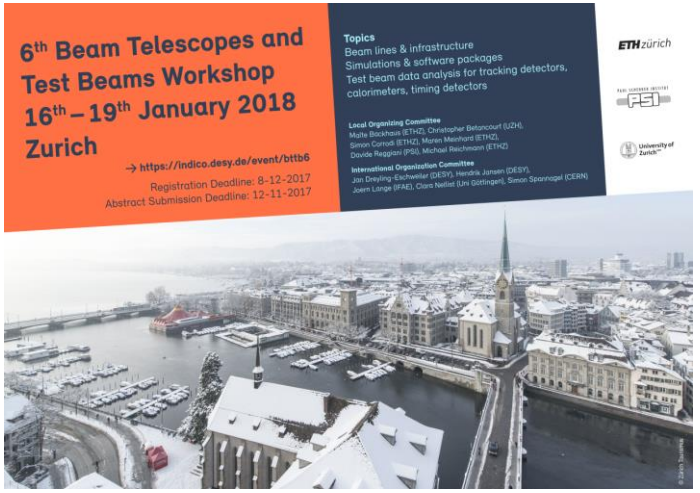
AIDA-2020 WP15
Upgrade of beam and irradiation test infrastructure

Federico Ravotti (CERN) & Marcel Stanitzki (DESY)



WP15 Satellite Meeting @ 6th BTTB Workshop
https://indico.cern.ch/event/683891/

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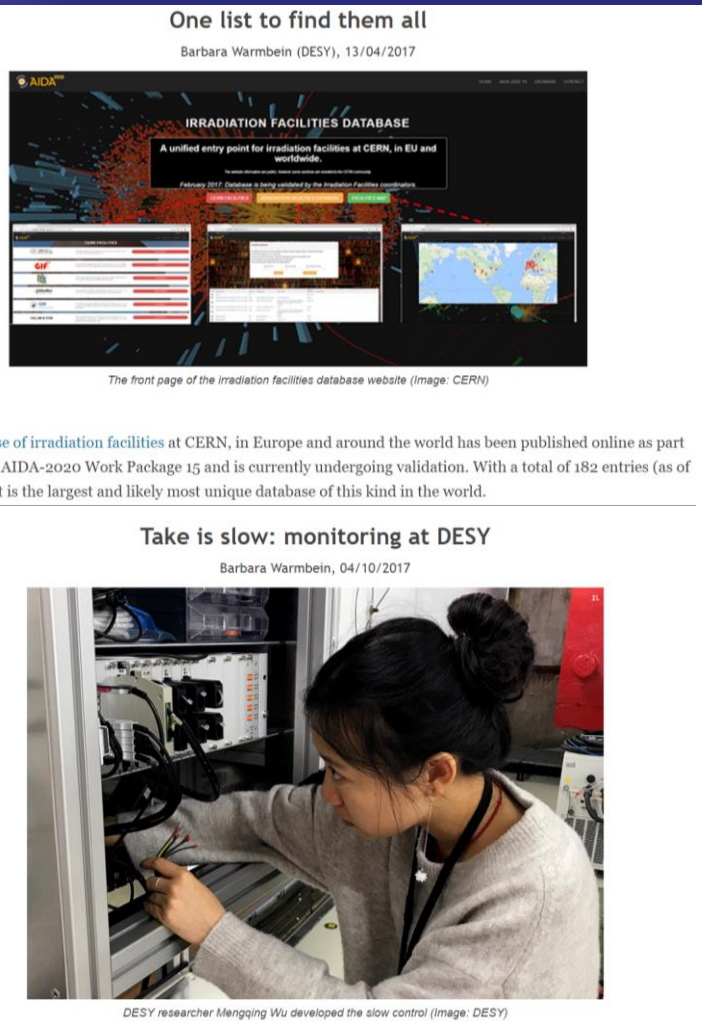
Welcome!

