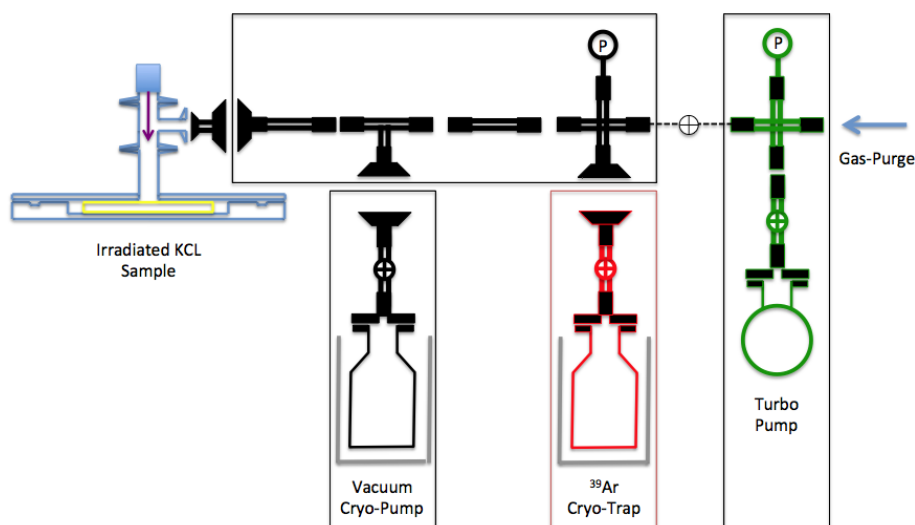


MiniCLEAN HEP 4QFY13 Progress Report

The MiniCLEAN detector is presently under assembly at SNOLAB and the collaboration plans to begin a commissioning phase in November 2013 with the detector filled with purified argon gas. This gas-phase run will allow a complete exercise of the photomultiplier tubes, electronics and data acquisition systems whilst the final hardware is installed and safety reviews are completed for operations in the liquid phase. Physics measurements will be made in the gas-phase with focus on 3-D position reconstruction, detector optics and light yield. An ultimate goal of the MiniCLEAN program with liquid argon is a high statistics measurement of pulse-shape discrimination capability using a “spike” of radioactive ^{39}Ar . This unique calibration source is available through LANL’s isotope program and will be extracted in a “hot-cell” on October 16 by scientists from Physics and Nuclear Chemistry Divisions (see attached figure).



Apparatus to be employed for the extraction of ^{39}Ar gas from an irradiated KCl target.