

The review should address the following questions:

1. Reminder of the proposed **detector configuration** for the use in the ePIC detector.
2. **Input information:**
  - a. Pertinent **information on similar technology/design** that is used by other experiments or R&D efforts (example references could be literature or conference talks).
  - b. **Prototypes and their tests:** done so far, ongoing effort, future planning (with timelines); results from prototypes and their tests
  - c. **Simulation studies:** already performed, ongoing and planned (with timelines); results from the simulations; particular care in (i) showing how realistic the parameters used in simulations are and (ii) reporting what is missing for a fully realistic simulation (backgrounds, specific event categories, ...) (iii) Does the simulation take into account the **realistic response of the selected photosensors and related FEE?**
3. **Performances:**
  - a. Comparison of the **present assessment of the Cherenkov PID detector performance compared with the YR requirements?**
  - b. Performance perspectives **beyond the YR requirements (if any) ?**
  - c. **Efficiency** figures: single particle Pi/Kaon/Proton identified as Pi/Kaon/Proton as a function of the truth momentum in a 3x3-panel figure?
  - d. **Please quantify the performance for electron/hadron separation**
  - e. **Active area** or /dead area as 2D function of eta and phi; and comment on the edge effects?
  - f. **Performance or potential as timing detector, providing both timing resolution and acceptance coverage in eta and phi.**
  - g. **Under the coordination of the SIDIS working group, provide Kaon Purity in the kinematic region of (x. .. Q2... ) via parameterized hadron PID performance.**
4. **Aerogel Radiator**
  - a. Status of **radiator selection**
  - b. **Status of the radiator** development and related potential issues?
  - c. **Perspectives of radiator mass production** and timelines for the production period?
5. **Sensors and FEE:**
  - a. Status of **photosensor selection** (a single consolidated option, more options under consideration); please provide photo sensor and pixel segmentation characteristics?
  - b. **Status of the sensor** development and related potential issues?
  - c. **Perspectives of sensor mass production** and timelines for the production period?
  - d. **Characteristics of the ASIC and FEEs** considered?

- e. Status of **FEE identification** (a single consolidated option, more options under consideration)? Present a plan for realization on the FEE development in the context of technology choice and in conjunction with the project.
  - f. Status of the **FEE development** and related potential issues?
  - g. Perspectives of **FEE mass production** and timelines for the production period?
6. **Integration:**
- a. **Status of the proposed detector integration** into the current baseline detector?
    - i. z-space and effect to tracking: in coordination with the tracking DWG, produce backward momentum resolution for the tracker that fit into the z-spaced allowed by the proposed RICH detector
    - ii. Material effect to backward EMCal: in coordination with the calorimeter DWG, produces electron lineshape in the backward EMCal with the proposed RICH detector in front.
  - b. Status of the **design of the electrical/electronic infrastructure** (channels, power supplies, heat, rate)?
  - c. **Cooling** strategies?
7. **Workforce:**
- a. **List of groups** engaged in the proposed detectors and of other groups potentially interested;
  - b. **Workforce needed with timelines and qualification of the required professional profiles**; please, include also physicists needed for dedicated simulation studies;
  - c. **Available workforce** (specifying: granted, expected, possible) by the groups proposing the detector;
8. **Cost and scheduling:**
- a. up-to-date cost estimate for the different components and expenditure categories;
  - b. In-kind contributions (specifying: granted, expected, possible).
  - c. Envisioned schedule for full scale production
9. **Envisioned risk and risk mitigation strategy**