

**EIC@IP6 kick-off meeting**

# **An introduction**

**12-13 March 2021**

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# The context

- The “Call for Detector” ( <https://www.bnl.gov/eic/CFC.php> ) with dead-line on December 1<sup>st</sup> is now in front of the EIC community
  - Clear priority and clear timelines for the Reference Detector sitting at IP6
- Reference Detector integral part of the EIC approved project
- Availability of a large preparatory work for the Reference Detector (even if not only for this Detector) within the YR, now published ( <https://arxiv.org/abs/2103.05419> )
- The fecundity of the overall EIC community and the strong preference for two detectors is demonstrated by the initiatives already started:
  - Set of 2<sup>nd</sup> IR workshops (kick-off on December 15<sup>th</sup>-16<sup>th</sup>, 2020, first meeting on March 17<sup>th</sup>-19<sup>th</sup>, 2021)
  - ECCE Consortium (<https://www.ecce-eic.org/>, kick-off on February 11<sup>th</sup>, 2021)
  - CORE
  - ... others
- An initiative for IP6, inspired by the Reference Detector, needed and starting today with this kick-off meeting

# EIC@ IP6, GOAL

- **From Call for Detector Proposals:**

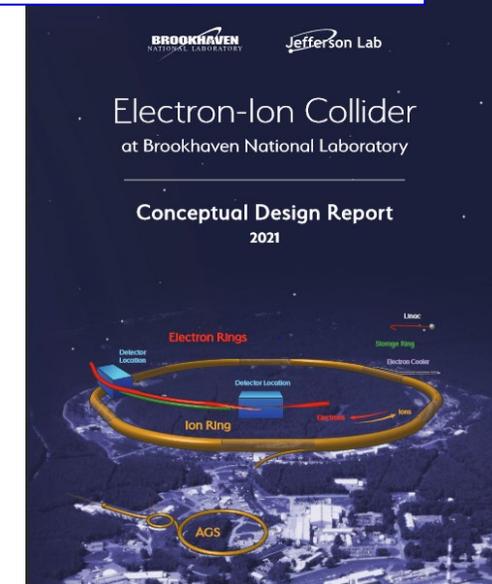
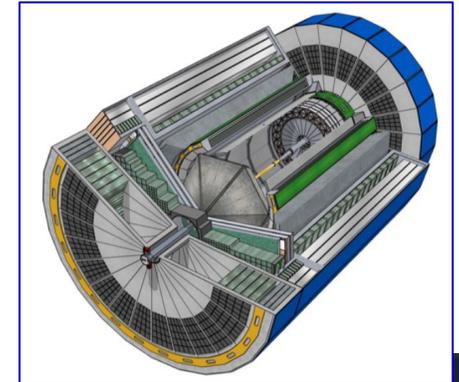
**“Detector 1 Collaboration Proposals:** Experiments must address the EIC White Paper and NAS Report science case. The collaboration should propose a system that meets the performance requirements described in the EIC CDR and EICUG YR. The design should be compatible with that of the accelerator and interaction region layout of the CDR.”

## NAS physics, main points:

- How does a nucleon acquire mass?
  - How does the spin of the nucleon arise from its elementary quark and gluon constituents?
  - What are the emergent properties of dense systems of gluons?
- Concerning the detector, CDR reference detector is regarded as a starting point from which we will move for our optimization

# The starting point for EIC@IP6

- An initial Reference Detector concept was presented at the recently held DOE Critical Decision-1 review of the EIC and is included in the EIC-CDR 2021  
( [https://www.bnl.gov/ec/files/EIC\\_CDR\\_Final.pdf](https://www.bnl.gov/ec/files/EIC_CDR_Final.pdf) )
- All interested groups and consortia are invited to this kick-off meeting to come together to plan for a detector inspired by the Yellow Report detector concept based on a new central detector magnet up to 3T, which could evolve into a concrete proposal and collaboration formation for IP6.
- The meeting is meant to enable forming a collaboration, planning timelines, and developing strategies to engage EIC community members to meet the deadline for submitting a detector proposal.
- At the same time, the workshop is designed to be highly informative and, therefore, open to the whole EIC community.



# A tour round the agenda, first day

FRIDAY, 12 MARCH	
11:30 → 12:45	<b>Morning Session I: Welcome / EIC Project Status / YR Reference Detector</b>
11:30	<b>Welcome / Orientation</b> Speakers: Franck Sabatié (CEA Saclay), Silvia Dalla Torre (INFN, Trieste)
11:50	<b>Yellow Report Reference Detector Presentation</b> Speakers: Alexander Kiselev (BNL), Yulia Furletova (Jefferson Lab)
12:45 → 13:15	Break
13:15 → 16:55	<b>Afternoon Session I: Eol submission presentations</b>
13:15	<b>Overview of Eol submissions by sub-systems</b> Speakers: Dr E. C. Aschenauer (BNL), Rolf Ent (Jefferson Lab)
13:30	<b>DAQ/Readout subsystems presentations</b>
13:45	<b>Calorimetry subsystems presentations</b>
14:10	<b>Tracking subsystems presentations</b>
14:55	Break
15:10	<b>Particle-ID subsystems presentations</b>
15:50	<b>Rear/Forward taggers subsystems presentations</b>
16:05	<b>Polarimetry subsystems presentations</b>
16:20	<b>EIC Software presentations</b>

- Friday morning
  - Orientation about the meeting
  - General information establishing the background of the workshop, 1<sup>st</sup> part
- Friday afternoon
  - Reviewing the possibilities from the Eols
    - as wide as possible
    - accepting this invitation is not a commitment yet: **thank you for accepting and contributing to obtain a global picture**

# A tour round the agenda, second day

SATURDAY, 13 MARCH

10:30 → 13:00 Morning Session II: EIC detector at IP6 discussion / Other detector proposals

10:30 EIC Project Status and Timeline

Speaker: James Yeck (University of Wisconsin-Madison and Brookhaven National Laboratory)

11:00 EIC IP6 IR design Overview

Speaker: Holger Witte (BNL)

11:30 EIC Detector at IP6: Vision and Discussion

Speaker: Barbara Jacak (UC Berkeley)

12:30 Open MIC - Alternate Ideas / Value Engineering Options for Reference Detector

13:00 → 13:30 Break

13:30 → 16:30 Afternoon Session II: Call for Detector Proposals / Proposal process / Collaboration Formation / Next steps

13:30 Elements of Call for Detector Proposals

Speakers: Bob McKeown (JLab), Maria Chamizo (BNL)

14:00 EIC Simulation Software & Resources

Speaker: Markus Diefenthaler (Jefferson Lab)

14:30 Detector Proposal Organization

Speaker: Bernd Surrow (Temple University)

15:00 Timeline and Process for Collaboration Formation

Speaker: Olga Evdokimov (UIC)

15:30 Next steps

Speaker: Franck Sabatié (CEA Saclay)

16:00 Discussion

## • Saturday morning

- General information establishing the background of the workshop, 2<sup>nd</sup> part
- Approaching EIC@IP6
  - Vision and discussion
  - New ideas and alternative options put forward: **thank you for your contributions to the Open MIC session, even with last minute contributions**

## • Saturday afternoon

- Learning more about the Call for Proposals
- Initial organization steps

# What next?

- **Largely depending on the outcome of the Saturday afternoon session when**
    - Organization
    - Timelines
    - Next steps
- will be addressed**

**Follow EIC@IP6 evolution in view of making your decision !**

**NOW is the time to contribute shaping EIC@IP6  
according to YOUR vision**