

Exclusive Reactions Weekly

Friday 14th May 2021

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Announcement of Simulation Workshop - Next Friday, May 21 2021, 9am ET

Ecce-eic-phys-l on behalf of Carlos Munoz Camacho

Tue 11/05/2021 17:29

To: ecce-eic-phys-l@lists.bnl.gov; ecce-eic-public-l@lists.bnl.gov; ecce-eic-ib-l@lists.bnl.gov



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Dear ECCE enthusiasts,

As the first simulation outputs are becoming available, the ECCE consortium will be having its 2nd simulation workshop on May 21, from 9AM to 1PM EDT. The workshop indico can be found at:

<https://indico.bnl.gov/event/11719/>

The goal of this workshop is to build on the information gained in the first workshop in order to train people to analyze the DSTs produced by the Fun4All framework that are currently available. Details are provided in the [wiki](#) and people are encouraged to browse through the files before the workshop and bring up questions during the discussion sessions.

We ask that participants register for the workshop so we have a list of contacts for future announcements and information. The talks will be recorded so that people can attend asynchronously. We ask that you still register so we can ensure that you receive all of the information that the other participants do.

Regards,

Carlos for the ECCE Physics and Computing Teams

- We will join the simulation workshop next Friday and recommend you join
- This clashes with our weekly meeting - unless we hear any request today to move the meeting time next week we plan to **forego the weekly meeting**
- We should still discuss by e-mail any progress/questions
- We will try to set up a discourse thread in the coming days too for offline discussions outside of meeting

Update from Monday's Physics Meeting

- Slide from C. Dean, J. Huang shown by Carlos
- If we have a generator running we should aim to contact simulation group to see how we can set up for test production too

Simulation working group

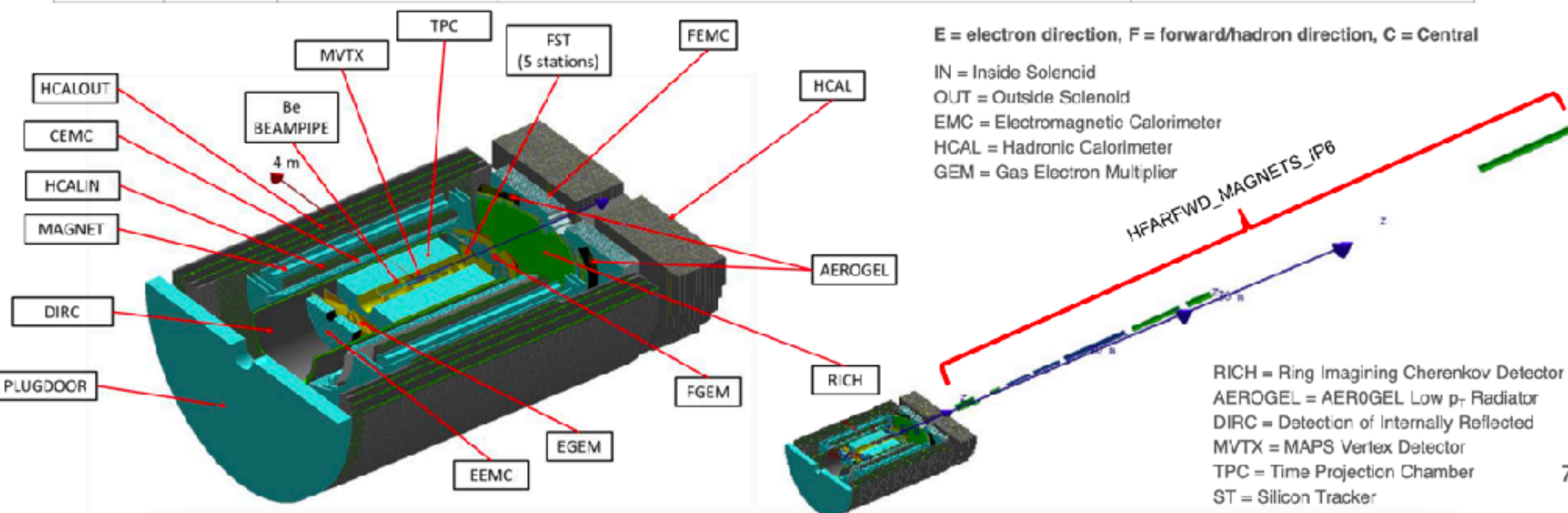
➤ 1st test production completed !

