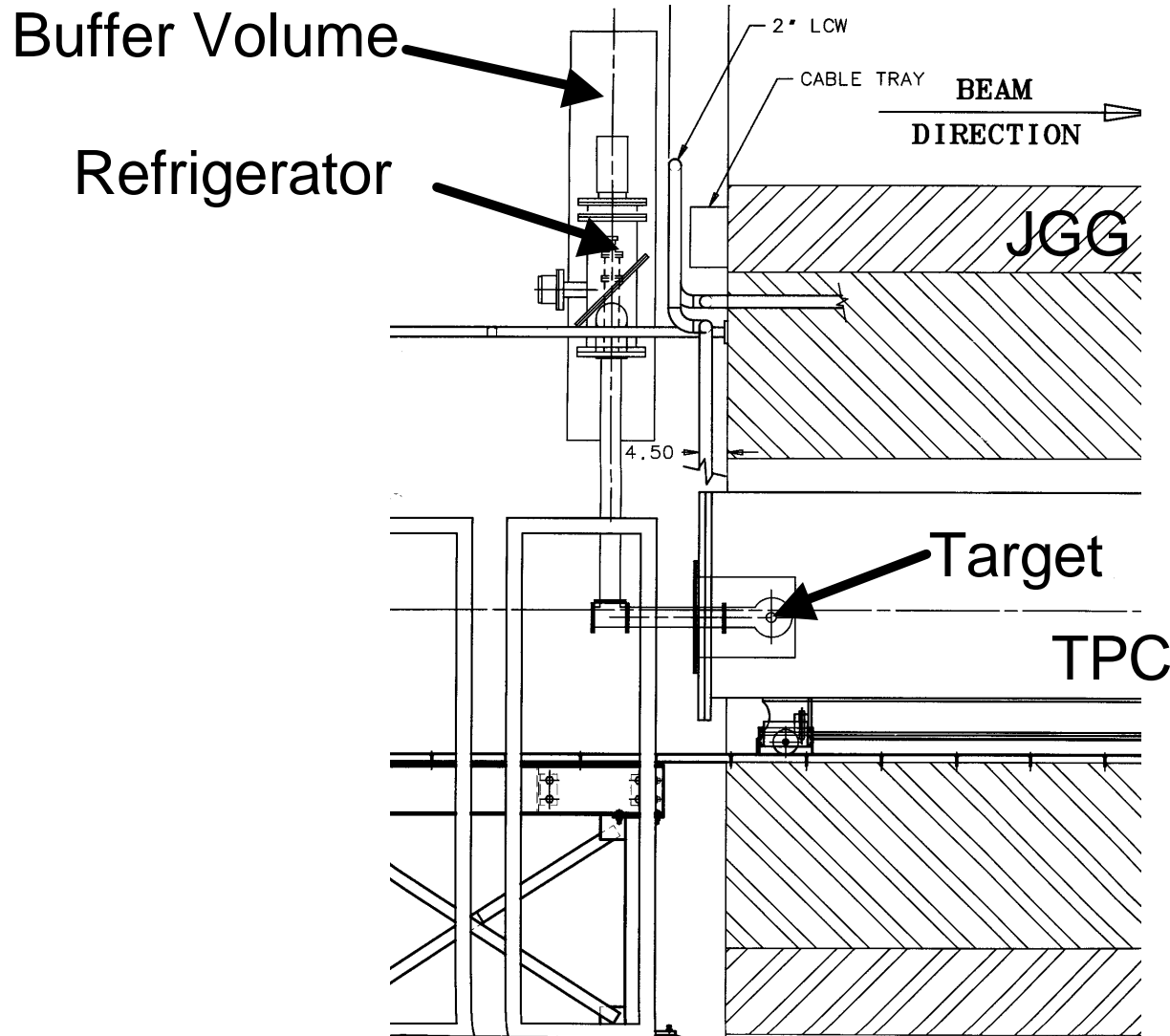
