

News - Physics Performance, July 19, 2021

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Improving SW documentation

<https://github.com/HEP-FCC/FCCeePhysicsPerformance/tree/master/General>

<https://github.com/HEP-FCC/FCCAnalyses/tree/basicexamples/examples/basics>

Basic examples

This directory contains a number of examples each showcasing a specific functionality of the FCCAnalyses framework. It serves as a reference guide for how to implement specific common usecases or you can work through the examples one-by-one in order as a tutorial to familiarize yourself with the full functionality of the framework.

Each example is a stand-alone script for demonstration purposes, and does not make assumptions on a specific physics case. To understand how to write a full analysis with the FCCAnalyses framework please have a look at (insert a link to documentation about code class-structure) - the examples here only illustrate specific technical functionalities.

Table of contents

- Prerequisites
 - RDataFrame
 - EDM4HEP event model
 - Structure of EDM4HEP files
- Reading objects from EDM4HEP
- Association between RecoParticles and MonteCarloParticles
- Navigation through the history of the Monte-Carlo particles

Explanation of the reference collections in EDM4Hep files (Muon#0 etc..)

Basic code examples.

Announcements & coming events

- Next FCC France workshop (Annecy): Nov 30 – Dec 2
- FCC Physics, Experiments & Detectors workshop in Liverpool
 - Date is now fixed:
 - 7-11 Feb 2022


Reshuffling of Indico categories

Reflecting the new structure: now under the “Physics, Experiments and Detectors” (PED) pillar: (cf [Patrick's talk at the FCC week](#))







Home Create event ▾ Room booking My profile

Home » Projects » FCC » Physics, Experiments and Detectors

Physics, Experiments and Detectors

Meetings related to physics, experiments and detectors (PED) study in the FCC Feasibility Study

PED Coordination meetings	32 events	 
PED monthly general meetings	57 events	
Physics Performance	16 events	
Physics Programme	32 events	
Detector Concepts	6 events	

Today's meeting & organizing analysis efforts

- Several Higgs reports, work done recently with master students or interns, at LLR, IJCLab, APC, Liverpool
 - They do not necessarily continue in the host group with a thesis, but has allowed some FCC-ee analysis to get started
- In case you have had a student with whom you have started an FCC-ee analysis effort, please let us know !
- Even better: please contact us when you start, or consider to start, a case study analysis, rather than at a later stage
 - Synergies / common grounds with other efforts already going on
 - Benefit from knowledge already in the group
 - Technical support, common MC samples, etc

Today's agenda and next meeting

15:15 → 15:20 **News / welcome**

Speakers: Emmanuel Francois Perez (CERN), Patrizia Azzi (INFN Pad)

15:20 → 15:35 **Higgs mass and sigma(ZH) from Z(ee)H**

Speaker: Nicolas Morange (Université Paris-Saclay (FR))

15:35 → 15:50 **Higgs couplings (esp. HWW, also HZZ and Hbb)**

Speaker: Roberto Salerno (Centre National de la Recherche Scientifique (FR))

15:50 → 16:05 **Higgs couplings to bb and cc**

Speaker: Giovanni Marchiori (APC, IN2P3 and Université de Paris (Paris, France))

16:05 → 16:25 **Higgs to invisible**

Speakers: Andrew Mehta (University of Liverpool (GB)), Stephen Farry (UCL)

Next meeting (t.b.c.) : Monday, September 20, 2021