

# Tutorial: generation, simulation, reconstruction, analysis of KKMC events



Marcin Chrzaszcz



EPOL workshp , 22<sup>th</sup> September 2022

The screenshot displays the GitHub repository page for `KrakowHEPSoft/KKMCee`. The repository is public and has 533 commits. The main content is a list of recent commits, with the most recent one being `jadach` adding more input output files in `fbench/Mu` and appending `HowToStart` on October 4, 2021. Other notable commits include `KK2f` implementing BES, `KKaem` adding missing `KKKaefile's`, and `MaMaer` adding more input output files in `fbench/Mu`. The right sidebar shows the public release `KKMCee v5.00.02` published 24 days ago, and a list of contributors including `rechrzasz` and `staszekjadach`.

Commit	Description	Age
<code>jadach</code>	more input output files in <code>fbench/Mu</code> , appended <code>HowToStart</code>	12 months ago
<code>KK2f</code>	BES implemented	12 months ago
<code>KKaem</code>	adding missing <code>KKKaefile's</code>	7 years ago
<code>MaMaer</code>	more input output files in <code>fbench/Mu</code> , appended <code>HowToStart</code>	12 months ago
<code>MaJrod</code>	adding autobuild functionality	10 years ago
<code>Rhaxd</code>	finished cleaning automake, 80% of warnings gone	2 years ago
<code>YRprod</code>	logfile update, from now on this is main branch of the KKMC project	10 years ago
<code>atso</code>	add recursive	10 years ago
<code>bornv</code>	BES implemented	12 months ago
<code>dzoet-6-21</code>	benchmark PRD33 complete	12 months ago
<code>dzoet-6-42-cpc</code>	drobno poprawka w <code>izet-642-cpc</code>	2 years ago
<code>dzoet-6-42</code>	linking reduced	2 years ago
<code>dzoet-6-45</code>	linking reduced	2 years ago
<code>fbench</code>	more input output files in <code>fbench/Mu</code> , appended <code>HowToStart</code>	12 months ago
<code>gBa</code>	adding missing <code>KKKaefile's</code>	7 years ago
<code>jmnet</code>	adding missing <code>KKKaefile's</code>	7 years ago

⇒ Distributed through github:

<https://hep-fcc.github.io/FCCSW/>

⇒ Lots of tutorials to follow:

- <https://indico.cern.ch/event/945608/>
- <https://hep-fcc.github.io/fcc-tutorials/>
- <https://indico.cern.ch/event/839794/>

⇒ Experts/Main Authors: Clement Helsens, Gerardo Ganis and others

⇒ To Run FCC analysis please follow: <https://hep-fcc.github.io/fcc-tutorials/fast-sim-and-analysis/fccanalyses/doc/starterkit/FccFastSimAnalysis/Readme.html>

# Today's tutorial

- ⇒ We will focus on KKMC MC.
- ⇒ As you will see from one point the generated events are the same from Pythia and other tutorials for analysis can be applied.
- ⇒ What do you need?
  - Access to lxplus (BEST solution)
  - Virtual machine (VMplayer, download my image: )
  - FCC virtual machine (<https://hep-fcc.github.io/fcc-tutorials/software-basics/prerequisites.html#enabling-the-fccsw-software-installation-from-cvmfs>)

## Exercises

VM: <https://cernbox.cern.ch/index.php/s/f175XTgX1pZPVsc>

Exercise1:

<https://cernbox.cern.ch/index.php/s/JWPnwrqhderUrcz>

Exercise2:

<https://cernbox.cern.ch/index.php/s/sYc0zXrSHBXWhIH>

# Acknowledgement

This project has received funding from the European Union's Horizon 2020 research and innovation programme under the European Union's Horizon 2020 research and innovation programme under grant agreement No 951754.

