

The PREX-II/CREx Experiment Readiness Review  
Jefferson Lab June 1, 2016

**Charge**

1. What is the operational status of the equipment? What are the completion/commissioning schedule and tasks?
2. Is the  $^{48}\text{Ca}$  target geometry optimized for background suppression? Are local shielding and machine protection systems required to minimize detector background in place? Have the proper measures been taken to protect the  $^{48}\text{Ca}$  target from oxidation?
3. Have the proper measures to protect the  $^{208}\text{Pb}$  target from melting been taken? Have measures been taken and defined to prevent and monitor density fluctuations?
4. The septum magnet will be operated at higher current density during CREx. Has the safe and efficient magnet operation at this current density been satisfactorily addressed by the collaboration? Is the water-cooling system adequate for the high current?
5. Does the operation of the septum magnet produce any residual field along the beam line? If it does, has its effect on beam transport been evaluated and shielded properly?
6. Have the EHS&Q considerations been properly included in the design of the equipment?
7. Are the anticipated beam characteristics (parity quality, general stability..) expected to be within the required specification to perform these experiments?
8. Are the radiation levels expected to be generated in the hall acceptable? I.e. has the impact of the radiation generated in the hall equipment and infrastructure been properly calculated and mitigated? This includes:
  - The scattering chamber
  - The beam-line downstream of the scattering chamber
  - The instrumentations (electronics, ...)
9. Are the responsibilities for carrying out each job identified, and are the manpower and other resources necessary to complete them on time in place?
10. Has the equipment ownership, maintenance and control been defined during beam operations?

11. Are the specific documentation and procedures to operate safely and efficiently the equipment, in place and adequate? This includes demonstrated readiness for full rate capability and expedient analysis of the data.