TUTORIAL:
- DPD MAKING IN ATHENA

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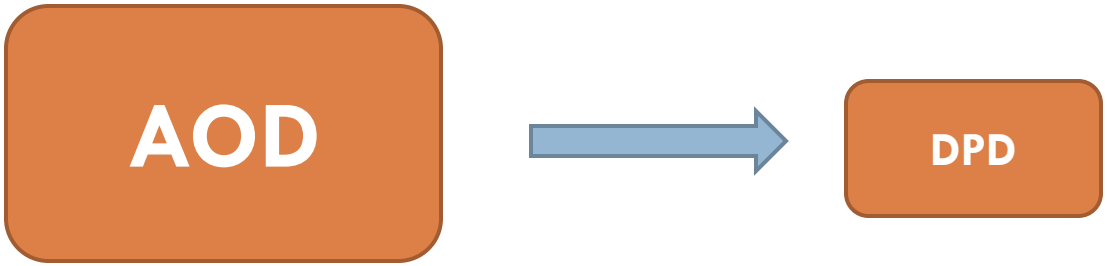
DPD making

- Introduction
  - What is a DPD (Derived Physics Data)?
    - A DPD (DP^1D, DP^2D) is a small AOD in which we have kept only the events we are interested in .

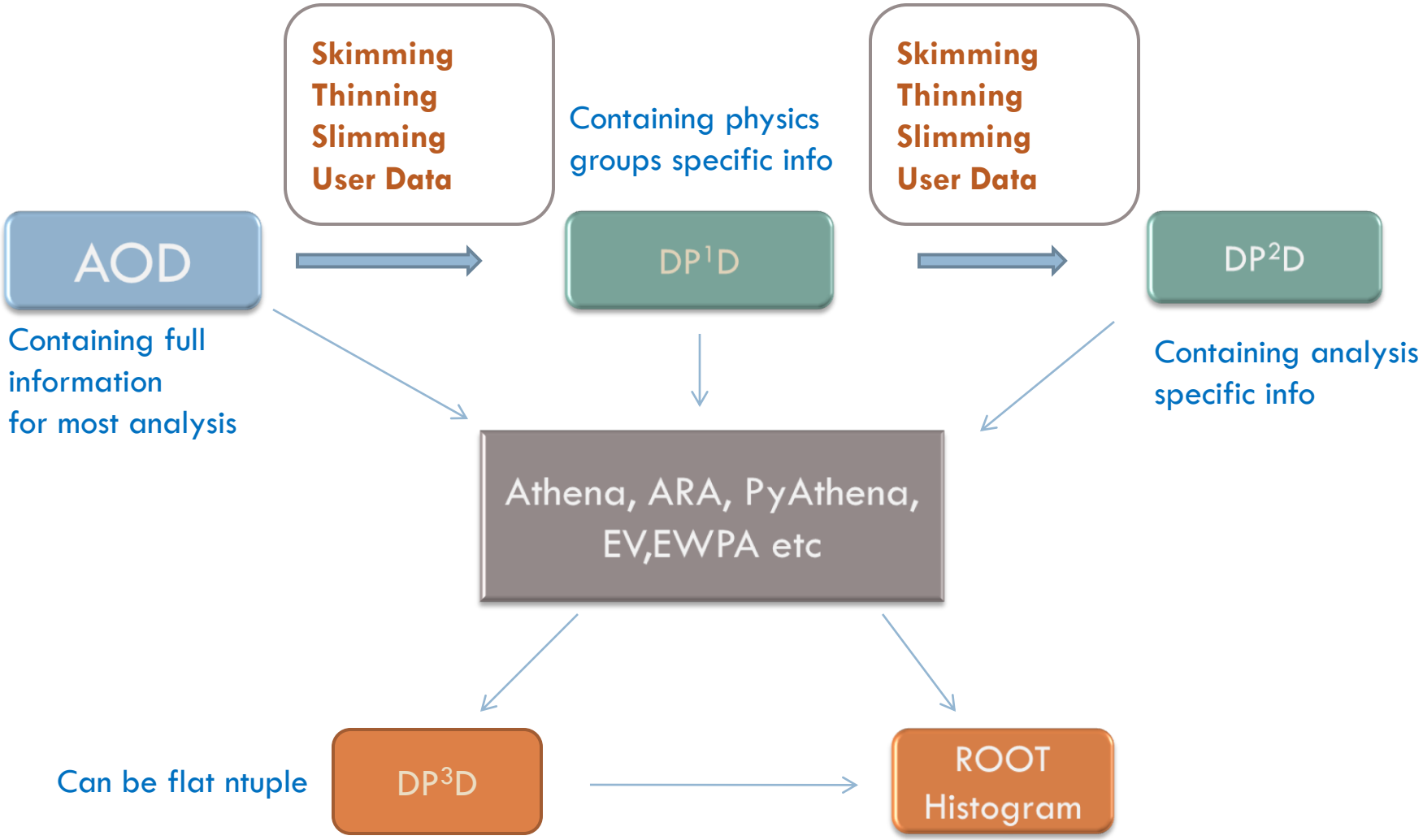


~250 kb/evt

~10 kb/evt

    - The DPD has the same format as the AOD. It can be read in Athena. Any analysis running on DPDs also runs on AODs and in Athena.

DPDs in the Event Data Model (EDM)



How to reduce the size of the AOD
(definition of skimming/thinning/slimming)

- Skimming:
  - Removing uninteresting events (filtering)

    ex: check if the event has objects fulfilling some conditions on η and pT
- Thinning:
  - Removing unused objects

    ex: electrons, tracks, jets not fulfilling particular requirements
- Slimming:
  - Removing properties of objects

    ex: track summary

- But the first thing to do is to remove unneeded collections from the AOD (which is a form of thinning)

Let's make DPDs!

- As an example we will make DPDs for a Z→ee analysis we have also a jet example.

- Twiki page : https://twiki.cern.ch/twiki/bin/view/Atlas/ArtemisParis
  and
  https://twiki.cern.ch/twiki/bin/view/Atlas/ArtemisParisDPD

- Let's Begin