

News from ESRF

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on behalf of the ESRF software group

Tango collaboration meeting

May 2013



Phase 1 upgrade

◆ Good progress

Construction work is finishing

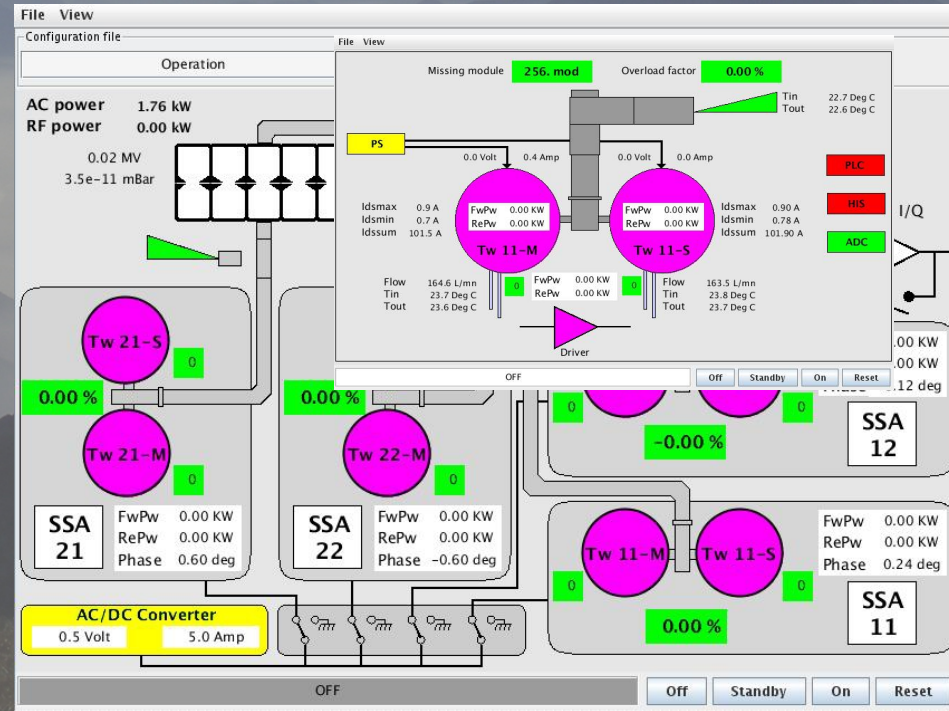


Other works in progress

- ◆ New site entrance (October 2013)
- ◆ New IBS institute on site this summer (+ 300 people)
- ◆ New restaurant (October 2013)
- ◆ Science building (September 2013)

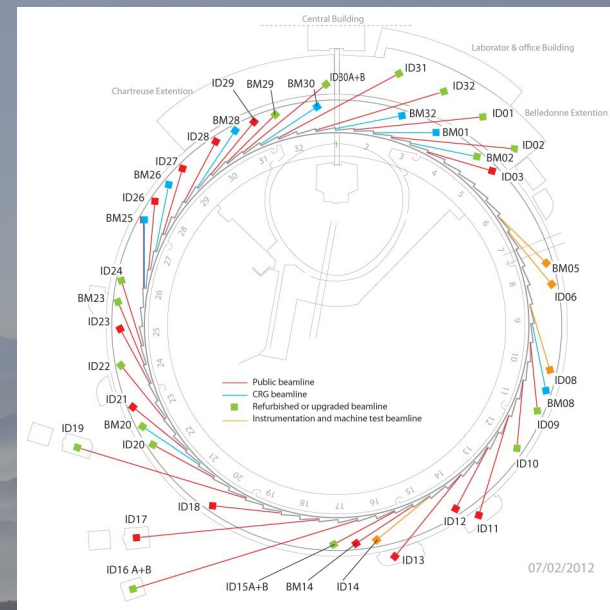
RF-SSA

- 8 RF SSA towers in booster operational
- 6 RF SSA towers in SR in installation
- HOM damped cavities in test



Phase 1 beamlines milestones

- ✦ ID24 + BM23 2 refurbished EXAFS beamlines in operation
- ✦ ID30 canted undulator and optic hutches installed
 - Waiting new hall to install experiment hutch, robot...
- ✦ ID16, nano imaging and spectroscopy, commissioning optics hutch
- ✦ ID19 refurbished and in user mode again
- ✦ MXCube V2 stabilised and being tested by scientists
- ✦ Pilatus 6MF installed and operational
- ✦ BM29 BioSaxs beamline commissioned
- ✦ HPLC and ISpyB TANGO collaboration



