PRad/X17 Collaboration Major Achievements

from the last collaboration meeting, March 3, 2025

1) The first ERR meeting conducted on May 8-9, 2025. In most parts it went positive with several recommendations. Currently addressing those recommendations.

   - ✓ A fresh information from Patrizia: "… Recommendations #2 and 4, the write-up you provided describes well how the experiment plans to deal with the beam-related background. The committee has no further questions or comments."

2) Active work continued on the development/design/construction of new beamline elements.

3) Preparation and tests of all detector systems and targets have been conducted successfully.

4) Good progress on the DAQ and readout electronics preparation.

5) Very active work on the software development and simulation parts.

6) Except for some (unexpected delays) on the PRad target part, we are well inside of the beamline installation plan.

Collaboration Tasks for the Next 1 Year

1)	Complete preparation and tests of all detector systems and beamline elements for the installation in Hall B	follow the current installation plan
2)	PRad target tested and ready for the installation	middle of October. 2025
3)	With the Hall B technical staff complete the installation of all detectors, PRad target and all beamline elements	December 2025
4)	Prepare DAQ system and readout electronics with HV el.	December 2025
5)	Complete all cosmic ray tests in Hall B	January/February
6)	Be ready for the beam	February 2026

Collaboration Tasks for the Next 1 Year (cont.)

7) Execute the PRad-II experiment — Febr. 20 to June 1, 2026

a) run with all three beam energies: 3.5, 0.7, 2.2 GeV;
b) accumulate high quality large statistics for all energies;

c) COMPLETE the PRad-II experiment.

8) Execute the X17 experiment — June 6 to July 27, 2026

a) run with Ee = 2.2 GeV beam energy;
b) optimize the luminosity conditions for the run;
c) accumulate as much as possible statistics to prove the feasibility of the Method;
d) accumulate enough experimental information to justify the next run period.