✓ 3 sets of 1,000,000 events for testing purposes:

Details at:

https://wiki.bnl.gov/eicug/index.php/ECCE_Simulations_Working_Group#Production_Status

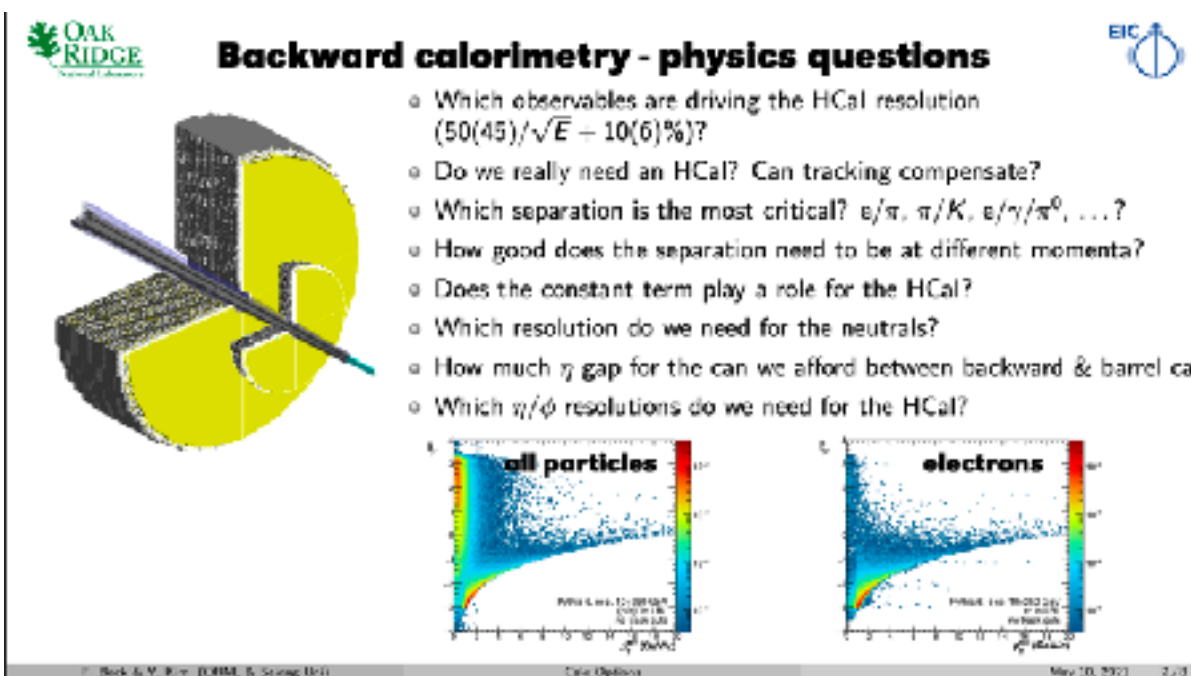
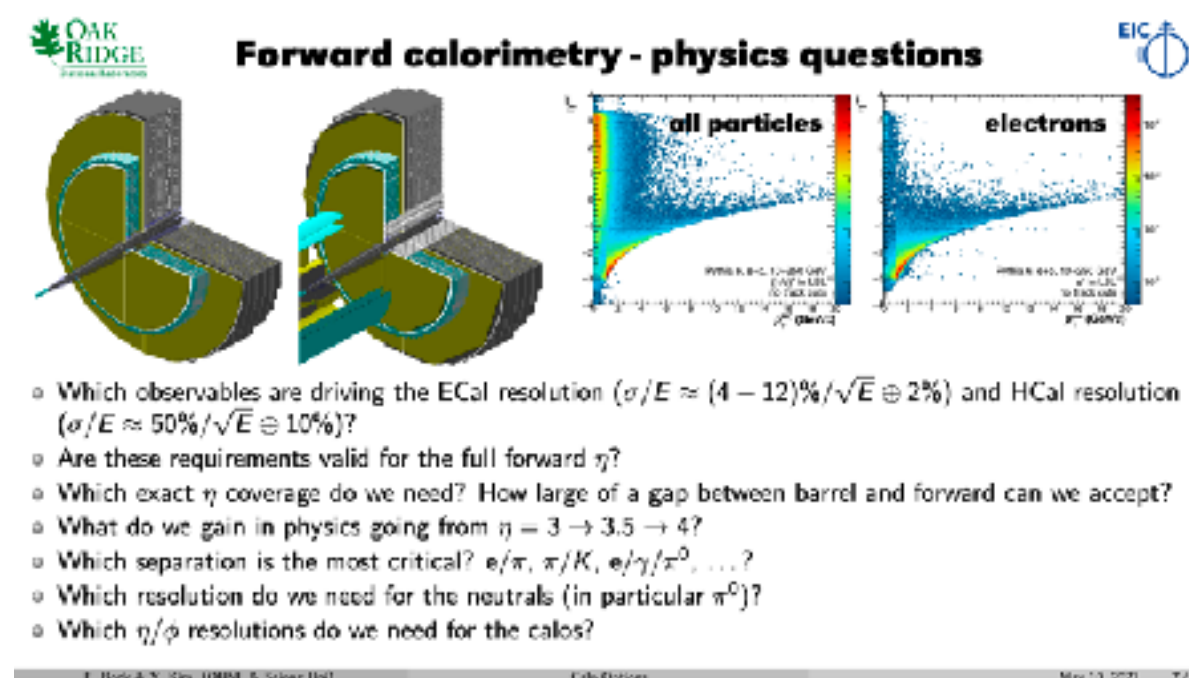
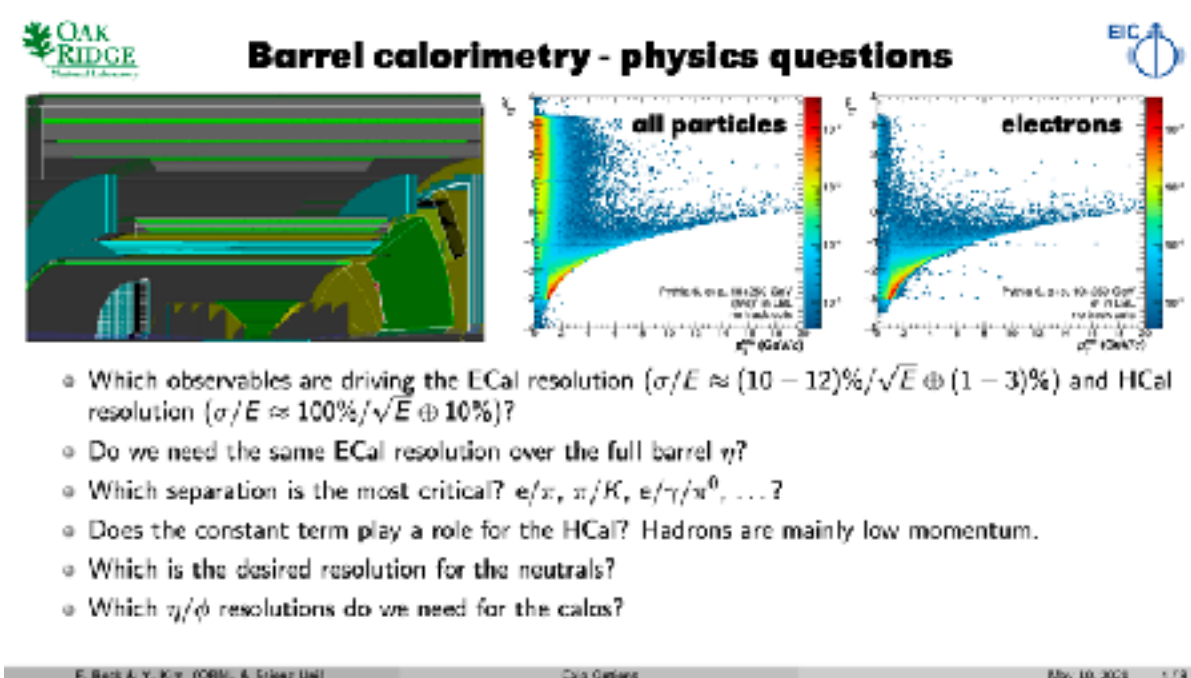
Sample	Generator	Beam Parameters	Path	Notes
"Min-Bias"	Pythia6	ep, 10 GeV x 250 GeV	/sphenix/user/cdean/ECCE/DST_files/general/pythia6_ep/	Run using internal Fun4All generator
SIDIS	Pythia6	ep, 18 GeV x 100 GeV	/sphenix/user/cdean/ECCE/DST_files/SIDIS/pythia6_ep_18x100/	EIC-smear tree input
HF & Jets	Pythia6	ep, 10 GeV x 100 GeV	/sphenix/user/cdean/ECCE/DST_files/HFandJets/pythia6_ep_10x100/	EIC-smear tree input



