil, Gustaaf van Moorsel, Joan Wrobel

Minutes:

Correlator and general system health (Ken, Michael)

- A power outage on the West arm caused us to loose 5 antennas. The problem occurred when a transformer was shorted to ground and blew the power to the antennas located beyond the transformer. The transformer should be replaced tomorrow. In the mean time, we are observing filler projects that can be done in any configuration and that can deal with this relatively poor weather.
 - Michael and Joan announced that given the limited number of observing programs that we can run, we are finding fairly large gaps in the schedule. We expect to have gaps tonight as well. If anyone has tests or approved science programs they can get useful data one in this crippled configuration state, please submit them ASAP.
- Antenna 10 was moved into the barn so we are down 6 antennas now (5 on the West Arm)..
- We are also down a baseline board pair in the correlator due to the power outage.
- Phased array testing:
 - We had another test this morning involving the phased VLA with the inner few VLBA stations. Phasing worked fine and the Mk5 unit was being written to but we don't know if there were any errors – data will be evaluated when we correlate the data later this week
- 3-bit testing:
 - Blocker issue 1 – running a 3bit program leaves the system in an odd state sometimes. We have been trying to isolate the problem but the power outage has interrupted the effort. We will get back to this with high priority.
 - Blocker issue 2 – There are issues with setups of a 3-bit program. This appears to be a firmware problem that is still being investigated.
 - Cornelia is working with 3-bit data to evaluate the switched power application and see how this might help us with flux/gain calibration. Right now she is stuck and needs information about how to apply switched power in CASA. Bryan suggested that she and Vivek email

George Mollenbrock, Steve Myers and Stuart Corder to ask them about how to apply switched power in CASA.

Software status, including CASA (Bryan & Juergen)

- The call for proposals went out last night. We have already had about 6 people who have registered. We should start to see real users on the PST soon.
- The new weather station is still in a strange state, should be fixed in 1 week
- Gains curves in AIPS and CASA need to be updated as soon as feasible. Rick has provided the appropriate coefficients to derive the gain response as a function of elevation now and before Dec 2011. For about 6 months, starting around 19 December 2011, the sub-reflector correction that rotated the sub-reflectors to compensate for the fold of the antenna dish as a function of elevation was zeroed accidentally. This caused the gain response of the antennas to be different (e.g. much worse) than previously measured. Once Bryan has generated the gain curve data needed for AIPS and CASA, he will give this information to Eric (for AIPS) and the CASA team so they can implement this gain response correction for the time it is applicable.
- There is a 1.13 release candidate for the OPT that is on “web-test”. The Software group will evaluate today whether it is ready for internal testing. This is in prep for the big release of 1.14
- The OST (Scheduler) has been updated.
- The Archive tool is “particularly fragile” right now. There is more than one archive tool ticket per week being submitted. Various problems are being tracked down.
- CASA:
 - There is a known bug in CASA exportuvfits introduced when Eric identified a problem in the CASA uvfits format and Honglin tried to fix it, introducing an even worse bug. John has a hack in place – he calls an older, working version for certain data being extracted by the archive. Honglin is working on figuring out what is wrong with the code.
 - How CASA and C++ is bound together with python is being upgraded in the current developer version. Most of the problems have been sorted out but some regression tests are still failing. This is the biggest thing that is happening.

Review where we stand on the documentation and tools, what users are likely to find problems with and what our helpdesk will have to compensate for.

(Everyone - see CfP documentation status below)

- There is a problem that we are getting into: we are patching in new ideas and concepts and the OSS is starting to lose its continuity. It needs to be re-worked completely in the near future.
- Note that we have some confusing tools that are only for this release. The documentation associated with these one-off tools are also confusing – there is no way around this and we must be prepared to field helpdesk tickets from

confused users who want to write a proposal. See <https://science.nrao.edu/facilities/evla/proposing/vlapst> for a summary of the tools and what people have to do to submit proposals in the various categories.

- The most difficult thing will be the spectral line setup and the SRCT use (which has bugs).
- Helpdesk tickets will show us where we have problems with our documentation. If Gustaaf sees issues that can be fixed, he will ask people here to help clarify the documentation.
- We have a good description of the shared risk observing restrictions but we need to include the general observing summary on this same page.
 - *This was done right after the ECSV meeting – action complete.*
- Juergen recommended that we need to sort out terminology (spectral window versus sub-bands there is potential that they can mean different things, how do we reconcile?). We should also consider whether we need to be consistent with ALMA. They use the terms ‘basebands’ and ‘spectral windows’.
 - *Deal with this later. Deb is keeping a list of things we need to do to transition to operations. This and the OSS complete re-write will be high up on the list.*
- POP items must be defined for FY13 and Deb will make sure all know what we are committing to for each proposal cycle.
- We need examples for general observing programs to guide users through general observing in a spectral line mode. Michael will work with Juergen and put this in the Spectral line guide.
 - Cornelia and Betsy as well as Joanna will give Michael their spectral line programs which will be good examples.
- Overheads for 3-bit observing needs to be estimated ASAP. Vivek and Michael will give this to Rick.
- Idea from Bryan: overhead estimates should be added to the sensitivity calculator. Coordinate with Mark – this would be very nice to have in the next round.
- Gustaaf will create an FAQ with the 3-bit overhead we recommend.
-

CfP documentation status

Updated 10jul12

Documentation preparation for the call for proposals (Everyone)

- Call must go to CV on 29 June. Documentation due date will be 1 July. So it can be reviewed and made consistent by 9 July.
- Status of various sections of the OSS:
 - Rick – ***Almost DONE, still making some updates***
 - 4.1 Resolution – ***DONE***

