P0D Electronics Cooling Tests

With the S-P0D utilities nearly ready to turn on, the water cooling loop will need to be tested. The jet pump and the hoses are at SBU.

The testing will include the following:
1) Turning on the electronics w/o cooling water and measuring temperatures nearby the boards.
2) Air pressure tests to check for gross leaks in the loop or hose connections.
3) Running treated water through the loop and measuring the flow rate vs pressure drops in the hose (electronics turned off).
4) Running treated water through the loop and measuring the temperature rise with the electronics turned on.
5) Running cooled water (at the nominal neg. pressure temperature at T2K and Neg. press. System flow rate) through the loop and measuring the water temperature rise with the electronics off.
6) Running cooled water with the electronics on. The difference in the water temperature rise will indicate the amount of heat removed by the cooling system at the ambient room temperature. Then the difference between the heat generated by the 30 boards (~90W) in one S-P0D and the heat removed by the water flow will be the heat expelled into the detector.