Pulsar Pipeline Checklist v1.20; updated Feb 8, 2011

	tasks	Developer	Commissioner	Expected date of readiness
BG/P	TAB Pipeline	John Romain, Jan David Mol, Rob van Nieuwpoort	Jan David Mol, Jason Hessels	Done in early 2009
	Design/preparatory work for BG/P 2nd transpose	John Romain, Jan David Mol, Rob van Nieuwpoort		Done
	Implement BG/P 2nd data transpose	Jan David Mol	John Romain, Jan David Mol	several weeks (mid-Apr)
	Document "new" BFout stream (post 2nd transpose)	Jan David Mol	Jan David Mol	1-2 days
	Test and bug fix 2nd transpose	Jan David Mol, John Romain	Jan David Mol, Jason Hessels	1-2 weeks
	Implement LOFAR center as LBA center position of station CS002	Chris B.	Chris B.	
	Implement Phase-Frequency correction due to cable lengths	John Romain, Michiel B.	Michiel B., Jason Hessels, Joeri v. L	
	Implement proper Stokes I,Q,U,V on the BG/P	Jason, Jan David, John Romein	Jason, Jan David, John Romein	
	Impliment on-the-fly squashing of channels per subbands for BF (IM+BF obs)	Jan David Mol	Jason, Jan David Mol	
	TiedArray Multi beam observations	Jan David Mol	Jason, Jan David Mol	
	Bypass 2nd Polyphase Filter in TAB pipeline	Chris B.	Sander, Jason	
	Implement BG/P 2nd data transpose for IncoherentStokes data (post H5 CS)	Jan David Mol	Jan David Mol, Jason Hessels, A2, Tom Hassal, Lars B.	
	Implement BG/P 2nd data transpose for Raw Voltage (BF) data (post H5 CS, IS)	Jan David Mol	Jan David Mol, Jason Hessels, A2, Tom Hassal, Lars B.	
	Online Coherent De-dispersion on CEP	Jason, Jan David, John Romein	PWG	
	Online Coherent De-dispersion Search Mode on CEP (multi beams all de-dispersed)			
	Separate BF from IM data writing on subclusters and disks (maybe non-issue after Phase II)	Jan David Mol, Alwin	Jason, Jan David Mol	
	Integrate phase correction into TAB module (from Imaging results) [lower priority if core single clock]	Jan David Mol, John	JD, Jason	
	Investigate extending the single clock on the entire core (hardware)	Jason, Ben, Andre, RO		
SAS / MAC/MoM	Integrate of TAB module into SAS/MAC	Jan David Mol, Ruud Overeem	Jan David Mol, Ruud Overeem	
	Multiple BF observations with MOM-templates	Nico, Jason, A2	A2, Jason	
	Processing multiple BF MOM-observations automatically (shell script pipe)	A2	A2, Jason	
	Multiple Imaging observations with MOM-templates	A2, George, John McKean, Roberto Pizzo	Roberto Pizao, George, John McKean	
	Multi-Beam IM/BF + piggy-backing obs w/MOM-templates	A2	A2, Jason, George	
	4 BF-related switches; allows MOM obs name seperate column; BF pos input	A2	A2, Jason, Ashish	
	BF-Observing Cookbook	Ashish	Ahish, A2, Jason, RO	
	Offline Pipeline Framework connection to SAS/MAC (automated kickoff)	John Swinbank, Ken Anderson, A2, Ruud Overeem	John Swinbank, Ken Anderson, A2, Ruud Overeem	
	BF-Observing Cookbook maintenance and updates as needed	Ashish, A2	PWG, Ashish	
	Add new switches to the MoM-template creation script for IM to match some BF switches	A2	Roberto Pizzo	
	MoM additional features/connectivity to SAS/MAC (DM field, Pulsar Catalog drop down, etc)	Nico, Jan David, Jason, A2	Jason, A2	
	Maintenance of xml-related (Mom import/export) scripts	A2	A2, Jason, Roberto	
BF2H5 online version	BeamFormed Writer (1st version to OLD ICD spec)	Alwin de Jong	Alwin de Jong, J. Hessels	Done
	Test svn externals when building LOFARSOFT with the DAL	Lars Baehren, Marcel Loose, Alwin de Jong	Alwin de Jong, Marcel	in process, 1-week
	Integrate parset reader into BF writer w/in LOFARSOFT	Alwin de Jong, Jan David Mol	Alwin de Jong	
	Integrate DAL classes into BF2H5	Lars		
	BF H5 data writer (abide by ICD) (BG/P CS out data)	Jan David, Lars	JD, Lars, Jason, A2	
	BF H5 data writer (abide by ICD) (BG/P IS out data)	Jan David, Lars	JD, Lars, Jason, A2	
	BF H5 data writer (abide by ICD) (raw data)	Jan David, Lars	JD, Lars, Jason, A2	
