

Questions and Simulations

- Electron question
 - Is anyone currently working on electron reconstruction rather than using truth info?
- Update from Diffractive and Tagging team on their simulation plans
 - [https://indico.bnl.gov/event/12316/contributions/51400/attachments/35610/58158/ECCE Dif tag Simulation Campaign June 30 2021.pdf](https://indico.bnl.gov/event/12316/contributions/51400/attachments/35610/58158/ECCE_Dif_tag_Simulation_Campaign_June_30_2021.pdf)
 - Please see Bill's slides - very informative on how to set up JLab job submission for Fun4All
 - Rather than pass their files to simulation team they are submitting them themselves
- Please read e-mail today from Bill to ecce-eic-phys1 (quoted below):
 - B0, off momentum, Roman pots now providing hit information without errors
 - Correct magnetic steering now in forward region, should be available Sat morning.
 - Please see Bill's e-mail or tell us if you didn't get it/need info
 - Update to this version rather than June 2021 concept (and Bill's updated diff_tagga_anna analysis if you are using)

I would also like to point at a new critical variable that was introduced in line 59 of the Fun4All_G4_EICDetector.C:

Enable::HFARFWD_ION_ENERGY=275;

This variable sets the beamline (magnet lattice) configuration you would like to run for your simulation. See examples below on setting the correct values for this variable:

Example 1: if someone would like to run DVCS events for 5 GeV e on 100 GeV proton, then you need to set this new variable to:

Enable::HFARFWD_ION_ENERGY=100;

to allow the proton to be steered properly.

Example 2: if one would like to study 5 GeV e on 108.4 GEV Pb beam (maximum energy), then one must set this new variable to

Enable::HFARFWD_ION_ENERGY=275;

to allow the Pb to be steered properly. When in doubt send me a message to double-check.

For anyone using the analysis plugin example I developed (diff_tagg_ana), this plugin will be updated to reflect the naming convention in the most recent version of Fun4all, and it will be ready for you to use by tomorrow morning.

https://github.com/billlee77/bill_diff_tagg_script

Questions and Simulations

- Update from simulation team
 - Files provided from tests of mass simulations for **particle gun and SIDIS studies**
 - They would like feedback **today** on whether all information needed is in the output files
 - if you plan to use these outputs please take a look in case we miss something
 - **Details how to access are on last slide**
- Table for simulation team on what we plan to run for initial simulation campaign:
 - https://wiki.bnl.gov/eicug/index.php/ECCE_Simulations_Working_Group#June_2021_Concept
 - Please tell us as soon as you have info if wrong/you have updated details on any item (eg reaction, config event no and files size) for **initial studies with high stats** (ie first high stat campaign and not whole study)
- Timetable from simulation team
 - https://docs.google.com/spreadsheets/d/e/2PACX-1vSHiMqzqiY5ZY8uvdvtVbMp_5Erv9AKvkBUBKO-5JLQAIYkuZ6SYQtN8KJ8e4cJyNhIfkGtRDUyYfk/pubhtml
 - We should be aiming for **at least** one or two reactions from the priority channels for these initial mass stats
 - We are currently behind schedule for this (should be starting now) - what are your updated timelines
- Discussion
 - Should we follow the same as diffractive? Or pass generator output files on to simulation team?
 - To follow diffractive example - **everyone would need a JLab computing account**
 - **if you don't have one please apply now!**
 - Either way, **simulation team still needs info from us ASAP and should not affect our timetable in running higher stats asap**
 - We still need comprehensive list of reactions, configurations, event numbers and file sizes etc if we use the JLab farm ourselves - since using **shared and limited EIC storage and cpu hours (amongst Athena and ECCE)**
 - Advice from simulation team is if going down JLab farm submissions route
 - **We can only do this if production process is <1M events and 10k events per job max**
 - **Eg Single pion production timing 24s/event, so 10k events ~ 3.5days for single job (ignoring location in queue)**

Location and accessing the test files for mass simulations

The outputs are all located on our S3 storage which will be set up when you start the latest version of the ECCE environment. Please note that the S3 client is not loaded up on the EIC environment.

```
source /cvmfs/eic.opensciencegrid.org/ecce/gcc-8.3/opt/fun4all/core/bin/ecce_setup.sh -n
```

You can test your connection to S3 with:

```
mcs3 ls eicS3
```

The output files are located under:

```
eicS3/eicctest/ECCE/MC/new/5f210c7/General/particleGun/singleElectron
```

```
eicS3/eicctest/ECCE/MC/new/5f210c7/General/particleGun/singlePion
```

```
eicS3/eicctest/ECCE/MC/ana.14/5f210c7/SIDIS/pythia6/ep_18x100lowq2
```

```
eicS3/eicctest/ECCE/MC/ana.14/5f210c7/SIDIS/pythia6/ep_18x100highq2
```

Evaluator files are in sub directories eval_00000 in each folder

You can copy the files to your local system via

```
mcs3 cp <filetocopy> <location to copy to>
```