CTAO
Cherenkov Telescope Array Observatory

Gammapy/SAT

Towards the integration and verification within CTAO SUSS

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Motivation

- Acceptance of Gammapy as part of the CTAO SAT
- Preparation for the SDC
- First release of SAT, within SUSS REL0
- Plan the work shared between SUSS and Gammapy team: AIV

AIV for SAT

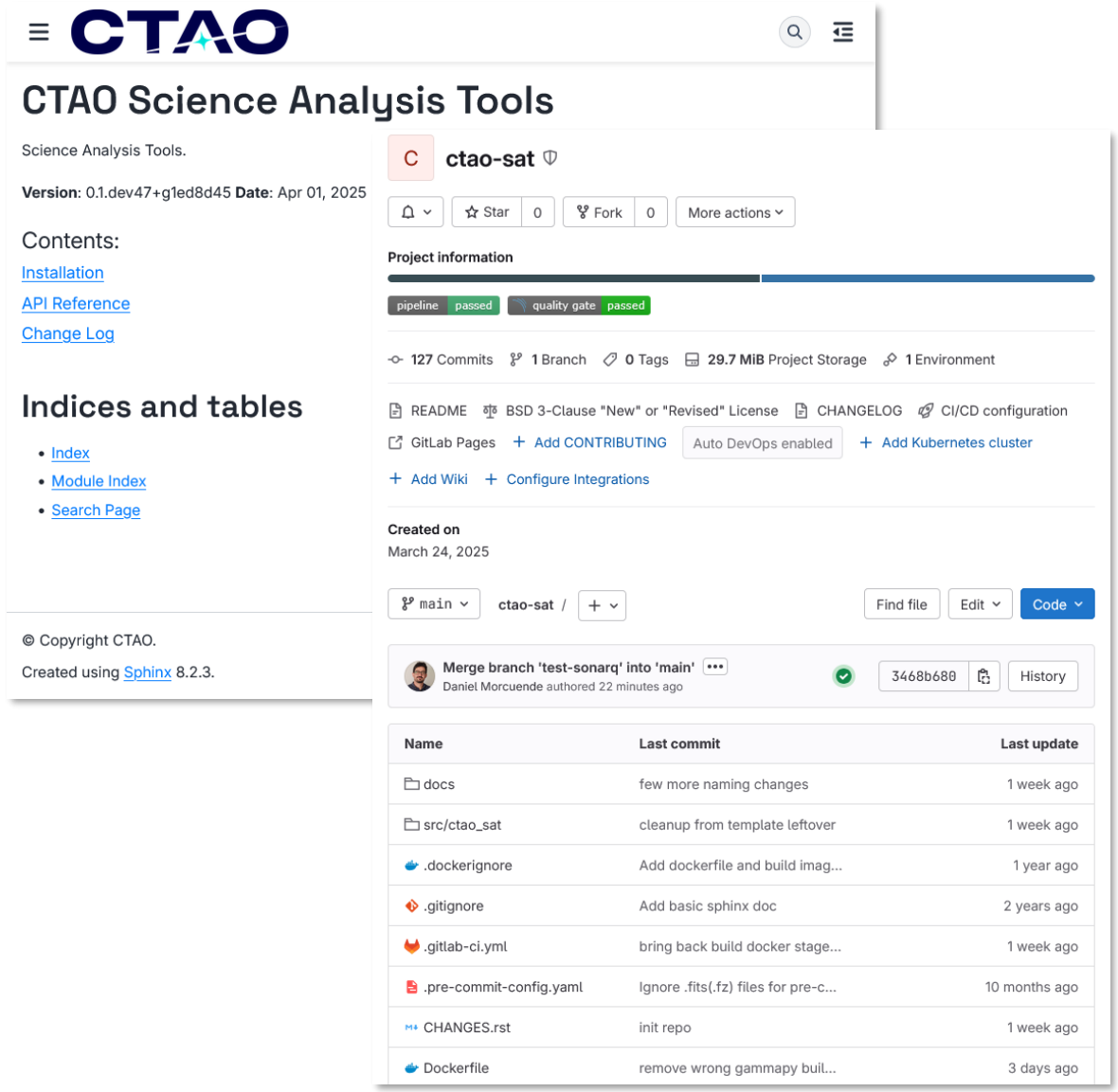
- Assembly: Test and release subsystem package
- Integration: Install and deploy package on test cluster (DESY)
- Verification: Tests and quality assurance → Create report

- Needed for the release of SAT

- Know-how from ACADA/DPPS experience

Assembly

- Package hosted in CTAO GitLab
- Gammapy as core dependency, but not only. Need other libraries to support all science analysis cases (e.g. pulsars)
- Documentation: CTAO-specific science analysis use cases examples
- Verification report (CI, unit testing, quality gates, benchmarking, validation): Lev. C
- Release subsystem package artifact



Integration tests

- Install and deploy package on test cluster at DESY (+ other data centres?)
- Using Docker + Kubernetes
- Being able to test it in a local machine (dev)
- Interaction with other SUSS subsystems

Verification

- Level B requirements (SUSS)
  - Identify what’s needed to support the SDC
- Requirements verification tests (TBD)
  - Benchmarking/Validation
  - Tutorials
  - Test dataset (SDC, Gammapy dataset)
  - How much can we automate
  - Complete them over time
- Finally: Release document

SDC preparation

- Shall use first SAT release
- Need an overview of Science cases, analysis use cases (in contact with Science Office)
- Unsure that we have all the functionalities needed
  - Tests/verification
- Documentation: accessible, properly exposed

Bonus track

- Data volume calculation DL3+ as input for CTAO Computing Model
- Understand what would be the products to keep at each stage for different analysis cases (as standard automized analysis)
  - Quick-look products
  - Quality checks
  - Also related to VODF
- Your insight would be helpful