CERIC-ERIC Panosc WP5 update

2020 Development sprint, 20. 4. - 30. 4.

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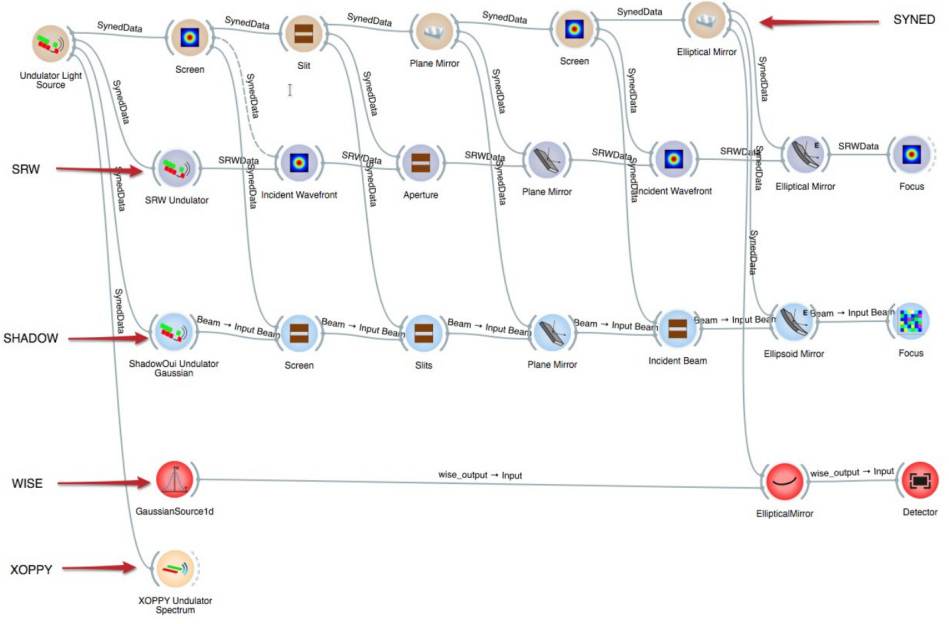
panosc photon and neutron open science cloud

OASYS

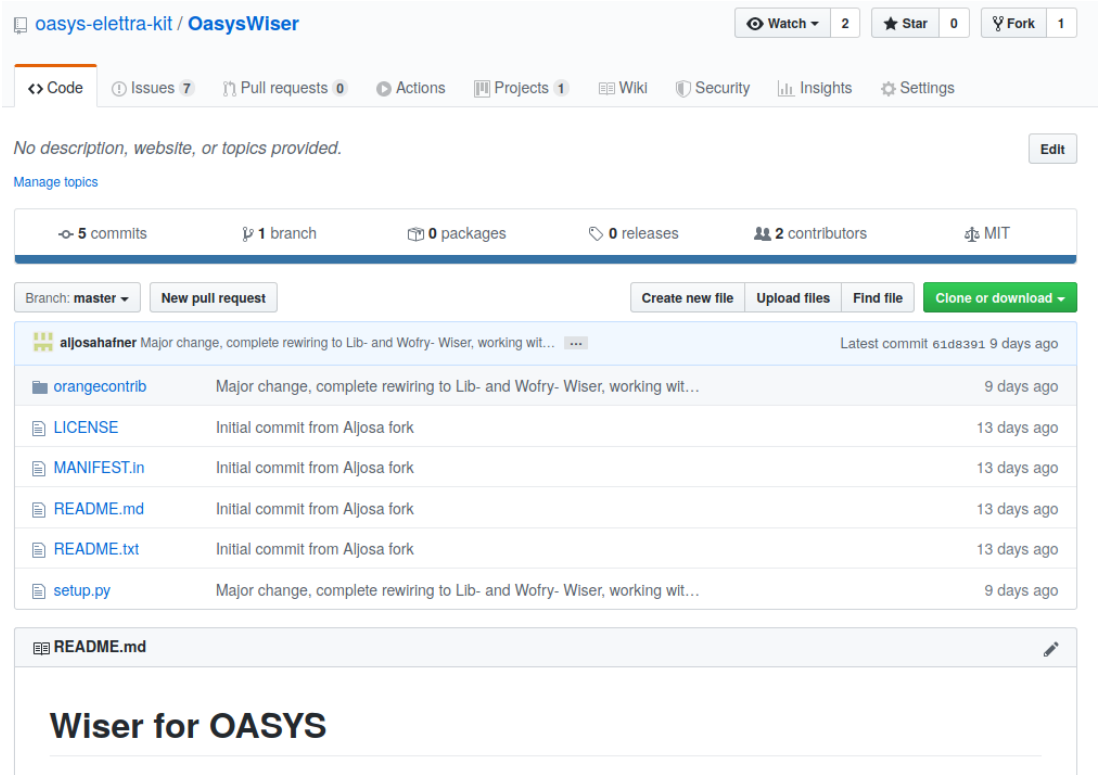
- Widely used software package for X-ray optics simulations (Created by L. Rebuffi and M. Sanchez del Rio)
- Codes available: Shadow, SRW, XOPPY, Syned
- Maintaining and developing code



