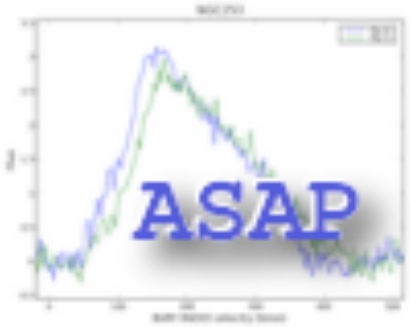

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ASAP Developer Workshop

Wednesday, 28th July 2010

Malte Marquarding

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Status/People

- Currently only in maintenance mode, i.e. only defect fixes and small feature additions
  - No new instruments
- Active developers
  - Malte Marquarding (~0.1 FTE)
- indirect developers
  - Mark Calabretta via libatnf
  - Maxim Voronkov – science driven algorithms (e.g. atmosphere model)

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Aims

- full python module which can be imported into any python script
- support all existing CASS instruments
- avoid breaking backwards compatibility
  - there are various non-developer user/project scripts

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Development items

- There are several bigger tickets which haven't been addressed
  - Hyperfine structure fitting (e.g. NH3)
- FFTs
  - some work done (lagflag) but need automated (c++)
- Move to Redmine
  - CASS is using Redmine not trac anymore – should have no impact except user re-registration
- merging of IFs
  - stitching together wide-band observations

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ASAP v3

- Major version changes if Table model changes
  - moved parallactic angle column from main to “FOCUS” table for consistency
- water vapor model from miriad was added (atmosphere)
- opacity from skydip observations
- basic coordinate access from python (casacore coordinate system with to_xxx methods
- Interactive plotting annotations via optional argument
- running polynomial fitter
- interactive mask (not the same as alma branch)
- interactive lag flagging (fft)

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Goals

- One development “branch”
  - everybody works on trunk
  - releases of trunk can be project specific
    - asap general release
    - casa specific “alma” release

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Issues

- plotter
  - embarrassingly bad code
  - will need a rewrite
  - I don’t like the asaplotbase and it should use matplotlib directly
  - should go with Qt backend
- multi-row operations
  - need to move more into c++
- pyrap
  - should use at least libpyrap which provides numpy to casacore mappings (superset of the current pyconversions.h)
- embarrassingly sparse API documentation
- Observatory handling
  - should be done OO and include fillers
- logging

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Issues continued

- Refactoring of STMath
  - too big
  - segregate into functional areas e.g. calibration, filtering etc.
- Fitting
  - interactive vs batch
  - more algorithms
- Testing
  - need better coverage
- Build system
  - make pure python build maybe using numscons
- Python 3 compatibility
  - numpy has been made python 3 compliant
  - matplotlib not python 3 compliant
  - boost-python is python 3 compliant?

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