

ECSV meeting, rm 317 (x7371/7370)  
19 Jan 2012

Attendees:

Andreas Brunthaler, Bryan Butler, Claire Chandler, Barry Clark, Mark Claussen, Stuart Corder, Vivek Dhawan, Miller Goss, Eric Greison, Jeff Kern, Josh Marvil, Drew Medlin, Heidi Medlin, Amy Mioduszewski, Emmanuel Momjian, Gustaaf van Moorsel, Jurgen Ott, Frazer Owen, Michael Rupen, Deb Shepherd, Lorant Sjouwerman, Ken Sowinski, Joan Wrobel, and & Tony Remijan (CV)

1. Intro (Deb)

- One of my primary focuses has been to understand what needs to be done by the end of the year and what needs to be carried over. I'm reviewing the program plan and promises made during the 'path to completion' review with the NSF. Next I need to understand what everyone is working on and how this relates to what we have promised.
  1. Do we have any gaps between what we have promised and what we are doing?
  2. I've been able to talk to a number of people about what they are doing for commissioning but not all. I will be talking to others within the next few days (I hope).

2. Overview/status

- Correlator & general system health (Michael & Ken)
  1. Last week of DnC config, pushing to observe projects that must be done in this config. Challenges:
    1. High spectral resolution with recirculation at a larger factor than we normally use.
    2. Continuum & spectral line
  2. Rick's test program: Many strong sources observed quickly at all bands that produces rapid changes in the correlator configuration which is very stressful to the system (CBE and CM problems).
  3. Many RSRO projects coming up that will be challenging:
    1. Recirculation + continuum project
    2. Multiple science sub-arrays
    3. Pulsar-related observations using very fast dumps, phased arrays with varying levels of user-supplied hardware.
  4. We will be testing fast dumps in the near future.
  5. Reconfiguration to C config starts Monday.
- Software systems (Bryan)
  1. Weather station is up but flakey (It has old cable & connectors that will take some work to fix). API stuff is coming through OK. Wind is now OK but it had gone down for a while and it is now back magically. Dew-point is showing behavior occasionally that can't be physical (potentially a problem

because this affects the refraction model which affects the atmospheric delay and pointing calculations).

1. AIPS and CASA will underestimate the opacity (because the programs use the temperature and dew point)
  2. We must define the dates for which the weather station is bad and let users know the work-around for this. – *Claire & Gustaaf.*
  2. Flux density trend information is being updated and should be linked to the database in the next weeks to months. This will provide the most recent flux-density measurements for users.
  3. There are some changes in the OPT – mostly ‘under the hood.’
    1. It is still sluggish when Rick’s monster SB is being validated. But otherwise, SBs below 1500-2000 scans have fast submissions.
      - a. If you find a problem with sluggishness when processing your SB, contact Dave Harland.
    2. There is now support to put in multiple LST start times and ranges (multiple ranges with a hole in the middle) – this is tested and appears to work.
    3. The OPT now has the ability to import a scan list (in preparation for mosaic support).
  4. Dave Harland is making a usage plot so we can tell what has been scheduled on the array. This will give us a better idea of what is getting scheduled, how long the blocks are, etc....
- CASA update (Jeff)
    1. CASA test has a new filler (casapytest asdm2msxl (xl = extra large)) that can support larger BDFs (should be able to support Andreas’ data). Contact Jeff to test this. Goal is to get this into stable CASA in the next version.
      1. When this filler is working and tested (end-to-end), then we can lift the user requirement to avoid short integration scans. But we must be careful that this doesn’t break something else in the system.
3. Documentations status for
    - EVLA Obs Status Summary (Deb)
      1. Andreas points out that there is nothing in the OSS about the baseline sensitivity and why folks would want to calculate this. We can give people a hint: Use 2 ants and sp channel width to get sensitivity on a single baseline. This is mentioned in low freq guide but it should also be mentioned in the OSS. See the VLBA OSS (Joan) for the text that can be added with minimal change – *Deb* will make the updates.
      2. Note – Deb has checked that all the links work in the EVLA OSS but she has not checked the content. We need to organize who is responsible for this EVLA content and a schedule of how often

it needs to be updated. *Deb & Claire* will work this out and report later.

