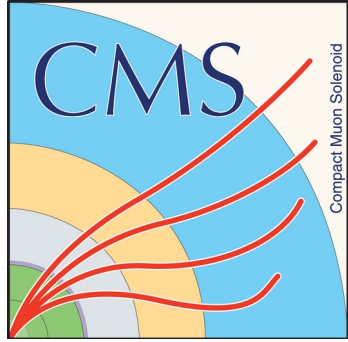

CMS PO&DAS preparation
September 5, 2023




# TauPOG exercise

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# Taus in CMS

In this session you will get to learn how tau leptons are treated in the CMS experiment, in particular how they are identified with respect to jets, electrons and muons

Plan of the session:

- Presentation of the tau reconstruction and identification in CMS ~20 min
- In parallel you can start setting up the CMSSW environment that will be used for the exercise → follow the instructions here
- The rest of the session is divided in 2.5 parts:
  - Use pre-skimmed samples to plot ID score distributions and kinematics of the mu-tau system, e.g. mvis, mT. Try different versions of DeepTau to see how things change with different working point combinations (duration ~45 min)
  - (optional) Preparation before coffee break: prepare ntuple skimmer to run different values of the tau energy scale → let jobs run during coffee break
  - Check output of jobs and visualize results with plotter → inspect the mvis distribution (30 min)
  - Measure the Tau ID efficiency, leaving the TES as an unconstrained shape parameter using produced tuples (1h and 30 min)

# Taus in CMS

Requirements: python, access to NAF, storage space in PNFS

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**Thanks for the attention.**

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