- **The BTTB series has been a very successful forum for:**
  - test beam & irradiation facilities users (and coordinators)
  - beam telescope users
- **AIDA-2020 WP15 has a large overlap of activities and participants** (Tasks 15.2, 15.3, 15.4) …
- **Upgrade activities in test-beams and irradiation facilities** (Task 15.5) **are driven by users requirements …**

  … natural to take the opportunity to meet and discuss WP15 matters!
- **Repeat the event after the positive feedback from last year meeting in Barcelona** (https://indico.cern.ch/event/591285/)

AIDA-2020 News

- **Third Annual Meeting:**
  - will be held in **Bologna, Italy** from **24 to 27 April 2018**
  - details will be circulated soon, … please, book the dates!
- **Extension of AIDA-2020 (1Y) ?:**
  - no call for detectors closing in ‘18/’19
  - no additional funding … but keeping community together!
  - discussion (& decision) in Bologna
- **On Track newsletter:**
  - http://aida2020.web.cern.ch/content/newsletter
  - several articles on WP15 activities were prepared during 2017



One list to find them all

Barbara Warmbein (DESY), 13/04/2017

The front page of the irradiation facilities database website (Image: CERN)

A new database of irradiation facilities at CERN, in Europe and around the world has been published online as part of the work of AIDA-2020 Work Package 15 and is currently undergoing validation. With a total of 182 entries (as of March 2017) it is the largest and likely most unique database of this kind in the world.

Take is slow: monitoring at DESY

Barbara Warmbein, 04/10/2017

DESY researcher Mengqing Wu developed the slow control (Image: DESY)

As part of the AIDA-2020 project's Work Package 15 (WP15), which aims to upgrade beam and irradiation test infrastructures across Europe, the DESY laboratory in Hamburg, Germany has developed a new infrastructure.

WP 15 Structure

- **Task 15.1**: Scientific coordination (CERN, DESY)
- **Task 15.2**: Improvements of test beam infrastructure for high precision tracking (CERN, DESY)
- **Task 15.3**: Improvements of the DESY test beam infrastructure (DESY)
- **Task 15.4**: Improvements of the test beam infrastructure at LNF (INFN)
- **Task 15.5**: Improvements of the infrastructure for irradiation tests (CERN, INFN, VU, INRNE, JSI, USFD*)

*associated partner linked to CERN

Milestones

Mil. no.	Milestone name	WP no.	Planned delivery date	Actual delivery date	Status	Comments
MS16	Specifications for IRRAD sample & user management system and online database fixed	15	M12	08/06/2016	Achieved	Report
MS17	Design of a transport system for neutron irradiations of large samples	15	M12	08/06/2016	Achieved	Report
MS32	Pixel telescope hardware assembled	15	M18	31/10/2016	Achieved	Report
MS33	Environmental control system hardware installed	15	M18	24/10/2016	Achieved	Report
MS34	New Frascati beam line components installed	15	M18 ~M40	M30	Delayed	Justification for delay
MS35	Test of various low cost silicon materials for fluence monitor concluded	15	M18	31/10/2016	Achieved	Report
MS36	Concept of cold box evaluated and design fixed	15	M18	31/10/2016	Achieved	Report
MS37	Design of the additional cosmic trackers on the other side of the source and on the side walls	15	M18	01/11/2016	Achieved	Report
MS59	Silicon strip reference tracker hardware ready	15	M24	08/12/2017	Achieved	Report
MS70	Photon tagging components installed	15	M30	07/11/2017	Achieved	Report
MS85	Installation and commissioning of instantaneous dose rate monitoring system	15	M36			
MS86	Test of the different software modules as event display, camera position tracking and user interface	15	M36			

components delivered first half 2018 ?

GIF^{++} upgrade: expected by the end of 3rd year

Deliverables

Del. no.	Deliverable name	WP no.	Planned delivery date	Actual delivery date	Status	Comments
D15.1	CERN pixel beam telescope for the PS	15	M24	27/03/2017	Achieved	Report
D15.2	Silicon strip reference tracker at DESY	15	M36	(end of 3rd year)		
D15.3	Environmental control system at DESY	15	M30	27/10/2017	Achieved	Report
D15.4	New Frascati beam line (delay of MS34)	15	M30	M45 ? ~~M38~~	Delayed	Justification for delay
D15.5	Frascati photon tagging system	15	M42	(link with D15.4 ?)		
D15.6	CERN proton facility upgrade	15	M24	11/05/2017	Achieved	Report
D15.7	Radiation-hard facility instrumentation for the CERN proton facility	15	M44			
D15.8	Cold irradiations at Birmingham	15	M36	(end of 3rd year)		
D15.9	JSI TRIGA Reactor Transport system	15	M18	04/11/2016	Achieved	Report
D15.10	GIF++ gas system	15	M24	31/05/2017	Achieved	Report
D15.11	GIF++ Facility upgrade	15	M48			

