4ᵗʰ Coding Sprint

Conclusions

Jürgen Knödlseder (IRAP)
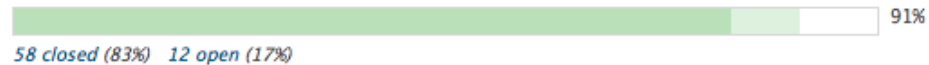
Achievements

GammaLib

1.0.0

about 6 months late (12/19/2014)

GammaLib 1.0.0 release

91%

58 closed (83%)   12 open (17%)

ctools

01-00-00

about 6 months late (12/19/2014)

ctools release 1.0.0

70%

36 closed (57%)   27 open (43%)

… this week's coding sprint …

1.0.0

Due in about 2 months (09/01/2015)

GammaLib 1.0.0 release

93%

68 closed (91%)   7 open (9%)

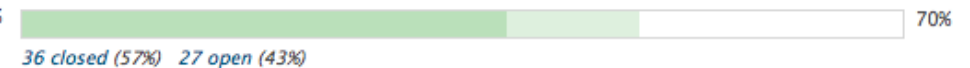10 closed, 5 new opened

Remaining issues:
- Test morphology fit
- Document energy dispersion
- Installed GammaLib tests (New)
- Produce binary packages (New)
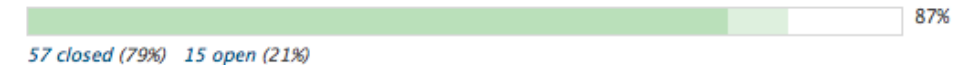
1.0.0

Due in about 2 months (09/01/2015)

ctools release 1.0.0

87%

57 closed (79%)   15 open (21%)

21 closed, 9 new opened

Remaining issues:
- Complete performance verification
- Write 1.0 release paper
- ctbutterfly still looks strange (New)
- ctools help (New)
- csinfo script (New)

Paper outline (#1274)

Description of code:
- Unique features of gammalib & ctools
  - Source confusion
  - Multi-instrument code
  - Full likelihood fit
- Formulae & algorithms
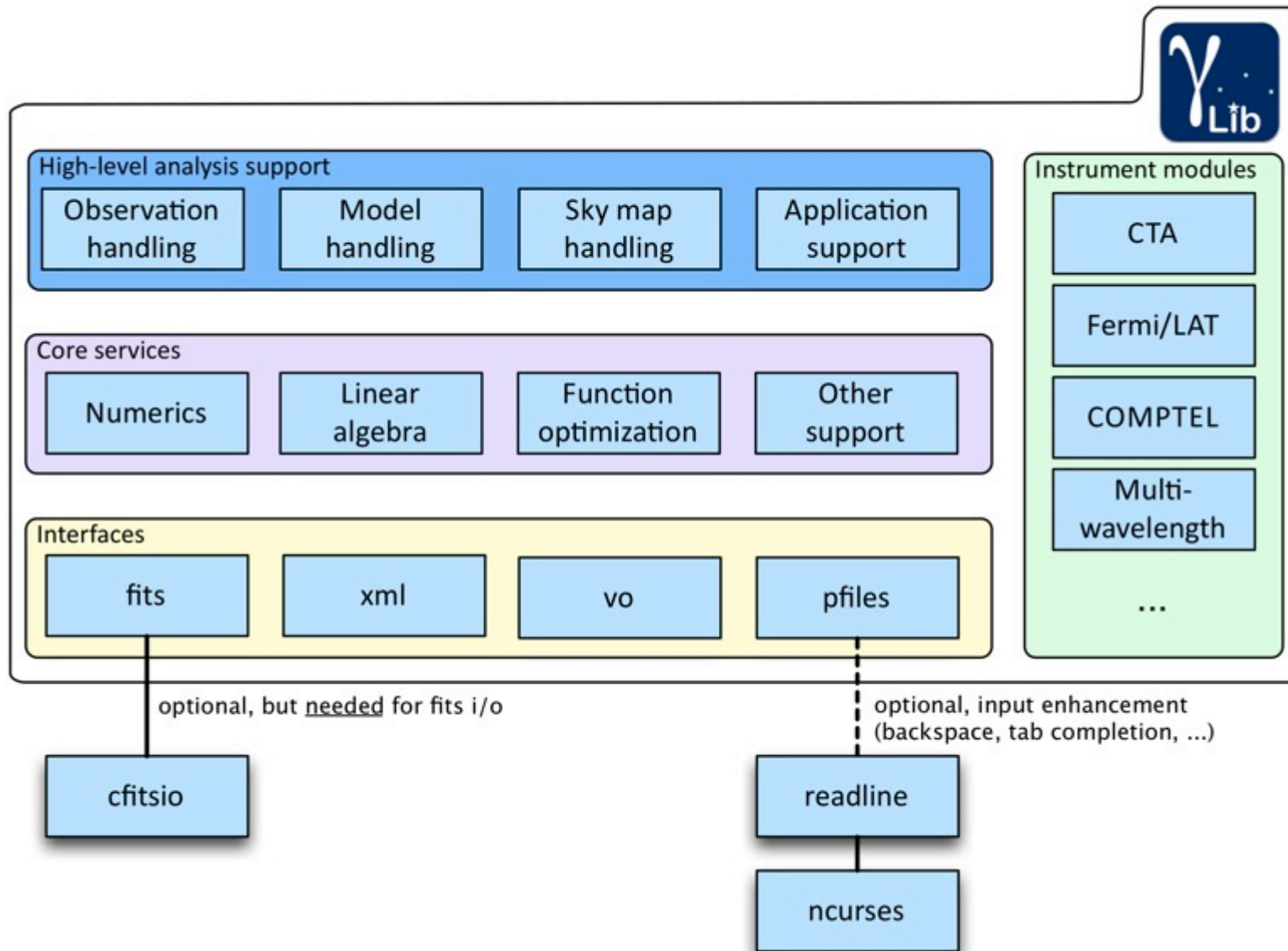- Methods (e.g. Levenberg-Marquard for fitting)