Wiser in OASYS

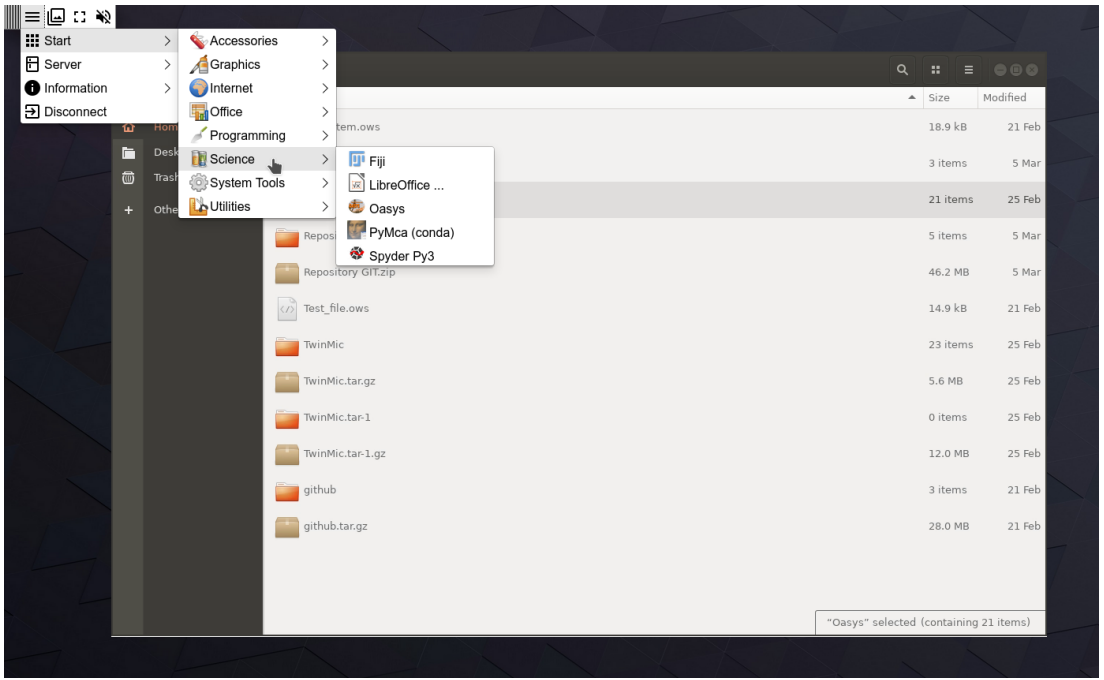
Raimondi, L., and D. Spiga. *Mirrors for X-Ray Telescopes: Fresnel Diffraction-Based Computation of Point Spread Functions from Metrology.* Astronomy & Astrophysics 573 (Jan 2015): A22. https://doi.org/10.1051/0004-6361/201424907.

- Port of numerical integration code (Huygens-Fresnel integral)
- Hierarchy:
  - LibWiser
  - WofryWiser
  - OasysWiser



