

MINERvA Experiment Operations Review

October 17-18, 2016

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The MINERvA Experiment had a successful operations readiness review (ORR) in Feb. 2013, has run well thus far and collected neutrino interactions data with an integrated $\sim 11E20$ protons on target (POT). The experiment is approved to continue to run in order to accumulate a minimum of $6E20$ POT in the antineutrino mode (MINERvA's request is for $12E20$), as a secondary user in the NUMI beam. Fermilab's run plan is to deliver another $2E20$ POT in the neutrino mode (as per NOvA's request) before switching to antineutrino mode. MINERvA is also taking over the responsibility of operating the MINOS+ near detector (ND), as MINOS+ has completed its data-taking but the ND is used by MINERvA for muon identification. Because of these reasons, this interim experiment operations review is being held. The focus of this review will be the degree to which the collaboration is ready to assume the M&O responsibility for the MINOS ND and the associated data monitoring, as well as overall data processing and analysis.

We would like the committee to review the preparations for future MINERvA running, plans for maintenance & operations of the detectors, data taking and analysis, and the run plan.

In particular:

1. Is there a completed Experiment Operations Plan (EOP) document that has been updated to include the additional scope from the MINOS ND? The document should include:
 - (a) A description of operations tasks and how they will be covered,
 - (b) ES&H activities and how they will be managed,
 - (c) Organization charts showing the management structure for the experiment and how it interfaces with the laboratory,
 - (d) The model for data processing and analysis including the budget and effort required,
 - (e) A list of the identified resources available, and
 - (f) A description of the roles and responsibilities of each institution within the collaboration.

2. Are the MINOS ND performance and calibration requirements well established for the needs of the MINERvA physics program, and is there a clear plan for achieving these requirements? Have the necessary resources been

identified? Given the availability of resources, are the expectations for the detector performance and data taking efficiencies realistic? Is there a clear plan for monitoring the MINOS ND data quality and has the team available for this task in the coming year tested the associated infrastructure?

3. Is there a well-understood run plan for FY17, consistent with accelerator schedule and performance? Have adequate resources from the laboratory and the collaboration been identified for an efficient and safe running of the experiment and for maintenance of the detector, and is it clear who is responsible for what?
4. Are there robust plans for data processing and data analysis? Have adequate resources from the collaboration been identified for data analysis to meet the set goals?
5. Are there clear goals set for reporting and publishing the results from the experiment in a timely fashion?
6. Does the committee recommend further actions to ensure full exploitation of the MINERvA program?

We request a brief written closeout report from the committee addressing these questions by October 28, 2016.