

Internal JIVE BlackHoleCam meeting

Date: 19 December 2016, 11:00 in Arpad's office

Subject: pipeline WP

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

Fringecal

Des is working on the porting of the prototype to C++. The solver in the casacore framework is not suitable for parallelization. He has found an alternative solver, Ceres, and will look into a Python interface for testing this solver with the prototype. If suitable, there would be some work required to get this solver into the framework.

The verification of the fringecal task shows that the solutions for phase are degenerate when the source is resolved. Ilse is working on comparing the phase solutions between FRING and fringecal, and will look at closure phases. The residual closure phases should be identical for FRING and fringecal, as they are solely determined by antenna positions and source structure.

Other issues

Mark is looking into a problem with converting DiFX data into FITS-IDI.

Gain curves cannot be plotted in CASA at the moment, might be helpful to have that implemented at some point, especially since we know that the gain curves for some telescopes are weird at times.

We need to look into the effect of gain calibration on the antenna weights, and if this is comparable between AIPS and our CASA tools.

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	Ongoing
18	Process EVN data with CASA	Mark & Des	160115	Ongoing
23	Write up phase model for CASA calibration	Des/Mark	160404	Done
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 fringecal	Ilse	160609	Ongoing
36	Define CASA XML template for fringecal	Ilse/Des	160609	
37	Verification C++ fringecal against AIPS	Ilse/Des	160609	
38	Benchmark fringecal	TBD	160609	
44	Compare closure phases AIPS/CASA	Ilse	161219	Ongoing
45	Assess Ceres solver	Des	161219	
46	Assess impact of gain correction on weights	Mark?	161219	

Next meeting: 16 January 2017