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Memorandum

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| To: | Rolf Ent, , Patrizia Rossi |
| From: | E. Rehm, R. Suleiman, C. Ugalde |
| cc: | Arne Freyberger, Matt Poelker |
| Date: | 26 May 2018 |
| Re: | Argonne Bubble Chamber ERR and Run Schedule |

This memo proposes a long-term plan for E12-13-005 with regard to the ERR and run schedule. The collaboration proposes 4 phases to complete the ultimate goal of measuring the cross section for the process. at energies that are inaccessible using standard techniques.

**Phase 1:** Complete a test run of the bubble chamber with a new single-fluid (i.e. no buffer fluid) configuration. Development of a low energy spread setup and measurement in the injector. A detailed plan for this test can be found on the bubble chamber wiki.

**Phase 2:** Complete the ERR process with final review to be completed in Summer of 2018

**Phase 3:** Complete a test of the bubble chamber using the single-fluid configuration with (oxygen in natural isotopic abundance). Convert the depleted water (abundance of 17,18O below 10-6)to .

**Phase 4:** Complete the experiment using the 17,18O - depleted .

More details of test plans and reports of previous tests can be found on the bubble chamber wiki:

<https://wiki.jlab.org/ciswiki/index.php/Bubble_Chamber>