



PAT cleaning tutorial: *Lecture*

Outline

- What is “cleaning”?
 - ➔ *objects provided by separate POGs*
 - ➔ *overlap between objects, tuning to the analysis needs*
 - ➔ *also: duplication (photons, electrons)*
- Object cleaning in PAT
 - ➔ *cleaning steps (modules) and default configuration*
 - ➔ *checking and handling overlaps*
 - ➔ *tuning the configuration*
 - discarding overlapping objects
 - preselection and final cuts
 - advanced overlap checking

References

- <https://twiki.cern.ch/twiki/bin/view/CMS/SWGuidePATCleaning>
- <https://twiki.cern.ch/twiki/bin/view/CMS/SWGuidePATv2Cleaning>



PAT cleaning tutorial: *Exercises*

Exercises (jet-electron overlap in ttbar events)

1. *Loop on jet collections and find closest electron*
2. *Tune the configuration*
3. *Check with another overlap (e.g., jet-muon)*

Reference

- ➔ <https://twiki.cern.ch/twiki/bin/view/CMS/SWGuidePATCleaningExercises>

To-do list

- Lecture:
 - ➔ *merge PATv1 and PATv2 twiki pages*
 - ➔ *write down slides + demonstration*
- Exercises:
 - ➔ *re-write for PAT version 2*
 - ➔ *maybe get away from TQAF?*