Update from Monday's Physics Meeting

- Meeting page: <https://indico.bnl.gov/event/11609/>
- Please see meeting slides/recording at indico for details
- Talk from Friederike Bock (ORNL) and Yongsun Kim (Sejong University) on calorimetry update
- Several questions posed which we must try to answer and lease with them to ensure our physics is included in calorimeter design

Example slides from F. Bock



- There will be similar questions posed to us over the next few weeks from other detector systems
- We need to start coming up with a list of general requirements for each process
- Please think about your reaction channel and feed back any information on these questions to us
- If you already have simulations running which can help with these questions, let us know

Tasks (lifted from the YR Exclusive Reaction section)

“Open” in green

Join a group or go at it alone

1. **DVCS and π^0 off the proton.** Check coverage of backward pseudorapidity at $\eta \sim -3.5$ – Igor Korover.
 2. **DVCS off the neutron (ie deuteron with spectator proton tagging).** Needs a reasonable design of forward proton and neutron detectors. (Rachel?)
 3. **DVCS of Helium.** Needs to optimize the Roman Pot threshold for recoil nuclei detection. (Rachel?)
 4. **Timelike Compton Scattering**
 5. **Exclusive meson production by charged current ($e+p \rightarrow \nu_e \pi^+ p$)**
 6. **Color transparency** – Holly Szumila-Vance
 7. **DVMP ρ , ϕ , J/ψ electroproduction and tagged diffractive J/ψ (ep and eA)** in collaboration with Diffractive group – Justin Frantz & Julie Roche, Stuart Fegan, Peter Steinberg).
8. **Diffractive Dijets** (taken over by the Diffractive working group)
 9. **u-channel exclusive electroproduction** (taken over by the Diffractive working group)

Update/Summary on who we are aware is active/interested

- DVCS ep - Igor Korover, R. Milner et al MIT
- DVCS eA - R. Montgomery, G. Penman, UoG
- TCS - interest from Orsay, UoG, VT, currently in discussions, stay tuned
- Color transparency - H. Szumila-Vance (JLab)
- DVMP in ep and eA J. Roche, J. Frantz (OU), P Steinberg (BNL), S. Fegan (UoY) (Also S. Kay and G. Huber UoR)

Round Table Discussion

- **Please tell us your activities/interests**
- **If you have already started working on something:**
 - Status update, eg what software are you using, have you produced any events etc
 - Your work plan and goal until the next meeting
- **If you are not working on something already:**
 - If you have a topic of primary interest that you would like to help with
 - If you will have time to run simulations
 - If so and no preference on topic let us know as there are plenty of tasks to contribute to
- Come with a slide if possible next time in 2 weeks