	Load testing of H5 read/write of BF data	Jan David	Jason	
BF ICD	Create mock BF H5 files with 4 types of data storage containers	A2	A2	Done
	Finalize BF ICD	A2, L. Baehren, J. Romain, JD Mol, J. Hessels, K. Anderson	A2, Lars Baehren, J. Romain, JD Mol, J. Hessels, M. Wise	
	Profile BF Observations (& Pipeline) for typical stats on sizes	J. Hessels, B. Stappers, M. Wise		
	Benchmark (DAL C++) 4 storage types to choose optimum BF container	A2, L. Baehren	A2, Jason Hessels	1-2 weeks
	Perform benchmarking on H5 chunking (storage efficiency and optimization)	unassigned		
	Identify source of metadata values (& calculations)	Hanno, R. Overeem, J. Hessels, M. Wise, Alwin de Jong, A2, B. Stappers		
DAL	Create DAL classes for BF metadata and structure (abide by ICD)	Lars Baehren, A2		in process
	Create DAL methods to access data from BF structure (abide by ICD)	Lars Baehren, A2		
	Hook in Coordinate Group-related material into the DAL.	Lars	Lars, A2, Ken, JM	
	Wrap BF DAL classes and methods with Python for PyDAL	A2, Lars Baehren, K. Anderson	The Pulsar Group	
	Ongoing PyDAL updates and bugfixes	A2, Lars Baehren, Frank B.		in process
	Integrate HDF5 into file I/O for Presto/TEMPO/etc	A2	The Pulsar Group	
Pulsar Tools	Daily build of USG repository on offline cluster	Arno, Mike Wise, Lars		
	Integrate FFTW-3.1.2 into cmake	A2		Done
	Integrate PPGPLOT into cmake	A2		Done
	Interate TEMPO into cmake	A2		Done
	Integrate PRESTO into cmake	A2; Lars	A2 fixing seg fault & other issues on new cluster build	1-2 weeks
	Integrate SIGPROC into cmake	A2	Ben Stappers, Joeri	
	Integrate PSRCHIV into cmake	A2	Ben Stappers	
	Integrate SSPS (Single Pulse sw and docs) into cmake	A2, Thijs Coenen	A2, Thijs Coenen, Joeri	
	Integrate PSRDADA into cmake	A2	Ben Stappers	
	Integrate DSPSR into cmake	A2	Ben Stappers	
	Test software installation/components on new cluster	A2, J. Hessels, B. Stappers	The Pulsar Group	in process
	Test software installation/components on user machines	Pulsar Group		in process; low priority
	Integate "convert" (bf2presto) into cmake	A2	A2, Tom Hassall	
	Update/maintain/expand "convert" (bf2presto) program for BF observations	Tom Hassall, A2, Jan David Mol	A2, Tom Hassall, Jan David Mol, J. Hessels	
	Assist Pulsar Group with integration of tools/scripts into cmake & USG	A2; Lars		
	Maintain/upgrade Pulsar shell script pipeline	A2, Pulsar Group	A2, Tom Hassall	
	Move some Pulsar packages to extenal for automated download instead of USG - not applicable	A2, PWG	A2, Lars	
	Design/implement Pulsar Pipeline(s) for other observing modes (RAW Voltage, OCD)	A2, Aris N., Jason	A2, Aris N, Jason	
	Maintain/fix Daily build of USG (Pulsar) repository on offline cluster	A2, Lars		
	Test software installation/components on Phase II cluster	A2, RO	PWG	
	Update USG Pulsar cmake dependancies for external packages so that "all build" is shorter	A2, Lars	A2	
	Convert Pulsar Pipeline to run with H5 input, using intermediate Presto binary files	A2	PWG	
	Create Pulsar Test datasets and cmake automated test-suites for code sanity check (non-LOFAR)	A2, Jason, PWG	PWG	
	Branch Pulsar OTF code changes to original tool repositories (sourceforge, etc)	A2		
	Create Pulsar Test datasets and cmake automated test-suites for code sanity check	A2, Lars	A2	
Pulsar Pipeline Integration	Design Pulsar Pipeline for basic observing modes	J. Hessels, B. Stappers, J. van Leeuwen, A2, M. Wise	The Pulsar Group	
	Decide how to distribute the Pulsar Pipeline	M. Wise, L. Baehren, J. Hessels, A2, J. Swinbank		
	Implement Pulsar Pipeline Design within the iPython Framework (** See Modes Document **)	A2 + unassigned	A2, K. Anderson, J. Swinbank	
	Pipeline Testing	A2, K. Anderson, J. Swinbank, J. Hessels, B. Stappers, J. Van Leeuwen	A2, J. Hessels, B. Stappers, J. Van Leeuwen	
	PWG learning curve of Pipeline Framework	PWG, John Swinbank, Marcel		

