FCC SW

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What happened since last meeting

- EDM4hep / key4hep
  - EDM4hep (Aug 4th, Aug 18th)
    - Version v00-02 available
    - Standalone Delphes with EDM4hep merged
    - Discussion about meta-data with concrete CMS example
      - Main difficulty is generalising event metadata
    - Discussions on updates of RDataframe-based analysis code
  - Key4hep (July 28th, Aug 11th, Aug 25th)
    - Progress in implementing Delphes as Gaudi algorithm
    - Several recipes added to the Spack infrastructure
      - In particular for CLIC packages
    - MarlinWrapper merged
  - Snowmass LoI about EDM4hep/Key4hep in preparation
- Next meetings: Sep 1st (EDM4hep), Sep 8th (Key4hep)
  - If interested register to egroups **hsf-edm4hep-wg** and/or **key4hep-sw**

Recent activities

- **FCCSW**
  - Pre-Key4hep tag (v0.13) available (see next)
    - To be used for next tutorials (see later)
  - Next version of FCCSW will depend on Key4Hep components
    - Major step forward common software, particularly the data model
  - Discussion about porting FCC-hh LAr calorimeter to FCC-ee restarted
- **Key4Hep**
  - New versions of EDM4hep (v0.2)
  - Gaudi wrappers for MARLIN algorithms merged in Key4hep

FCCSW v0.13

- Latest Pre-Key4hep tag
  - Available for CentOS7 and Ubuntu20.04 on CVMFS

    /cvmfs/fcc.cern.ch/sw/views/releases/fccsw/0.13/LCG_97a_FCC_2/

    - Native Mac OS version in preparation
  - Includes last version of several key packages
    - Delphes 3.4.3pre04
      - TrackCovariance is enabled
    - DD4hep 01-13-01
    - Geant4 10.06.p02
    - …

- Reminder
  - A working environment can created on **any** machine via VirtualBox
  - Contact us or follow doc

Next tutorials (for Snowmass)

- Target: introduce Snowmass people to FCC software
  - Open to anyone interest
- Virtual only
  - No registration limit for the time being
    - However limitations may arise from limited human support available
- Current dates
  - 22-23 September, 16h-19h CET
    - Introduction, Delphes, EDM, Analysis, Full Sim 1
    - Developing agenda and registration
  - 28 September, 16h-19h CET
    - Full Sim 2, Development
    - Developing agenda and registration

(Near) future activities

- **FCCSW**
  - Migrate the physics analyses to the new workflow with EDM4Hep
    - Needed for updated tutorials
  - Decide on the best approach to deal with detector geometry reconstruction etc…
    - What belong to FCCSW and Key4Hep
- **Key4Hep**
  - ACTS integration
    - Vertexing (primary and secondary), truth tracking, extrapolator
      - Suggested presentation at next Key4hep meeting
  - Consolidate the common data model
    - Need to pursue well defined use case from beginning to end for debugging

Today's meeting

- HGCAL reconstruction in CMS (M. Rovere)

- Topics for next meetings
    - IDEA drift chamber
    - …

- 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 themself recognisable**
  - People with a CERN account **must register** to he meeting with their own CERN credentials
  - For people without a CERN primary account, GUEST connection will allowed **only** if agreed previously via email to Gerardo.Ganis@cern.ch or Clement.Helsens@cern.ch