

Internal JIVE BlackHoleCam meeting

Date: 22 November 2016, 11:00 in Arpad's office

Subject: pipeline WP

Present: Arpad Szomoru, Des Small, Mark Kettenis, Ilse van Bommel

Last week there was a visit from Ciriaco Goddi and Michael Janßen from IMAPP. This was rather short notice, but in the end sufficiently productive for most of us. Ilse walked them through the step plan for the pipeline as it was working for her at that time, but cautioned that things were still rapidly changing. They looked at importing EHT data into FITS-IDI format. Eventually there were also some clear wishes for new functionality in the fringe fitter, of which we have made note.

Earlier that week Tammo Jan Dijkema gave his CALIM2016 presentation for the group. His method is an interesting approach for future development, which will be part of the RINGS programme. For now, we will continue implementing only the AIPS functionality.

The testing is bringing up a range of interesting issues with the code and parsing of the ANTAB tables. Ilse is looking at the issues and verifying that we at least read everything that AIPS can handle. This turned out not to be realistic, since the AIPS parser is much less strict, and not easy to reproduce. Instead we have chosen to print the ANTAB line that causes the error and have the user fix this by hand. The errors are usually caused by manual intervention from the support staff, user support group is aware of the issues.

Des is starting the C++ coding. The actual coding part is expected to be fast, but the implementation in the CASA framework will require careful work and reiterating some of the discussion we had at NRAO in June. There have been discussions with the ASTRON casacore developers about the solver and possibility to use minpack (the same solver used in the prototype).

The prototype now has a Figure-of-Merit for the signal to noise (detection probability) of the fringe on each baseline. There is a new API, which is shorter and easier to use. Testing of this new element is ongoing.

Huib will attend the EHT2016 meeting next week and report on our progress. Ilse will provide some slides on the pipeline efforts.

Actions

31,32: JIRA tickets awaiting action from George

36-38: await porting to C++

ID	Description	Owner	Ref.	Due
6	Write report on verification with AIPS (deliverable)	Ilse	151019	
18	Process EVN data with CASA	Mark & Des	160115	Ongoing
23	Write up phase model for CASA calibration	Des/Mark	160404	Ongoing
27	Include verification test without EF station	Des/Ilse	160512	Ongoing
31	Definition of gain curve in CASA	Mark	160620	
32	Implement apply Tsys for MS	Mark	160620	
35	List of minimum parameters for fringeal	Ilse	160609	Ongoing
36	Define CASA XML template for fringeal	Ilse/Des	160609	
37	Verification C++ fringeal against AIPS	Ilse/Des	160609	
38	Benchmark fringeal	TBD	160609	
40	Find existing CASA solver and test if useful	Des	160928	Done
42	Write testplan	Ilse	161024	Done
43	Contact support scientist for assistance w. testing	Ilse/Arpad	161024	Done

Next meeting: 19 December 2016