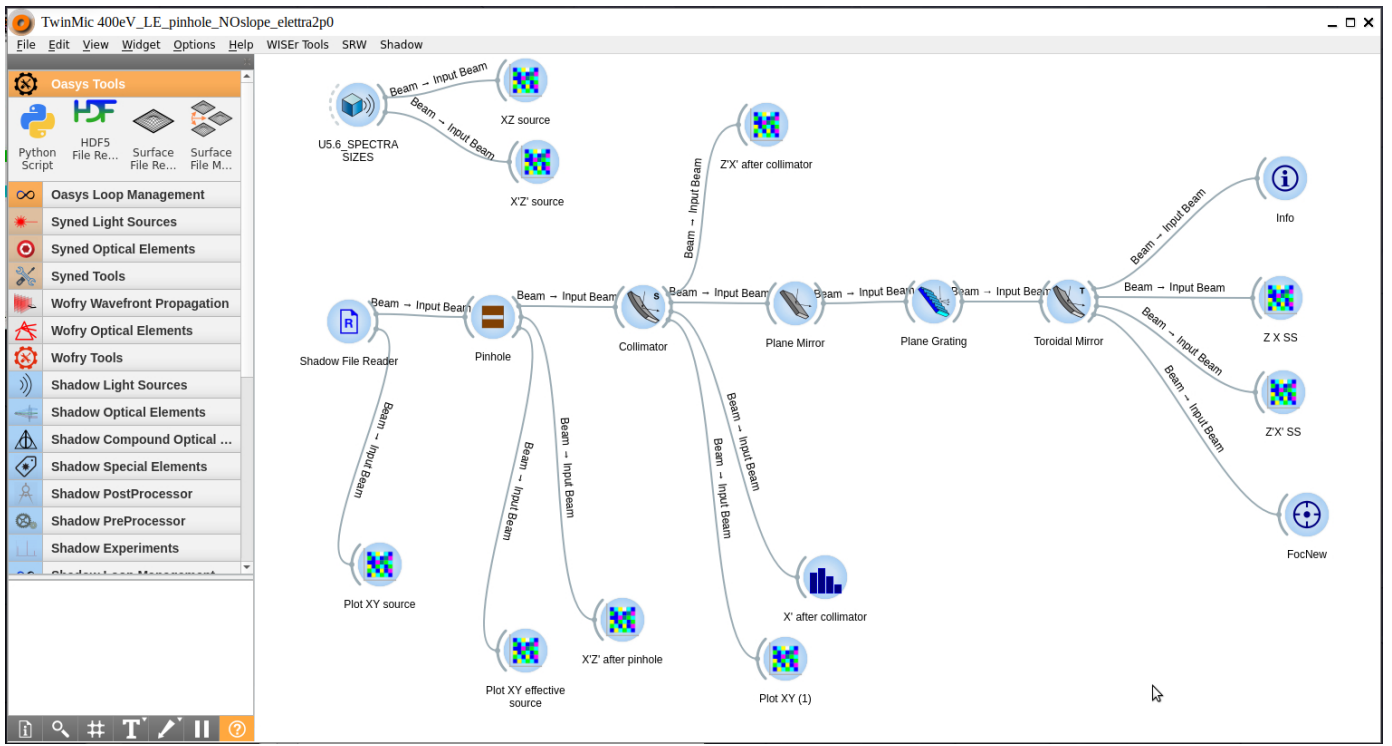
Remote access

- RAFEC – internally developed remote access technology built around Xpra and Kubernetes
- To be available through VUO
- Collaborative access



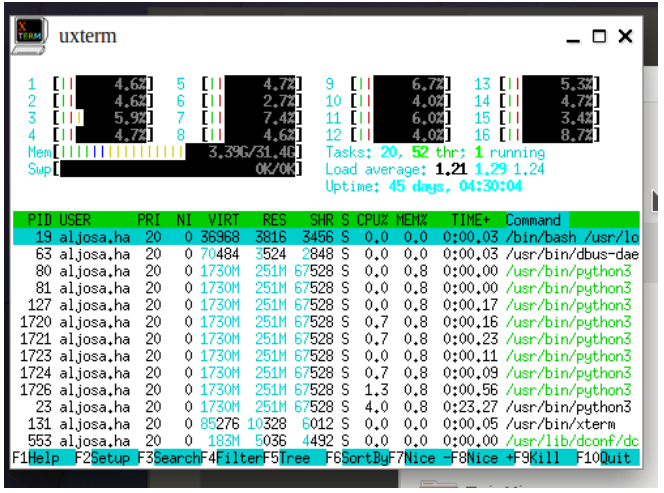
Documented beamlines

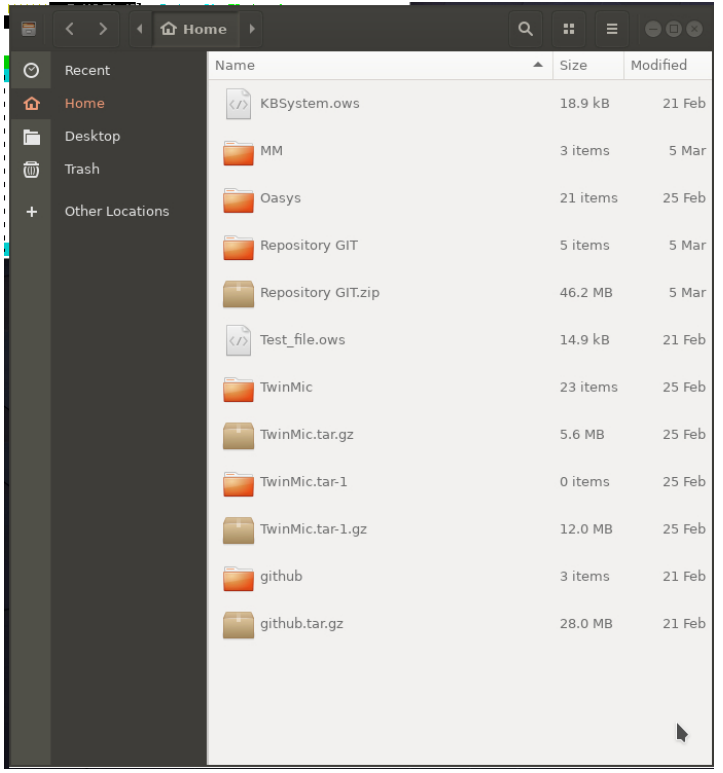
- Elettra beamlines



Cloud resources

- Scaling with available computing power
- Each user has access to their own files





Outlook

- Wiser in OASYS
    - Full-range of optical elements
    - Interoperability with other OASYS codes
- OASYS in RAFEC
    - Documented beamlines, accessible to scientists and users
    - Interoperability with other software (goal of this workshop)
- Strengthening OASYS community