Combined PWG pTDR and ES Workfest

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ePIC Collaboration Meeting

BNL - Jan 20-23, 2026

What's on the Agenda Today?

Morning

- Particle flow
- Electron finder
- Radiative corrections
- **Discussion:** machine bkd. studies across PWGs and next steps

Afternoon

- **Discussion:** systematic uncertainty studies across PWGs and next steps
- Summary of planned activities in France
- PWG conveners' reports
- **Discussion** and planning next steps on Early Science Report

Some shared notes for today’s workfest

Link to shared notes

Can use for taking notes, comments, extra questions, or to-dos during discussion session

Have put the link also on indico session page for workfest

https://indico.bnl.gov/event/30532/sessions/8770/#20260121

And will put in zoom chat too

preTDR/TDR

preTDR Chapter 4 status

- Completely re-structured last year
- Mammoth amount of work performed by PWGs, conveners, analysers and others in the collaboration for the Dec 19th version of Chapter 4 in preTDR
- Thank you all for the inputs!
- *We currently await feedback*
- Meantime:
  - Today we can look at statuses of where each group stands
  - And discuss if anything needed to help progress things

ES Report

Jefferson Lab

Brookhaven National Laboratory

June 13, 2025

Subject: ePIC Collaboration: Early Science Document

John Lajoie and Silvia Dalla Torre
Spokespeople, ePIC Collaboration

Dear John, Silvia and the ePIC Collaboration,

As the EIC construction plan becomes more mature, it is apparent that there will be a period of about five years when there will be collisions at the ePIC and early data could be recorded. The EIC Project team has released their expectations for the beam parameters (polarization, luminosity, energy and nuclear species) and their ramp-up during that early operating phase. We are writing to you – the ePIC collaboration - to develop a short document summarizing the science that would be possible from those early data.

Based on the early commissioning beam parameters released by the EIC project [1,2], the ePIC collaboration should summarize for the broader nuclear physics community, the funding agencies, and for the Labs, what exciting scientific results would be possible from this perid. The results in the document should be based on the most recent understanding of the ePIC detector including the acceptances, efficiencies of each detector subsystem, and off-line reconstruction capabilities the collaboration has developed so far. We believe this document will also serve to help in the preparation of the ePIC TDR currently under preparation by the collaboration with the EIC Project, as input to CD2/3 milestone for the EIC. Beyond the physics of interest, we think that this ePIC early physics document would also be useful to demonstrate the collaboration's engagement and getting prepared for physics at the EIC and capture the status of ePIC collaboration's activities at this stage. We are happy to support this activity through in-person or hybrid workshops or topical meetings should they be needed.

We recognize that this is an additional exercise for the ePIC community. At the same time, many previous such exercises (like the Yellow Report) were focused on full EIC machine capability. This report should focus on the science that could be produced before the ramp up to the full EIC machine capability.

We suggest that the collaboration prepares this report by May 1, 2026.

1 of 2 ePIC Early Science

ES Report

- We have a tight timeline for the ES report
- Currently this is a **very high priority and is becoming urgent**

- Will discuss today action steps we need to take to realise this document in this timeline

- Continue as planned with our existing ES matrix and timeline until otherwise notified or asked

ES Report

Reviewers

- Reviewers are ready to receive a draft to provide initial feedback:
  - *General Overview:* Thomas Ulrich; Taju Gunki; John Lajoie; Wim Cosyn
  - *Inclusive:* Katarzyna Witchman; Pia Zurita; Paul Newman; Enrico Tassi; Andy Buckley
  - *Exclusive, Diffractive, Tagging:* Kresimir Kumericki; Nicole D'Hose; Alex Jentsch
  - *SIDIS:* Marco Mirazita; Marco RAdici; Marco Contalbrigo; Charlotte Van Hulse
  - *Jets/HF:* Olga Evdokimov; Deepa thomas; Brian Page; Rithya Kunnawalkam Elayavalli; Cameron Dean
- Thanks to these colleagues who have offered their time to help during the drafting stage

- Of course we will also be requesting feedback from the wider collaboration during this process as we develop the document

