

FCC SW

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FCC SW Meeting, 9 October 2020

What happened since last meeting

- EDM4hep / key4hep ([indico category](#)); minutes attached to meetings
 - EDM4hep ([Sept 1st](#), [Sept 15th](#), [Sept 29th](#))
 - Key4hep ([Sept 8th](#), [Sept 22nd](#), [Oct 6th](#))
 - Snowmass Lol about EDM4hep/Key4hep submitted
 - Progress and consolidation of Spack infrastructure and CI
 - Progress of (LCIO) converters for use with Marlin wrapper
 - Example of simul/recons for CLIC with key4hep
 - Delphes as Gaudi algorithm still in progress
- Next meetings: Oct 13th (EDM4hep), Oct 20th (Key4hep)
 - If interested register to egroups **hsf-edm4hep-wg** and/or **key4hep-sw**

Recent activities

- Software related talks at Physics Performance meeting
 - [Progress with flavor tagging](#) (L Gouskos, M Selvaggi)
 - Flavour tagging algorithm running on *Delphes Track Covariance* tracks
 - Being followed up w/ comparison w/ LCFIPlus
 - [Z-pole flavour physics at FCC-ee](#) (D Hill)
 - Efficient combinatorial analysis using *awkward arrays* and *uproot*
 - Followed up by discussion with LHCb on possible synergies w/ FCC
- Discussion about porting FCC-hh LAr calorimeter to FCC-ee restarted
 - [PR 403](#): updated dimensions, code cleaning, example / J Faltova
- First implementation of the FCCee CLD detector
 - [PR 395](#) / E Perez
- Ongoing work/discussions
 - KKMC
 - Discussion about HGCal software and ACTS integration
 - ...

Status of FCCSW: v0.14

- Latest Pre-Key4hep tag
 - Available in two forms
 - In the LCG stacks

```
$ source /cvmfs/fcc.cern.ch/sw/latest/setup-lcg.sh
```

- for CentOS7 and Ubuntu20.04 on CVMFS
- Native Mac OS version in preparation
- As full Spack build, for centos7

```
$ source /cvmfs/fcc.cern.ch/sw/latest/setup.sh
```

- Includes last version of several key packages
 - Delphes 3.4.3pre04, 3.4.3pre05
 - TrackCovariance is enabled
 - DD4hep 01-13-01, 01-14-01
 - Podio 0.12
 - Geant4 10.06.p02
 - ...

Snowmass 2021 tutorials

- Target: introduce Snowmass people to FCC software
 - Open to anyone interest
- Virtual only
 - No registration limit
- Dates
 - 22-23 September, 16h-19h CET
 - Introductory presentation
 - Hands-on: setup, generation with pythia8 and whizard, processing with Delphes, analysis with RDF
 - [Agenda](#) (with recordings)
 - Attendance = ~50 at beginning, ~35 at end
 - 28 September, 16h-19h CET
 - Hands-on: full simulation, development (write a Gaudi algorithm)
 - [Agenda](#) (with recordings)
 - Attendance = ~20
- Tutorial documentation in ReadTheDocs: [FCC Starter Kit](#)

Today's meeting

- Status of the DD4hep migration of dual-readout calorimeter (Sang Hyun Ko)
- Suggestion for discussion topics are welcome

Reminder: Vidyo meetings and connections

- Following CERN restrictions from now on - and until further notice - this meeting will be Vidyo only
- The meeting is open to everybody, but people connected **must make themselves recognisable**
 - People with a CERN account **must register** to the meeting with their own CERN credentials
 - For people without a CERN primary account, GUEST connection will be allowed **only** if agreed previously via email to Gerardo.Ganis@cern.ch or Clement.Helsens@cern.ch