

ECSV meeting, rm 317 (x7371/7370)  
7 Feb 2012

Attendees: Andreas Brunthaler, Bryan Butler, Claire Chandler, Barry Clark, Stuart Corder, Vivek Dhawan, Miller Goss, Amanda Kepley, Jeff Kern, Casey Law, Josh Marvil, Gustaaf van Moorsel, Steve Myers, Jurgen Ott, Frazer Owen, Rick Perley, Michael Rupen, Philip Schmidt, Deb Shepherd, Ken Sowinski, Theresa van Vliet Wiegert, Joan Wrobel.

## 1. Short Overview/status

- Correlator & general system health (Michael & Ken)
  1. CBE has been losing scans again. Memory gets used up, CPE gasps and it doesn't improve until there is a config change. Martin is working on this problem.
  2. Sat morning we were not getting as many frames through as we should have. Michael is working on it.
  3. Recirculation tests last week. If you tried to do RSRO/ECSSO mixed cont and sp line obs with recirculation, we are losing data. The commands generated on the station board telling the baseline boards to do things, got lost. The problem still exists. Dave Fort is looking into this – likely an FPGA/firmware issue.
  4. Fast dump testing planned soon
  5. Phasing of the array might be possible for all VLBI-type things (256 MHz in each independent tuning for a single pol). Extending capabilities to support pulsar work will take more work.
  6. 3-bit sampler work on-going. Started with ant 19. Another antenna planned for this week. Working through issues.
  7. Problems with the switched-power data to calibrate data. Vivek is working on this – meeting will be organized on Thursday morning to continue this evaluation.
  8. The pager is flooding the system occasionally and this causes the MIBs (Module Interface Board) to die – loose contact to the antenna and someone must go out to flip switches.
- Software systems (Bryan)
  1. There was an update to 1.12 of the OPT and OST. A few minor problems that were fixed in 2 patches.
  2. A couple oddities with the archive. Some data and logs were not showing up in the archive. Data was actually there but you just couldn't see it or access it (indexing not done properly). Fixed for this project but considered an 'odddity.'
- CASA update (Steve)
  1. January stable was delayed. Built yesterday, testing today. New features:
    1. The streaming filler (\_xl, extra large)

- a. Steve will send around a note about the `importevla_xl` task (wrapper around `sdm2ms`) and how to use it.
    2. The model data column is there and optional but not all tasks know it is optional.
    3. `Plotms` has been modified so the model data column is always available for plotting.
    4. There is a new flagger that Urvashi is working on. It has most of the capabilities of the `flag_cmd` that Steve wrote. Should be ready to test in about 2 weeks. Called `tflag_data` (either execute a flagging command as always did, or put a flag into the `flag_cmd` table) and `tflag_cmd` (allows you to run a batch job for flagging).
      - a. Theresa has been working with Urvashi to test out what flagging parameters are effective in her C and L band data. It would be appropriate for Theresa to start testing the `tflag_data` and `tflag_cmd` files.
    5. There is a new region file that is ascii that has all region capabilities. No more shape manager. This region file will be able to specify deconvolution files and plot the regions onto an image as an annotation. To get this capability now, use:
      - a. `Casaviewer --newregions`
    6. Release notes not written yet but it will be soon by Juergen and Steve.
  2. The Feb stable will start to be built next week.
  3. Early March will be a planning meeting for the next development cycle starting 15 April.
    1. This will be the release that the first OSRO in 2013 will use.
2. Documentations status & open actions (see for details: <https://safe.nrao.edu/wiki/pub/EVLA/ECSVMeetings/01-ECSVmeeting-26jan12-actionsUpdate.pdf>)
- EVLA Obs Status Summary final update
    1. **Deb** – still working.
  - Low & high frequency EVLA guides (Emmanuel & Mark)
    1. High frequency guide: Content updated by Mark & Deb. Frazer has provided comments. **Mark** is writing the 2<sup>nd</sup> draft now. Gustaaf has created a link for this documentation in the plone documentation now. However, this version is still in a development link (content not available in a plone link yet)
    2. Low frequency guide: DONE. content done, Deb sent the link to Gustaaf and he linked it into the plone documentation under “Observing”.
  - Sp line EVLA guide.

- 1. **Juergen** – expect draft done by 9 March.
  - OPT manual
    - 1. **Lorant** – delay until after we have defined the observing modes to be offered at OSRO at the beginning of 2013.
  - Proposal technical reviews template
    - 1. **Mark** – working, due 13 Feb (earlier date than before as requested by Joan – templates need to go to the reviewers on 15 Feb).
  - Data reduction workshop
    - 1. Support scheduled done, individuals are reviewing the tutorials.
  - Figuring out the array phasing solution.
    - 1. **Ken, Michael, Bryan, Barry,** and **Amy** need to get together to decide what method we will try to implement to fix the problem and then test again.
3. Main topic: RSRO status – Summaries of what each person is working on is now available on the RSRO Calendar:  
<https://safe.nrao.edu/wiki/bin/view/EVLA/RSROCalendar>
- Notes on discussions:
- Andreas Brunthaler
    - 1. Steve & Bryan will organize a mosaic meeting next week including Andreas, Rick, Stu, Dave Harland, Deb.
      - 1. Note that Satoko Takahashi worked on mosaicing when she was here. **Deb** should follow up with her to determine if she will return for additional RSRO work.
    - 2. Intelligent slews are not possible with the current VLA ACUs. They will be possible with the new ACUs.
    - 3. We need a guide for how to do mosaicing – **Deb** will follow up on who can write this.
    - 4. For astrometry – is possible we are still getting the uvw's not correct to the level of  $10^{-4}$ . Vivek needs to get back to this (not as high of a priority as the things he is currently doing but keep this on the list for the future and have a meeting soon to plan the way forward).
  - Stu Corder
    - 1. Quite a few camps are working on the combination of interferometric and single dish data. Stu is working on EVLA & GBT combo, Andreas has EVLA and other single dish data, this is a big issue for ALMA, Anish Rosi is also interested in working on EVLA & GBT data. Make sure this work is not done over and over. Discuss in the mosaicing meeting next week.
    - 2. We need to review our reference pointing documentation and make sure we have the right OPT defaults. **Deb** to follow this up.
  - Amanda Kepley

1. The issue about continuum subtraction should be discussed in an upcoming meeting on spectral line considerations. Eric will be a big help for this.
- Cornelia Lang & Betsy Mills
  1. Ideas for RSRO are preliminary – they will be updated when Cornelia and Betsy come for their 3mo stint.
- Casey Law
  1. Note: Casey's software will run separately on the CBE. He and Bryan will discuss implementation issues.
- Theresa van Vliet Wiegert
  1. Theresa will be here until 31 July (not 31 Aug as indicated in the RSRO calendar).
  2. The project in which we test an antenna after a set of switches is installed would be good to do. Stu has verified that this is easy to see in CASA and he can show Theresa how to do this.
  3. The project in which we measure the time it takes to switch between bands is a good one, especially for high-frequency fast switching where taking the conservative estimate of 20s to switch is a big hit on the available source integration time. Michael notes that the correlator takes 10-12s to reconfigure and, at this time, it is not high priority to try to make the reconfiguration go faster. But we still need to quantify how long the switch-over takes.
4. Proposed discussion for next week:
  - Next discussion will be on the status of spectral line testing – jointly run by Juergen and Michael.
  - We need to develop a proposal for what correlator modes we should provide to our users at the end of commissioning. Then we will discuss the proposal in this meeting at a later date.
5. We will not have an ECSV actions meeting on Thursday. The time slot will be taken for a switched power discussion.