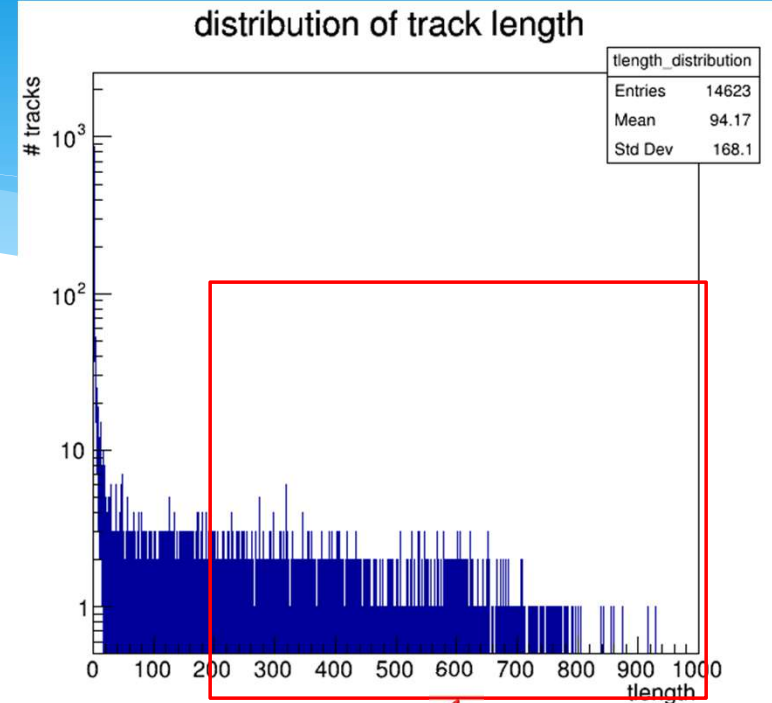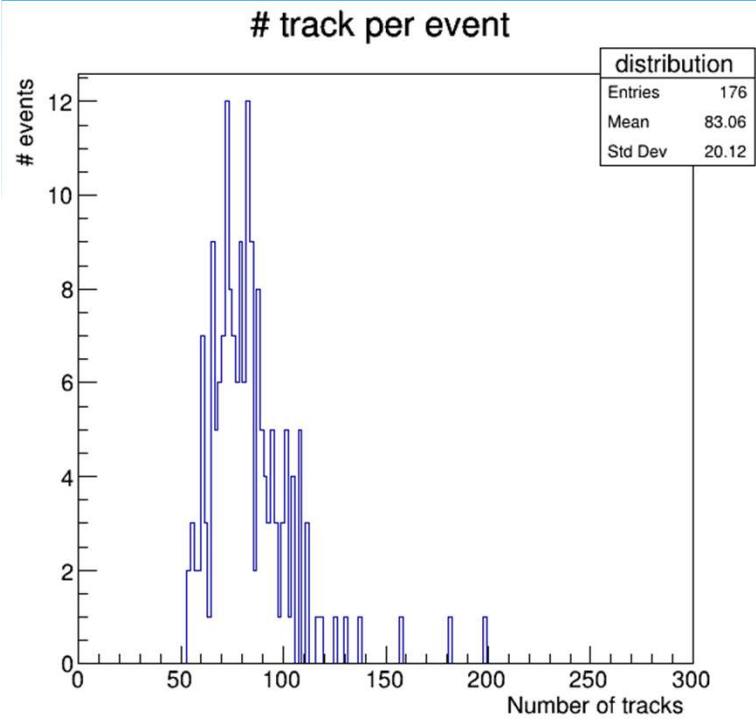# Cosmic run data: number of root files and storage required

