DCI meeting: requests

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Introduction

- At the review during last meeting, one of the points that was stress out was the need to do further tests of the DCI system → profit to also simulate useful samples for JUNO

- During the january collaboration meeting we had a request from the ML group to produce a large e^+ and e^- samples for their studies
  - this was completed at the mid-end of February
  - I'd say this worked pretty well generally, took a few days of processing
  - ML group mentioned some post-processing they were doing that might be of general interest – put on the FC ?

- I have now received 2 additional requests:
  - μ production for offline
    - ★ I'm organizing this with other people working on μ reco
    - ★ Important for a review on μ reconstruction at the next meeting
    - ★ However, high requirement for production – not sure how much DCI can help...
  - Yury requested a new dataset for ML (for PID studies):
    - ★ 3 positions $\times$ 4 particles at fixed energy
    - ★ don't know details yet, but should be similar to previous ML production

General information about the setup for μ simulation

- Software version : J20v1r0-Pre0 + few commits $\Rightarrow$ will request new release when ready

- Number of events : $2 \cdot 10^6$ ($\approx$ 1 day)
  - Not clear how many events per file, but likely $\mathcal{O}(10)$

- Muon.exe options : with bundles, μ produced in Rock around detector

- Simulation level : detsim (saved user and data-model formats)

- Status:
  - Preparing a script that handles all requests from different users
  - Big issue: requirement on resources is unknown at this point. We likely will need upwards of 10 GB of memory per job.
  - Artëm proposed some memory-reducing option, I'm looking into them now.
  - Hopefully can have this finished up with clear requirements before May 12th
  - In any case, are there ways to request specific amounts of memory to DIRAC? Or in this case we cannot use the DCI now?

Final thoughs

- We got to a good start producing the ML electron/positron dataset

- Xiaomei: for now you need to manually intervene in all requests, do you want me to help with that? How?

- We have 2 new requests already made:
  - μ production – large memory requirements might be tricky
  - ML PID production – requirements should not be an issue, will just take some time

- I also foresee the validation group might also request some help to produce the validation samples – need to talk with Benda Xu about that, not sure about timelines for that