**Pulsar Pipeline Checklist**

| | tasks | Developer |
|---|---|---|
| **BG/P** | | |
| | Design/preparatory work for BG/P 2nd transpose | John Romain, Jan David Mol, Rob van Nieuwpoort |
| | Implement BG/P 2nd data transpose | Rob van Nieuwpoort |
| | Document "new" BFout stream (post 2nd transpose) | Jan David Mol |
| | Test and bug fix 2nd transpose | Rob van Nieuwpoort, Jan David Mol, John Romain |
| | | |
| **SAS / MAC** | | |
| | Integrate of TAB module into SAS/MAC | Jan David Mol, Ruud Overeem |
| | | |
| **BF2H5** | | |
| online version | Merge USG repository as svn external package into LOFARSOFT | Lars Baehren, Marcel Loose |
| | Integrate DAL "BF" and "Common" classes into BF2H5 | Alwin de Jong |
| | Integrate parset reader into BF writer w/in LOFARSOFT | Alwin de Jong, Jan David Mol |
| | Integrate new BF H5 data format (ICD) into BF2H5 (raw data) | Alwin de Jong |
| | Integrate new BF H5 data format (ICD) into BF2H5 (BG/P out data) | Alwin de Jong, Jan David Mol |
| | | |
| offline version | Extract UDPcopy and IonProc out of LOFARSOFT | Alwin de Jong, Jan David Mol, Masaya |
| | Extract parameterDB out of LOFARSOFT | Alwin de Jong, Jan David Mol, Masaya |
| | Create standalone BF2H5 tool | Alwin de Jong, Masaya |
| | | |
| **BF ICD** | | |
| | Create mock BF H5 files with 4 types of data storage containers | A2 |
| | Benchmark (DAL C++) 4 storage types to choose optimum BF container | A2 |
| | Finalize BF ICD | A2, L. Baehren, J. Romain, JD Mol, J. Hessels, K. Anderson |
| | (Perform benchmarking on H5 chunking) | K. Anderson, A2, L. Baehren |
| | Identify source of metadata values (& calculations) | Alwin de Jong, R. Overeem, J. Hessels, M. Wise, A2, B. Stappers |
| | Profile BF Observations (& Pipeline) for typical stats on sizes | J. Hessels, B. Stappers, M. Wise |
| | | |
| **USG Software Repository** | | |
| Integrate Pulsar SW into USG | Integrate FFTW-3.1.2 into cmake | A2 |
| | Integrate PPGPLOT into cmake | A2 |
| | Interate TEMPO into cmake | A2 |
| | Integrate PRESTO into cmake | A2 |
| | Integrate SIGPROC into cmake | A2 |
| | Test software installation/components on new cluster | A2, J. Hessels, B. Stappers |
| | Test software installation/components on user machines | Pulsar Group |
| | | |
| DAL | Create DAL classes for BF metadata and structure (abide by ICD) | Lars Baehren, A2 |
| | Create DAL methods to access data from BF structure (abide by ICD) | Lars Baehren, A2 |
| | Wrap BF DAL classes and methods with Python for PyDAL | A2, Lars Baehren, K. Anderson |
| | Ongoing PyDAL updates and bugfixes | A2, Lars Baehren, Frank B. |
| | Integrate HDF5 into file I/O for Presto/TEMPO/etc | A2 |
| | | |
| Related Tools | Update/maintain/expand "convert" program for ongoing BF observations | Tom Hassal, A2, Jan David Mol |
| | Integate "convert" into cmake | A2 |
| | | |
| **Pulsar Pipeline** | | |
| | Design Pulsar Pipeline for basic onserving modes | J. Hessels, B. Stappers, J. van Leeuwen, A2, M. Wise |
| | Decide how to distribute the Pulsar Pipeline | M. Wise, L. Baehren, J. Hessels, A2, J. Swinbank |
| | Implement Pulsar Pipeline Design within the iPython Framework | A2, K. Anderson, J. Swinbank |
| | Pipeline Testing | A2, K. Anderson, J. Swinbank, J. Hessels, B. Stappers, J. Van Leeuwen |

| | |
|---|---|
| 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 |

**Archive**

| | |
|---|---|
| <mark>Sync Archive schema with BF ICD</mark> | A. Renting, A2, L. Baehren, M. Wise, R. Overeem |
| Archive Pulsar raw data | A. Renting |
| Archive Pulsar Pipeline Processed data | A. Renting, A2 |