Other work in progress

- ◆ New Web CMS (Jahia replacing Plone)
- ◆ network and data storage :
 - upgraded from 1 Gbit/sec to 20 Gbit/sec per beamline, 40 Gbe
 - Quality of Service (QoS) implemented on network to guarantee bandwidth
 - local buffer storage installed on 2 beamlines
 - central storage being replaced with dedicated storage per beamline

TDR for phase 2 upgrade

- ◆ New magnetic lattice giving 160 pm^*r emittance
 - Brilliance *25. (Number of photons at the sample)
 - Lifetime /10 -> topping-up mode
 - Much smaller acceptance
 - Orbit steering challenge
 - Injection challenge
 - New absorbers
 - Extremely Strong magnets (high field gradient)
 - Challenging mechanical and vacuum design
 - (high density of equipment if little space)
 - 12 months shutdown (2019)
 - **TDR to be finished by June 2014**

Impact on Control activities

- ◆ Refurbish of injector diagnostic for topping up:
 - 100 new BPM electronic (New design from itech)
 - Refurbishment of current monitoring
 - New tune measurement
 - New injection scheme, new timing structure
- ◆ Storage ring
 - 160 Libera + to integrate to the 224 existing ones
 - Fast Orbit Feedback to re-furbish
 - Many new diagnostic
 - Many new control servers+ GUI: powersupplies, RF cavities, diagnostics
 - Timing

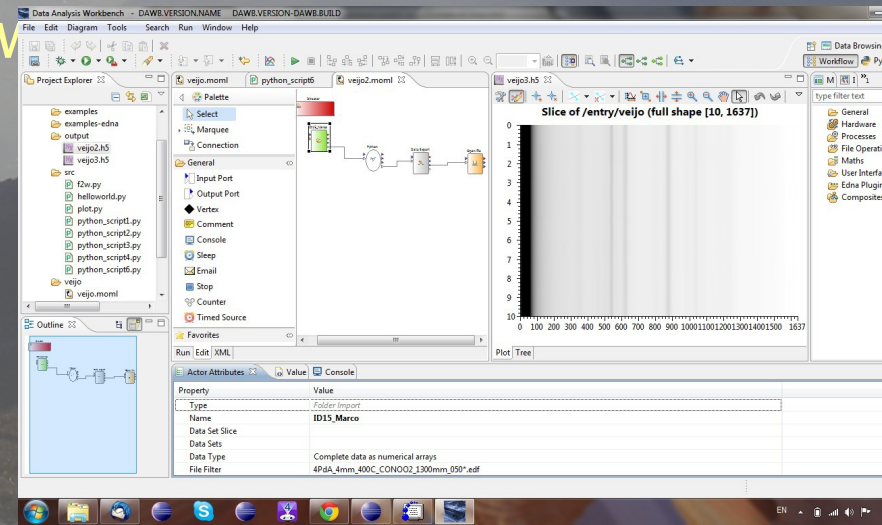
News from Software group

- ◆ 2 workshops, LIMA and MXCUBE
- ◆ Project of renovation of beamline control (3years)
 - GUIs, Sequencing,
- ◆ Beamline Control Unit reorganized
 - Helpdesk, prioritization, resource management, reporting...
- ◆ Accelerator Control: 2 departures -> 2 new comers + 1 18months contract
- ◆ ID control refurbished recently (40 beamlines)

Data analysis

- ◆ FabIO input/output library for reading and writing images from various X-ray cameras
- ◆ FullField XANES
- ◆ PyFAI Python library for azimuthal and radial integration (Integrated as a Lima plugin)
- ◆ HPLC for steric exclusion chromatography of proteins on BioSaxs beamline. azimuthal integration online on GPU v
- ◆ Dawn project

TANGO collaboration



TANGO for industry

- ◆ ESRF is actively working on it
 - Refer to Andy's presentation



NEXEYA

Let's merge our talents



THALES



Atos



Sopra
group



ESRF new countries members

- ◆ South Africa associated member since 22nd of May 2013



- ◆ Negotiation in progress with Russia
- ◆ Negotiation in progress with India

Thank you!