ES Report

Contents

Template

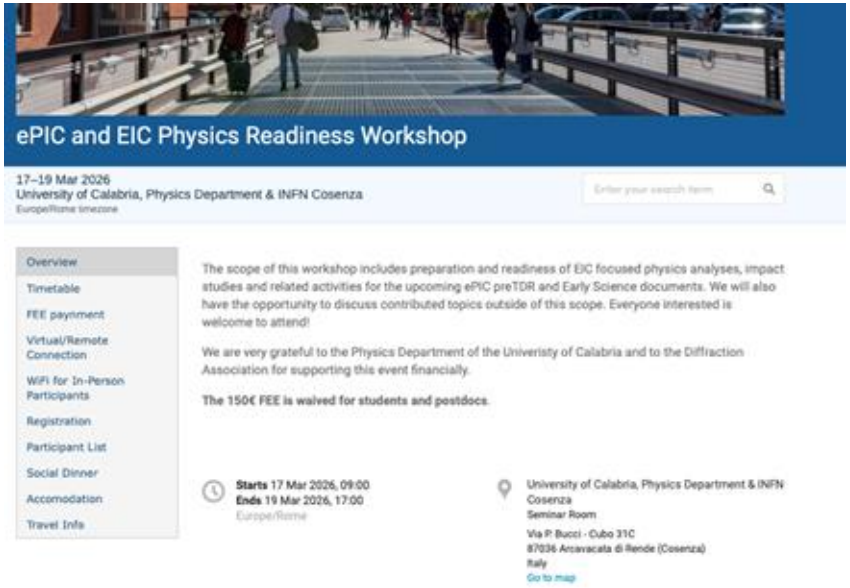
- On Overleaf
- Contact us if you need the link

- Currently separate sections for PWG
- Today we can discuss further the structure (eg do we put executive summary and refer to PWG sections or re-organise around physics and have PWG appendices or …)

- PWGs are requested to fill what they have so far by **Feb 16**

- We will polish and send to reviewers to provide initial feedback at March Workshop

ES Workshop



https://indico.bnl.gov/event/30283/overview

- We will receive feedback and continue discussions and updates at March workshop

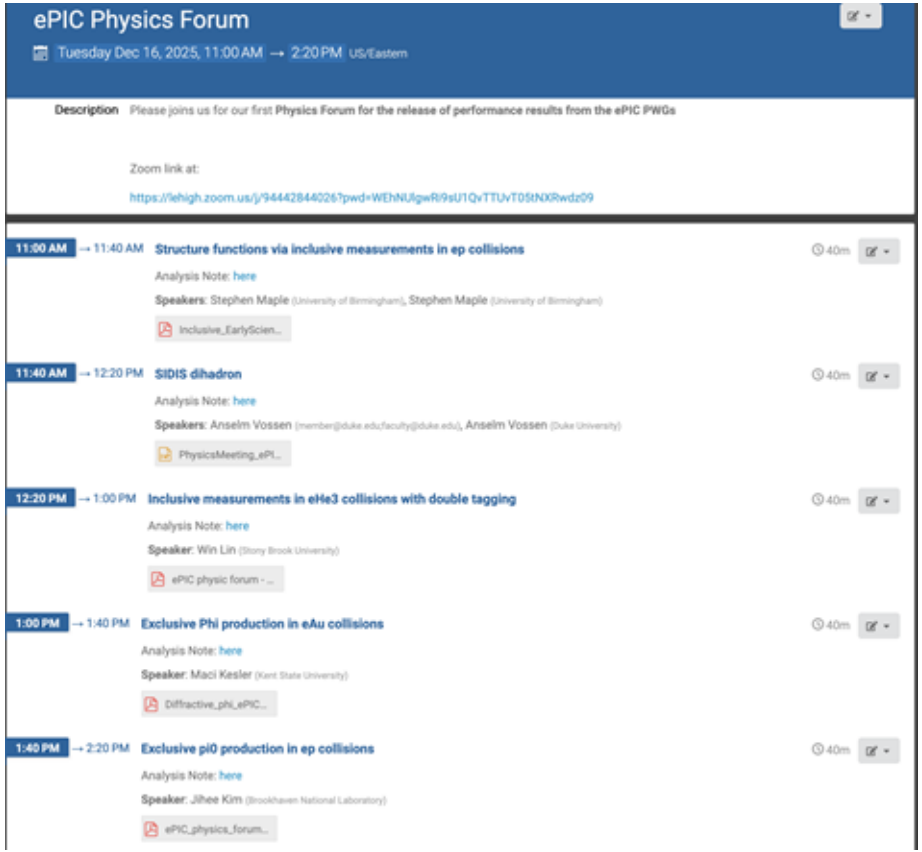
- Join us - everyone is welcome to come and discuss or learn about ES science with us
- We will also have a zoom link

- Please register and pay fee asap
- Final deadline for payment is **Feb 27**
- Please pay earlier - helps us better use the money for supporting ECR travel

- For ECRs fee is waived

- We will evaluate what still needs done and re-work the document after this workshop towards being ready for **May 1st Deadline**

Physics Forum



First physics forum took place Dec 16

- Congratulations to all presenters and thank you for their hard work!
- Thank you to collaboration for joining and providing feedback

- Performance Results shown are current versions approved and ready to be released, and can be updated to new versions in future (with convenor approval)

- Look forward to arrange more forums in coming year

- Please reach out if are any analyses would like to release results soon

Thanks!