**Misc.**

| | |
|---|---|
| (Remove PGPLOT from PRESTO) | Lars Baehren, A2 |
| (Work with the VO on format/protocol issues for LOFAR HDF5 data) | J. Swinbank, A2, M. Wise, K. Anderson |

| Commissioner | Expected date of readiness | remarks |
| --- | --- | --- |
|  | in process, 1-2 months | Rob and John have started talking about what needs to be done |
| Rob van Nieuwpoort, John Romain, Jan David Mol | 1-2 months | Rob works at ASTRON 1-day/week;  additional days in Delft for LOFAR |
| Jan David Mol, Alwin | 1-2 days |  |
| Rob van Nieuwpoort, Jan David Mol, Alwin de Jong, Jason Hessels | 1-2 weeks |  |
|  |  |  |
| Jan David Mol, Ruud Overeem |  |  |
|  |  |  |
| Alwin de Jong, Marcel | in process, 1-week | Lars has spoken to Marcel and emailed relevant info;  Lars to touch base with Marcel to implement ir |
| Alwin de Jong |  |  |
| Alwin de Jong |  |  |
| Alwin de Jong, A2, J. Hessels |  |  |
| Alwin de Jong, A2, J. Hessels, Jan David Mol |  |  |
|  |  |  |
| Alwin de Jong |  |  |
| Alwin de Jong |  |  |
| Masaya, James Anderson |  |  |
|  |  |  |
| A2 | Done | 4 types are: 1D arrays, ND arrays, 1D tables, ND tables (note ND arrays are memory limited) |
| A2, Jason Hessels | 1-2 weeks |  |
| A2, Lars Baehren, J. Romain, JD Mol, J. Hessels, M. Wise |  |  |
|  |  | not necessary for completion of the pipeline |
|  |  | need to schedule a meeting to go over these issues (possibly during PBW #6) |
|  |  | should be a chart in the ICD to view typical data sizes for types of observations |
|  | Done |  |
|  | Done | note, depends on system install of PGPLOT |
|  | Done | workaround for problems with reading files with line length > 70 chars;  fix requested to developer |
| A2 fixing seg fault & other issues on new cluster build | 1-2 weeks |  |
|  |  | not 100% sure this is needed |
| The Pulsar Group | in process |  |
|  |  | Ramesh would like a copy of the software suite within cmake |
|  | in process | implemented three highest tiers of H5 structure (not yet lowest tier where the data structures are) |
| The Pulsar Group |  |  |
|  | in process | need to formalize the to-do and bug list |
| The Pulsar Group |  |  |
| A2, Tom Hassal, Jan David Mol, J. Hessels |  | needs documentation and upgrade to accept command line parameters |
| A2, Tom Hassal |  |  |
| The Pulsar Group |  | 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? |
| A2, K. Anderson, J. Swinbank |  |  |
| A2, J. Hessels, B. Stappers, J. Van Leeuwen |  |  |

not needed for completion of first pipelline release

A. Renting, A2, J. Hessels                              in process          meetings took place to mesh the LOFAR ICD with the Archive schema
A. Renting, A2, J. Hessels, M. Wise
A. Renting, A2, J. Hessels, M. Wise


The Pulsar Group                                                           investigate S2PLOT or some other package which can be used in general for LOFAR data plotting
?                                                                          not needed for pipeline release