

# Timelines and the proposal writing process

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**The 1st EIC@IP6 (Asia Focused) monthly Zoom meeting 8:00PM April 8, 2021**

# Call for Collaboration Proposals for Detectors at the EIC

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Announced by BNL and JLAB on March 6, 2021 -> [the link](#)

- “Detector 1 is within the scope of the EIC project and should be based on the “reference” detector described by the EIC User Group (EICUG) in the Yellow Report (YR) and included in the EIC Conceptual Design Report (CDR). This detector must satisfy the requirements of the EIC “mission need” statement based on the EIC community White Paper and the National Academies of Science (NAS) 2018 report.”
- **“Detector 1 Collaboration Proposal: 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.”

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- “The Proposals should include two parts:
  - (1) A description of the science addressed and performance estimated through simulation including, but not limited to,  $e/\gamma$ , jets,  $\pi/K/p$  separation, vertex, and tracking, and how the simulated performance compares to the requirements detailed in the YR. The realization of the conceptual detector design given the technology choices, the R&D needs, risks, and, if applicable, adoption of emerging new technologies.
  - (2) A collaboration roster and structure, timescale and cost (including potential sources of funding sources and assumptions), and potential upgrade paths.
- If possible, the proposal should not exceed 60 pages, 40 pages for the first part and 20 for the second.”
- The Collaboration proposals should be submitted by December 1, 2021

# The timelines (as presented at the 03/13/21 meeting)

	March	April	May	June	July	August	September	October	November	December
Org. tools	Yellow									
Org. structure	Yellow									
Completion sym. tools	Yellow	Yellow	Yellow	Yellow						
Subsystem specification	Yellow	Yellow	Yellow	Yellow						
Subsystem simulation		Yellow	Yellow	Yellow						
Specification of key processes		Yellow	Yellow	Yellow						
Simulation / Analysis				Yellow	Yellow	Yellow	Yellow	Yellow		
Costing / R&D / Timeline				Yellow	Yellow	Yellow	Yellow	Yellow		
Collaboration structure						Yellow	Yellow	Yellow		
Proposal writing						Yellow	Yellow	Yellow		
Editing									Yellow	
Submission										Red

← --- at a minimum: consistent geometry description

← --- using existing tools (fun4all, g4e, EicRoot)

Rough cost estimate is required much earlier! → ---

May want to have the first draft earlier? → ---

↑ April 1

December 1 ↑

# Other considerations

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- Only eight months for the whole proposal writing process (and only six months after the Collaboration is formally created, which is in June)
- Contrary to the Yellow Report, a drafting committee is required to provide a coherent document, by requesting and incorporating a variety of the working group inputs
- Several activities must happen in parallel (and perhaps “out of order”):
  - ▶ Drafting committee formation prior to the formal elections in June (?): *create a structure of the proposal & identified plots for making a strong case*
  - ▶ Preliminary decisions on the detector composition and the technology choices taken in parallel with the costing estimates and the first few months of the preliminary simulation effort

# DISCUSSION

# A proposal will need

- A detector concept
  - 1 or 2 technology choices for each subsystem
- Simulations of integrated detector options to show
  - Subsystem performance
  - How the subsystems affect each other's performance
  - Global performance
- Physics validation simulations
  - illustrate how well the detector concept can carry out key physics goals in the NAS report
  - small number of additional/newer physics goals, e.g. those addressed by jet measurements.
- A cost estimate using tools which will be provided by the EIC Project team
- YIKES! looks like a lot to accomplish before December!