May 25th, 2023

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Advisor: David Martinez
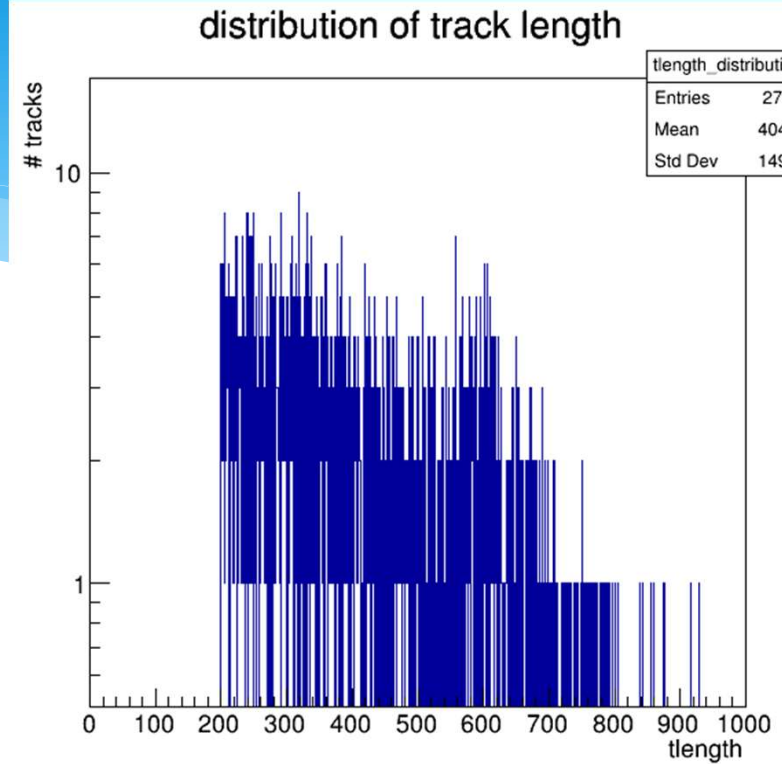
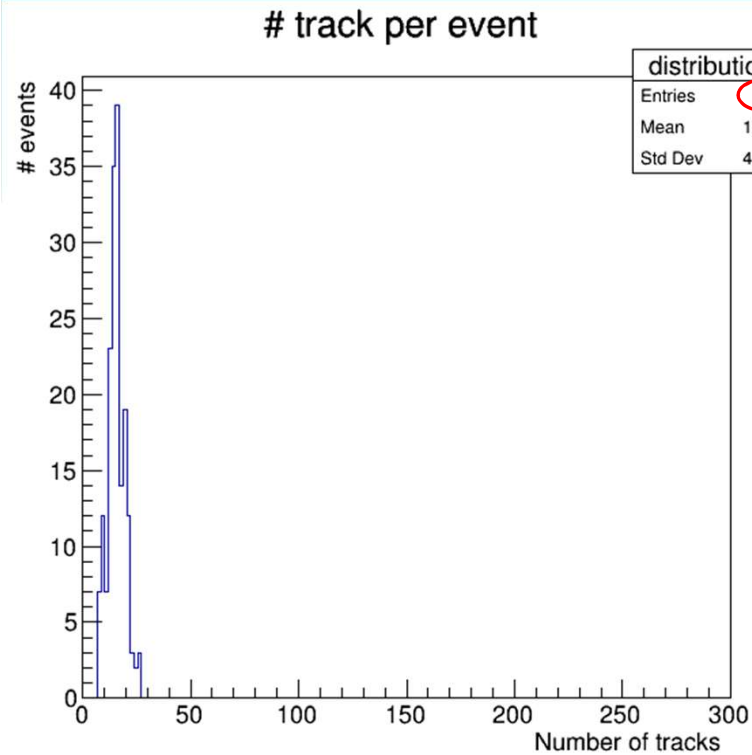# Distribution of the track number per event and track length: cosmic run6201, four root files

track per event

distribution	
Entries	176
Mean	83.06
Std Dev	20.12

distribution of track length

tlength_distribution	
Entries	14623
Mean	94.17
Std Dev	168.1

- We want to use long tracks only

- Four root files have 176 events
- Number of tracks per event : 83 on average(short + long tracks)

Distribution of the track number and track length after a cut between 200cm and 1000cm

- Each of the 176 events has at least 5 long tracks
- Size of the four root files: ~160MB
- Size of the data in json format is about 347MB

Number of root files required to get 1000 events: 24
Storage required on the server: 347MB * 6 = 2082 MB

Next steps

- Look at cosmic MC
- Determine the number of root files and storage required if we want to use 1000 events