# AIDA WP2 Session

Frank Gaede, DESY
Pere Mato, CERN

AIDA Annual Meeting

March 27, 2014

AIDA is co-funded by the European Commission within the Framework Programme 7 Capacities Specific Programme, Grant Agreement 262025

# WP2 session

| | |
|---|---|
| **Introduction** | *Dr. Pere MATO VILA et al.* |
| *Böcklsaal, Vienna University of Technology* | 09:00 - 09:05 |
| **Status of DD4hep** | *Markus FRANK* |
| *Böcklsaal, Vienna University of Technology* | 09:05 - 09:20 |
| **Status of USolids** | *Dr. Pere MATO VILA* |
| *Böcklsaal, Vienna University of Technology* | 09:20 - 09:35 |
| **Status of Tracking Toolkit** | *Christoph Gerhard ROSEMANN* |
| *Böcklsaal, Vienna University of Technology* | 09:35 - 09:50 |
| **Status of Pile-Up Tracking** | *Gigi CAPPELLO* |
| *Böcklsaal, Vienna University of Technology* | 09:50 - 10:05 |
| **Status of Trigger Simulation Tool** | *Jelena ILIC* |
| *Böcklsaal, Vienna University of Technology* | 10:05 - 10:20 |
| **Update on Vertexing tools** | *Ferenc SIKLÉR* |
| *Böcklsaal, Vienna University of Technology* | 10:20 - 10:35 |

focus on status of software and upcoming deliverables

| | |
|---|---|
| **Cellular automaton track finding in Belle II** | *Rudolf FRUHWIRTH et al.* |
| *Böcklsaal, Vienna University of Technology* | 11:15 - 11:30 |
| **Status of Alignment** | *Christoph HOMBACH* |
| *Böcklsaal, Vienna University of Technology* | 11:30 - 11:45 |
| **Status of Particle Flow** | *Prof. Mark Andrew THOMSON* |
| *Böcklsaal, Vienna University of Technology* | 11:45 - 12:00 |
| **Discussion - Final Deliverables** | *Dr. Pere MATO VILA et al.* |
| *Böcklsaal, Vienna University of Technology* | 12:00 - 12:45 |

# AIDA Deliverables for WP2

| Delive-rable Number [61] | Deliverable Title | Partners (lead beneficiary) | | e [62] | Dissemi-nation level [63] | Delivery date [64] | |
|---|---|---|---|---|---|---|---|
| D2.1 | Project web infrastructure to document software packages | CERN | 5.00 | O | PU | 3 | done |
| D2.2 | Central code repositories and other infrastructure required for the software development | DESY | 5.00 | O | PP | 4 | done |
| D2.3 | Software design for geometry toolkit including the interfaces for the reconstruction toolkits | CERN, DESY, LLR, UniGla, STFC | | | PU | 12 | done |
| D2.4 | Software design for tracking toolkit | DESY, CERN, OeAW, KFKI | | | | 12 | done |
| D2.5 | Software design for PFA tools | Ucam, LLR, CERN, | | | PU | 12 | done |
| D2.6 | Design for handling the pile-up in sLHC | INFN, NTU, KFKI | | | PU | 30 ~~17~~ | done |
| D2.7 | Software toolkit for detector geometry, materials and detection technologies | CERN, DESY, LLR, UniGla, STFC | | | PU | 38 | |
| D2.8 | Software toolkit with tracking algorithms | DESY, CERN, OeAW, KFKI | | | | 38 | next |
| D2.9 | Particle Flow software tools | Ucam, LLR, CERN, | | | PU | 38 | |
| D2.10 | Alignment tools software tools | UniMan | 30.00 | O | PU | 38 | |
| D2.11 | Trigger simulation software tool | STFC | 20.00 | O | PU | 38 | |
| | | Total | 350.00 | | | | |

# WP2 - Milestones

| Milestone number [59] | Milestone name | Partners (lead beneficiary) | | Comments | |
|---|---|---|---|---|---|
| MS10 | Running first prototype of the particle flow algorithm. | Ucam,LLR,CERN | 10 | Application to LC detector (Task 2.3) | done |
| MS11 | Running prototype of tracking toolkit including some algorithms | DESY | 18 | Application to ILD-TPC simulation (Task 2.2) | done |
| MS12 | Running prototype of the geometry toolkit | CERN, DESY, LLR | 26 | Application to ILD detector simulation (Task 2.2) | done |
| MS13 | Running prototype of the tracking code for the pile-up | INFN, NTU, KFKI | 26 | Application to sLHC simulation (Task 2.3) | done |
| | | | 36 | | |
| MS14 | Integration of tracking toolkit into LC software framework | DESY, CERN, OeAW | 44 | Validation of physics performance (Task 2.3) | next |
| MS15 | Application of PFA tools to sLHC detectors | Ucam, LLR | 44 | Demonstration of concept (Task 2.3) | |
| MS16 | Application of alignment tools to sLHC | UniMan | 44 | Validation of performance (Task 2.3) | |
| MS17 | Integration of pile-up tracking code in sLHC software frameworks | INFN, NTU, KFKI | 44 | Validation of tracking efficiency (Task 2.3) | |

# Deliverables

- all deliverables are due in M38 - i.e. now :
- D2.7 software toolkit for geometry description
  - USolids & DD4hep
  - CERN
- D2.8 software toolkit with tracking algorithms
  - aidaTT, pile-up tracking (CMS), vertexing tools, CA tools
  - DESY (INFN, HEPhy, Wigner)
- D2.9 particle flow software tools
  - pandoraPFA, Arbor
  - Cambridge (LLR)
- D2.10 alignment software tools
  - LHCb and telescope alignment tools
  - Manchester
- D2.11 trigger simulation tools
  - trigger simulation tkLayout
  - STFC

# deliverables and reports

- for the deliverables we are expected to have:
  - first 'final' version of the software tagged in a public repository, e.g. the aidasoft svn
  - documentation:
    - manuals
    - web page
    - code documentation
  - deliverable report (5-10 pages) with pointers to the above
- reports are due end of april
  - 1-2 months delay does not need formal justification
  - if delayed more than 2 months, we need to write a short explanation
- use the talks and discussion in the end to see where we are with respect to these goals