Reports …

- AIDA-2020 comes with a **certain amount of paperwork**:
  - Annual Reports, Milestone Reports, Deliverable Reports, etc…
  - contractual obligation with the EU

- **Deadlines**:
  - reports need to be read & edited by WP15 management, AIDA-2020 management before being uploaded on the EU system
  - expect comments

- **Please, have the reports ready at the time we asked them to be! Thanks!**

Outreach

- Becoming more and more important!
  - frequently asked/reminded by AIDA-2020 coordination
- **39 (+1) records for WP15 in CDS** so far (including official reports)
  - http://cds.cern.ch/collection/AIDA-2020?ln=en
- Please, **submit your publications** related to WP15 activities:
  - http://aida2020.web.cern.ch/content/submit-your-publication
  - *journal publications, conference/workshop papers, scientific/technical notes, academic dissertations, posters, presentations and handouts, press articles*, etc …
- and, please, remember the **AIDA-2020 acknowledgement** text!
  - http://aida2020.web.cern.ch/science/publications

Today's Program …

09:30 → 09:35	**Welcome & Introduction** **Speaker**: Federico Ravotti (CERN)	5m	
09:35 → 09:50	**WP15.2 Improvements of test beam infrastructure for high precision tracking** **Speaker**: Jan Dreyling-Eschweiler (Deutsches Elektronen-Synchrotron (DESY))	15m	
09:50 → 10:05	**WP15.3 Improvements of the DESY test beam infrastructure** **Speaker**: Mengqing Wu (Deutsches Elektronen-Synchrotron (DE))	15m	Test-beams & Tracking
10:05 → 10:20	**WP15.4 Improvements of the test beam infrastructure at INFN-LNF** **Speaker**: Mr. Claudio Di Giulio (INFN)	15m	
10:20 → 10:35	**WP15.5 - Si and GaN for large fluence irradiation monitoring (D15.6)** **Speaker**: Dovile Meskauskaite	15m	
10:35 → 10:50	**WP15.5 - IRRAD Facility Upgrade: samples manager & irradiation facilities database (D15.6)** **Speaker**: Blerina Gkotse (Université Européenne de Bretagne UEB (FR))	15m	Irradiation Facilities
10:50 → 11:00	**Break**	10m	

Today's Program

11:00 → 11:15 **WP15.5 - IRRAD Facility BPM and sample holders (D15.7) & GIF++ Gas System Upgrade (D15.10)** 15m

Speakers: Isidre MATEU (CERN) , Roberto Guida (CERN)

11:15 → 11:30 **WP15.5 - Upgrades to the Birmingham robotic scanning system (D15.8)** 15m

Speakers: Paul Neil Kemp-Russell (University of Sheffield (GB)) , Richard French (The University of Sheffield)

11:30 → 11:45 **WP15.5 - Cosmic-rays tracker improvements & augmented reality event-display for GIF++ Facility (D15.11)** 15m

Speakers: Davide Boscherini (Universita e INFN, Bologna (IT)) , Giulio Aielli (Universita e INFN Roma Tor Vergata (IT)) , Federico Ravotti (CERN)

11:45 → 12:00 **WP15.5 - Istantaneous dose-rate monitor for GIF++ Facility (D15.11)** 15m

Speaker: Plamen Stoianov Iaydjiev (Bulgarian Academy of Sciences (BG))

AIDA2020_DRM_Ra... AIDA2020_DRM_Ra...

Irradiation Facilities

12:00 → 12:15 **Wrap-up** 15m

Speaker: All