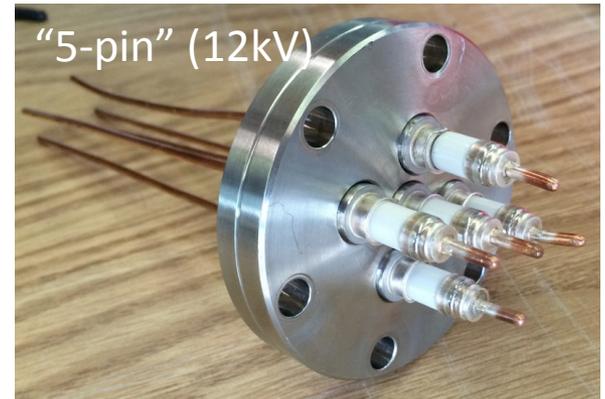


PMT Feedthrough tests



Motivation: One of the 5pin high voltage FTs for PMTs for LArIAT cracked during the UC light tests in April. Putting the others through stress tests to ensure they will hold up.

FTs to be tested:
two 5-pins
one 6-pin

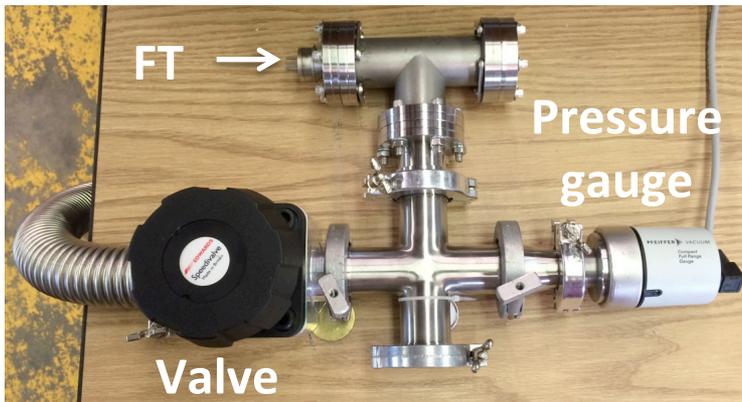


PMT Feedthrough tests



Procedure:

1. FTs dipped in liquid nitrogen 5 times (10 min each) as a cold shock stress test
2. Each FT vacuum-tested
 - Small chamber evacuated
 - Valve is then closed and rise-time from 2×10^{-2} to 3×10^{-2} mbar measured as performance metric (“leak rate”)



PMT Feedthrough tests

Results:

- One of the other 5-pins cracked again!! (just 1 lead this time)
- Remaining **5pin** and **6pin** that survived the cold shocks performed similarly
- **6pin from week-long UC tests** performed *poorly*
- **Blank** held vacuum worse than FTs... something else appears to have started leaking by this point (need to go back and resolve this, and then repeat tests)