	Task		
	Write "how-to" run the Known Pulsar Pipeline w/in the Framework	Ken	Ken, A2, PWG	
	Pipeline Framework issues/problems/hickups action items	Ken, John S., A2, Adriaan	John S., Adriaan, Ken	
	Release Pulsar Pipeline	M. Wise		
	Design Pulsar Pipeline(s) for other observing modes including survey	J. Hessels, B. Stappers, J. van Leeuwen, A2, M. Wise		
	Integrate prototype Pulsar Search Pipeline (script) into USG (summer student)	A2, Vlad	A2, Vlad	
	Integrate new Pulsar Search Pipeline into USG (w/Git)	Thijs, Lars, A2	Thijs, Lars, A2	
	Pulsar Search Pipeline: finalize details/code + add SSPS functionality & perform extensive testing	Thijs, Ben, Jason, Vlad, Joeri	Thijs + Pulsar Group	
	Pulsar Search Pipeline: profiling and speed up; most revelant for multi-beam modes	Thijs	PWG	
	Documentation/diagrams/switches of Pulsar Pipeline + tools for LOFAR science users	A2, Jason	A2	
	Observing Plan / Regular weekly Testing of BF observations	Ashish, Michiel B.		
	Pulsar Pipeline (sh & py) profiling (if speed is less than real-time; most relevant for multi-beam modes)	A2 + unassigned		
BF2H5 offline version	Extraction process of parameterDB out of LOFARSOFT & distribute offline	Mike to assign this issue to different group		
	UDP reader/interpreter library (UK)	Alessio, Aris, Chris, Fred, Ben	Alessio, Aris, Chris	1st version Apr 7th
	Integrate PELICAN & PELICAN-LOFAR into USG	Lars	Lars	
	Link Pelican-LOFAR with PELICAN and DAL	Jan David, Lars, Oxford Group		
	TCP-packet convert module for Pelican	Jan David	Jan David, Oxford group	
	HDF5 data writer module for Pelican	Jan David	Jan David, Lars, A2, Oxford group	
	Create standalone BF2H5 tool	Jan David	Masaya, James Anderson	
Archive	SARA Pulsar Archive (organize, create scripts, maintain web pages)	Joeri, Vlad		
	Investigate SARA + Grid processing (LTA) potential	Joeri, Jason, A2		
	Sync Archive schema with BF ICD	A. Renting, A2, L. Baehren, M. Wise, R. Overeem	A. Renting, A2, J. Hessels	in process
	Archive Pulsar raw data	A. Renting	A. Renting, A2, J. Hessels, M. Wise	
	Archive Pulsar Pipeline Processed data	A. Renting, A2	A. Renting, A2, J. Hessels, M. Wise	

remarks

John, Jan David and Rob have completed the discussions; 4-phased for transpose prep, then transp
Rob will no longer be involved; Jan David will implement the entirety of the 2nd transpose

Need to ask Jan David for a status on this issue; rumor has it that this is working

John is working with Ruud on the messaging/communication aspect

Working again; can read parset file and feed keys to header; works w/o UDP
Lars has spoken to Marcel and emailed relevant info; Lars to touch base with Marcel to implement ir

4 types are: 1D arrays, ND arrays, 1D tables, ND tables (note ND arrays are memory limited)
John Romain's comments and James Anderson's comments integrated; moved Coord Group; may c
should be a chart in the ICD to view typical data sizes for types of observations; waiting on Jason
DAL is missing Array/Table real() methods from sub-groups; Lars to add functionality before benchm

Put this as an adgenda item for discussion during the next BF status meeting

implemented three highest tiers of H5 structure (not yet lowest tier where the data structures are)

need to formalize the to-do and bug list

Mike to start up the process of asking Arno to include this in a daily build

note, depends on system install of PGPLOT
workaround for problems with reading files with line length > 70 chars; fix requested to developer
accelsearch sef fault (non LOFAR data); cmake external dependencies can be made smarter (Lars)

Does not build on the Mac (needs specific version of X11)
Does not build on the Mac (needs specific version of X11)

fixing problems as they unfold
Ramesh would like a copy of the software suite within cmake; TEMPO doesn't build on Mac OS 10.6

Tom needs to check in his version into the ISG repository

A2 updated to use 8-cores per mode; speed increase 5-6 times

create use-cases and map these to tools/parameter settings; start at PBW #6
do we need to integrate the Transient S/W repository with the USG S/W repository?
current SH scripts pipeline described and sent to Ken; John & Ken to meet about iPhython Framewc

not needed for completion of first pipelline release

on target to meet one month deadline from start-up of project

meetings took place to mesh the LOFAR ICD with the Archive schema