



HF jets analysis

21.10.2019 ALICE@IFJ meeting

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Outline



1. What was done
2. Issues and questions
3. Plans for next week

What was done



- very informative meeting with Rudiger
- re-run locally his lego train:
 - Tag: PWGHF/HFCJ_pp_MC/660_20190221-1807 https://alimonitor.cern.ch/trains/train.jsp?train_id=87
 - MC: `alice/sim/2017/LHC17f8f/20/257630`, 10 test files, **pp@13TeV**
 - information extracted:
 - Basic event properties (ID, vertex, centrality, bgrd. densities, ...)
 - Jet constituents, basic properties (pt, eta, phi, charge, ...)
 - Jet constituents, IPs
 - Tracks PID (true, reconstructed and ITS/TPC/TRD/TOF signal(?)) - *not yet used*
 - MC information (origin, matched jets, ...)
 - Secondary vertices
 - Jet shapes (jet mass, LeSub, pTD, ...)
 - Jet splittings (kT, theta, E from iterative CA reclustering)
- Exploratory Data Analysis (EDA) on different jets' flavours

Issues and questions



- **pyxsec.root** and **pyxsec_hists.root** does not exist -- how important are they?
- pass1 and pass2 available -- difference between AOD and AOD202?
 - /alice/data/2016/LHC16k/000257630/pass1/AOD/001/AliaOD.root
 - /alice/data/2016/LHC16k/000257630/pass1/AOD/002/AliaOD.root
 - /alice/data/2016/LHC16k/000257630/pass2/AOD208/0001/AliaOD.root
 - /alice/data/2016/LHC16k/000257630/pass2/AOD208/0002/AliaOD.root
- What jet **radii** do we want to have?
- not sure what modifications should be done when changing MC -> data

Plans for next week



1. run on the data: 257630 (good tracking and electron PID, but not Calo)
2. specify the fractions of jets to be saved for each flavour and pt-bin
3. find proper pp@5TeV data+MC, run for higher statistics
4. try ML on that sample

Plans for next week (after discussion)



1. find out how primary and sec. vertices are found
2. specify the fractions of jets to be saved for each flavour and pt-bin
-> no downscaling of HF
3. find proper pp@5TeV data+MC, run for higher statistics
4. try ML on that sample, w/o PID info