Validation:
- Numerics (pull distribution)
- Performance (based on simulated data, LMC?)
  - point source sensitivity
  - point source separation and confusion
  - extended source fitting
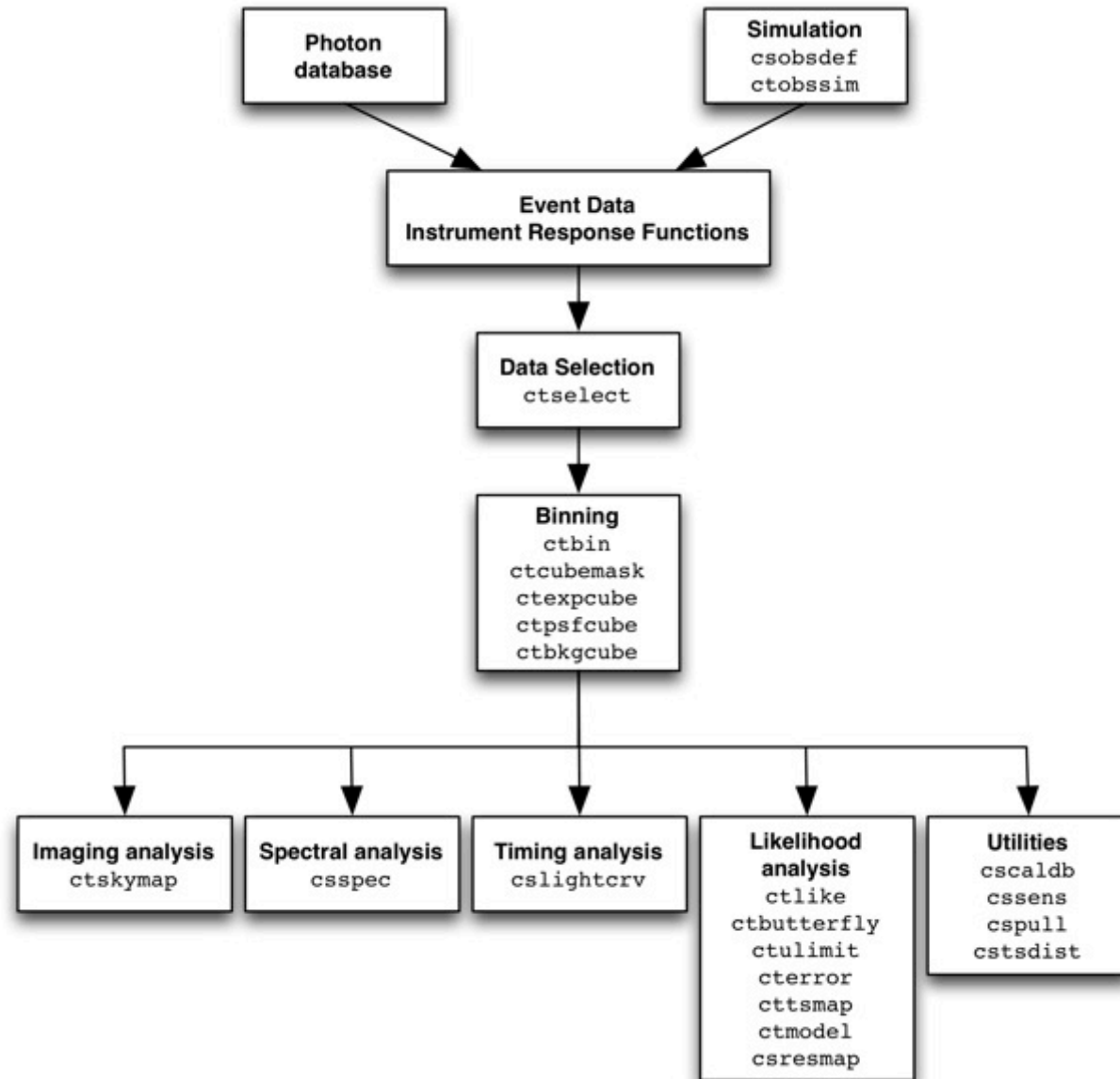 - diffuse emission analysis

Demonstration
- HESS
- Fermi (SNR W49B, presented at Fermi collaboration meeting)
- CTA
- joint fitting

4th ctools and gammalib coding sprint
(Jürgen Knödlseder)

GammaLib overview

4th ctools and gammalib coding sprint
(Jürgen Knödlseder)

ctools overview

4th ctools and gammalib coding sprint
(Jürgen Knödlseder)

Plans

- Resolve all remaining issues in the coming days / weeks, but in any case before the summer break

- Freeze code for release 1.0 (24 July at latest)

- Complement performance tests, collect material for paper (until end of August)

- Write release 1.0 paper; aim for astro-ph post end of September, together with 1.0 release