ELETTRA

Sincrotrone Trieste

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ICAT **Workshop - Grenoble - 20 March 2012**

Elettra

- Third-generation synchrotron radiation source

- Optimised for the VUV and soft-X-ray range

- Operates between 2.0 and 2.4 GeV

- Feeds over 24 beamlines

- The total operating time of the facility is currently about 5000 hours/year, providing about 105000 hours of user time on the individual experimental stations

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- A single-pass **Free Electron Laser** user-facility
  - wavelength range from 100 nm (12 eV) to 10 nm (124 eV)
- The main machine characteristics are:
  - High peak power (~ GW) optical pulses with synchronization to external laser sources.
  - APPLE II type undulators to enable flexible tuning of both photon wavelength and polarization
  - Implementation of seeded harmonic cascade FEL schemes for tunable and controlled short-wavelength photon pulse production
  - Advanced feedback and feed-forward systems to improve output stability.

Related projects

- PaNdata ...
- **PaNdata-ODI**
- Elisa ...
  - European LIght Sources Activities (I3)
- **Calipso**
  - Coordinated Access to Lightsources to promote Standards and Optimization
  - Kick-off meeting in Trieste in June

    (Together with PaNdata workshop?)

Our 1st ICAT experience

- **NFFA** : Nanoscience foundries and fine analysis (FP7)

- A demonstrator built on ICAT 3.0

- Deployed a portal

  - Allows users to login, create metadata XML file(s) using forms and ingest it into ICAT catalogue

  - Query and retrieve data from the storage

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Current ICAT involvement & plans

- PaNdata WP4 – Data Catalogue Service

- Installed & testing ICAT 4.0

- All FEL BL and some synchrotron BL store data in HDF5 (NeXus?)

    - Convince them of cataloguing benefits

    - Proper use linked to data policy implementation

See you in June?

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