- 4.2 Sensitivity - ***DONE***
 - 4.3 EVLA Frequency Bands and Tunability - ***DONE***
 - 4.6 RFI - ***DONE***
 - 4.10 Cal and Flux Density Scale - ***DONE***
 - 4.11 Complex Gain Calibration - ***DONE***
 - 4.15 Snapshots - ***DONE***
 - 4.16 Shadowing and Cross Talk - ***DONE***
- Emmanuel - ***DONE***
 - 4.2 Sensitivity - ***Done by Rick***
- Steve - ***DONE***
 - 4.4 FoV - ***DONE***
 - 4.12 Polarization - ***no changes needed***
 - ***Steve says on 29jun12:*** we don't have anything new to add unless Rick wants to add his table of the polarization fraction and angle on the standard sources, equivalent to whats in the old VLA guide at:
<http://www.vla.nrao.edu/astro/calib/manual/polcal.html>
This doesn't have to be done now, as its not particularly relevant for proposal prep but more for actual observing.
 - 4.17 Combining configs and mosaicing - ***Steve added a link to the evlaguides page on mosaicing to 4.5.2 & 4.18 - DONE***
- Claire - ***DONE***
 - 4.7 Subarrays - ***DONE***
 - 5.8 Data processing - ***DONE***
 - 5.9 Travel Support - ***DONE***
 - 5.10 Student assistance - ***removed***
 - 5.11 Student Observing Support Program - ***DONE***
- Vivek - ***DONE***
 - 4.8 Positional accuracy - ***DONE***
- Frazer - ***DONE***
 - 4.9 Imaging - ***DONE***
- George - ***DONE***
 - 4.11 Complex Gain Calibration - ***done by Rick***
- Michael - ***DONE***
 - 4.5 Time Resolution & data rates - ***DONE***
 - 4.13 Correlator Configs (with Deb) - ***DONE***
 - 4.18 Pulsar observing (with Deb) - ***DONE***
- Jon/Amy - ***DONE***
 - 4.14 VLBI - ***DONE***
- Joan - ***DONE***
 - 5.1 Obtaining Observing Time on the EVLA - ***DONE***
 - 5.2 Director's Discretionary Time - ***DONE***
 - 5.5 Fixed date and dynamic scheduling - ***DONE***

- Gustaaf - **DONE**
 - 5.3 Helpdesk - **DONE**
 - 5.6 Observations and remote observing - **DONE**
 - 5.13 Reservations for the EVLA site and/or DSOC - **DONE**
 - 5.14 Staying in Socorro - **DONE**
 - 5.15 Help for Visitors to the EVLA and DSOC - **DONE**
- Lorant - **DONE**
 - 5.4 Observing Preparation - **DONE**
 - 5.7 Data Access - **DONE**
- James/Bryan - - **DONE**
 - 5.12 Computing at the DSOC - **DONE**
- Deb - **DONE**
 - 1 Introduction
 - Purpose of Document - **DONE**
 - What is the Expanded Very Large Array?
 - Changed to the EVLA project - **DONE**
 - VLA to EVLA Transition - **DELETED**
 - VLA Science Opportunities - **ADDED (replaces chapter 3)**
 - 2 Overview of the VLA - **DONE**
 - 3 EVLA early Science (change to a description of the VLA) - **DELETED**
 - 4.13 & 4.18 - help Michael - **DONE**
 - 5.16 On-line information about the NRAO and the VLA - **DONE**
 - 6 Publication guidelines - **DONE**
 - 6.1 Acknowledgement to NRAO - **DONE**
 - 6.2 Dissertations - **DONE**
 - 6.3 Preprints - **DONE**
 - 6.4 Reprints - **DONE**
 - 6.5 Page Charge Support - **DONE**
 - 7 Documentation - **DONE.**
 - 8 Key Personnel (refer to people to the helpdesk) - **DONE**
 - 9 Acknowledgements - **DONE**
- Other documentation (outside of the OSS)
 - Claire - **DONE**
 - Draft Call for Proposals - **DONE, submitted to CV.**
 - Joan - **DONE**
 - Config plans web page - **DONE**
 - Including LST availability plots - **DONE**
 - Michael, Emmanuel, Juergen - **DONE**
 - General Observing Setup-Tool (GOST) - Includes in-line help (button taking people to the separate help file) - **DONE**
 - Nirupam - **DONE**
 - Vis tool, includes in-line help - **DONE**
 - Lorant, Emmanuel - **DONE**

- Stand-alone RCT (SRCT) for shared risk - ***includes in-line help (button taking people to the separate help file)***
- Deb/Claire - ***DONE***
 - Shared risk observing web page - ***DONE***
 - RSRO web page update, include low-band - ***DONE***
 - ECSO web page - ***DONE***
 - Main Proposal Preparation and Submission page: overview about how to submit a proposal (like a quick-start guide), directing people to different tools and links depending on what type of proposal they will be writing and what to do in each tool if asking for shared risk (including recirculation programs) or RSRO or ECSO. - ***DONE***
 - Update the CfP with any last minute changes. - ***DONE***
- Gustaaf - ***DONE***
 - FAQ update, add FUnaskedQs discussed at tech review meeting - ***DONE***
- Jon, Amy - ***DONE***
 - Phased VLA for VLBI - ***DONE***
- Juergen - ***DONE***
 - Spectral line observing guide
- Mark - ***DONE***
 - PST documentation update - <https://my.nrao.edu/nrao-2.0/secure/Help> - ***DONE***
 - Sensitivity calculator - ***DONE***