- RSRO & OSRO pages (Deb & Claire)
    1. Done
  - Low & high frequency EVLA guides (Emmanuel & Mark)
    1. *Mark* is getting *Deb* edits for the high frequency guide and she will be responsible for updating the documentation
    2. *Emmanuel* has the low frequency EVLA guide almost ready. When ready, he will send it to *Deb* for upload
      1. Low frequency EVLA guide will mention how much of the band will be affected by RFI in L, S and C bands (right now it only mentions the L band).
  - Sp line EVLA guide.
    1. This has only just been started by *Jurgen* – it needs higher priority to get something out relatively soon.
  - RFI guidelines
    1. The RFI section of the OSS needs to be reviewed and updated along with the associated link (see OSS above).
    2. RFI reports from the users (goes to Dan and he posts the information to the website). This seems to be under control.
    3. RFI flagging templates need to be developed and input to the OPT for SB development (comparison with lines from splatalogue) and into data reduction algorithms eventually.
      1. Challenging because it is time, frequency and Baseline dependent.
      2. Not slated for development this year.
  - Guidelines for the proposal technical reviewers by Feb 16. *Mark* has been working on the template for the technical reviews so they are more consistent.
  - There was a discussion in December on the order a user must run UVSUB and CVAL in AIPS – Miller asks: has this been changed in the AIPS documentation and has observing advice been written up? *Eric* will check.
  - The OPT manual needs to be updated – *Lorent* can't do the updates. He can identify what needs to be done (chapt. 3, resources). *Claire* will figure out who can do this.
  - Guidelines for observations and what we tell the analysts.
4. Group discussions for the future (all)
- Future meetings will devote ~50% of the meeting time to detailed discussions on the status of different groups. To include short presentation on status followed by an in-depth discussion. (e.g., high frequency, low frequency, spectral line, wide-BW, 3-bit samplers, PL (esp. flagging) heuristics, polarization, external calibrations, phased array, data processing, archiving (uvw issue), RSRO end-of-term reports.)
  - Suggestions for future discussions:

1. Phased array – Bryan, Amy, – 2 weeks from now
  2. Testing and deciding what correlator modes we will provide for full operations. Decision by the end of May.
  3. Sp line
  4. 3-bit sampling testing
  5. end of RSRO reports
  6. **Michael** will send Deb additional suggestions.
- **Deb** will collect ideas and organize

5. Data Reduction workshop

See the detailed agenda at:

<https://science.nrao.edu/facilities/evla/early-science/data-reduction-workshop%20September%202011/program>

Agenda Summary:

- 22feb (Wed)
  - Presentations – Gustaaf, Deb, Lorant, Emmanuel (2), Jurgen
  - 2-5pm, Hands-on session – EVLA staff
- 23feb (Thurs)
  - All day, Hands-on session – EVLA staff
- 24feb (Fri)
  - Presentations – Eric, Sanjay, Urvasi, Bryan, Jeff
  - Afternoon, Hands-on session – EVLA staff
- 27feb (Mon) – 1mar (Thurs)
  - All day, EVLA personal data reduction support – EVLA staff

In each hands-on tutorial session: we need ~2 expert sci staff + 1 CASA staff + 2 sci staff support.

In the personal data reduction sessions: we need:

- Day 1 – mostly flagging, Urvasi & Steve + sci staff (1 expert, 2 in training)
- Day 2 – calibration, George + sci staff (1 expert, 2 in training)
- Day 3 – imaging, Kumar + sci staff (1 expert, 2 in training)
- Day 4 – wrap up + sci staff (1 expert, 2 in training)

Each sci staff needs to work ~3 days. **ALL listed below**: Please send Deb 3 days that you can support the workshop. **Deb** will talk to individuals and work with **Gustaaf, Jeff and Claire** to create a final support schedule.

Note: **All staff who need additional training** should go through the tutorials before the workshop begins (both to test the tutorials and as a refresher course in CASA).

Expert:

1. Miriam – only if we fly her in
2. Gustaaf
3. Emmanuel

4. Juergen
5. Steve

CASA sci staff:

1. Sanjay
2. Urvashi
3. George
4. Jeff
5. Kumar

Need training (please let me know if you are now in the 'expert' category)

1. Amy
2. Mark
3. Lorant
4. Michael
5. Bryan
6. Vivek
7. Josh
8. Frazer (?)
9. Nick (?)
10. Rick (?)
11. Miller (?)

Possible:

1. RSRO scientists
  - a. Andreas Brunthaler
  - b. Stu Corder
  - c. Theresa Wiegert
2. Eric (support advanced topics for workshop?)