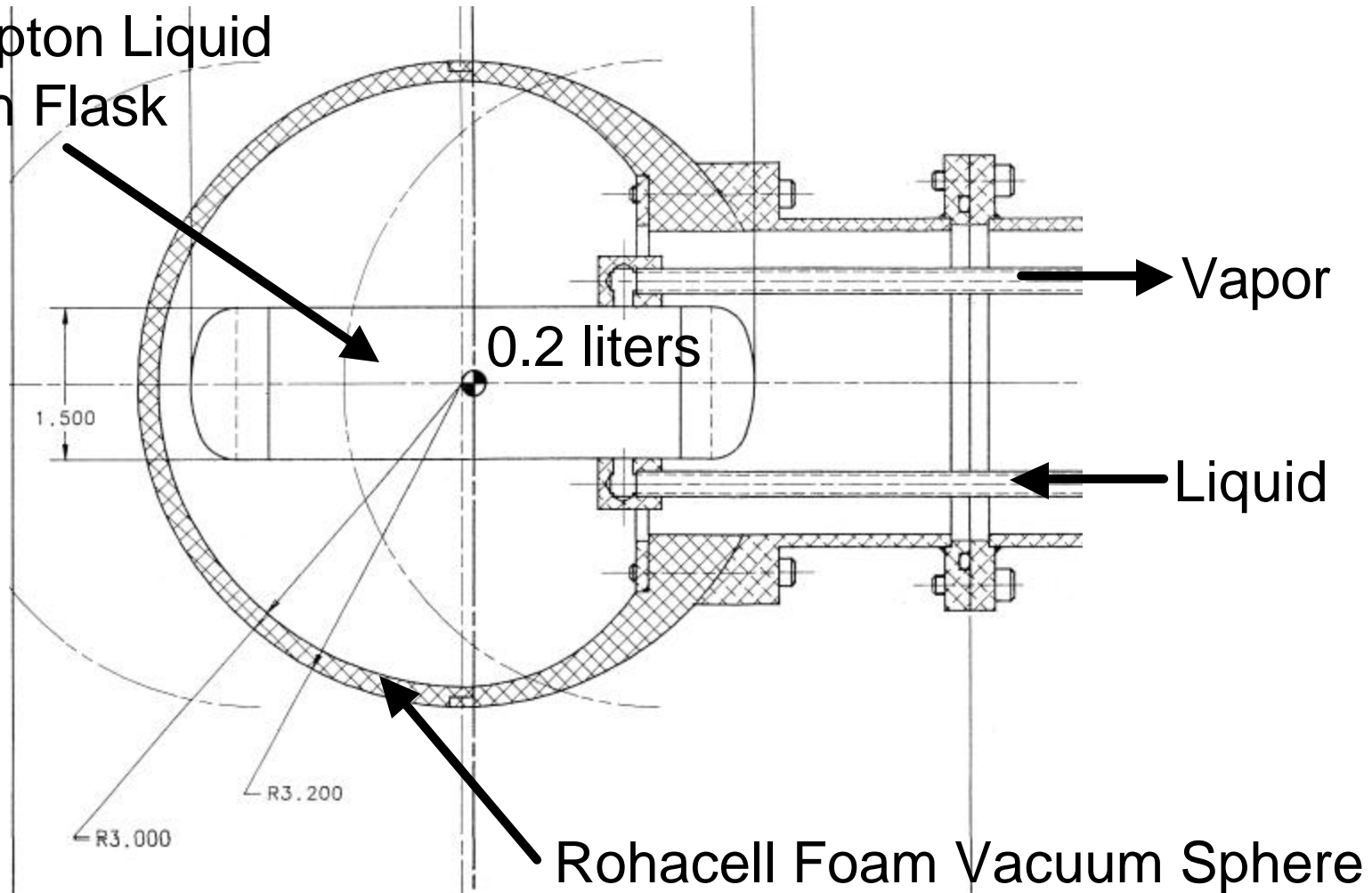


Hydrogen Target Layout



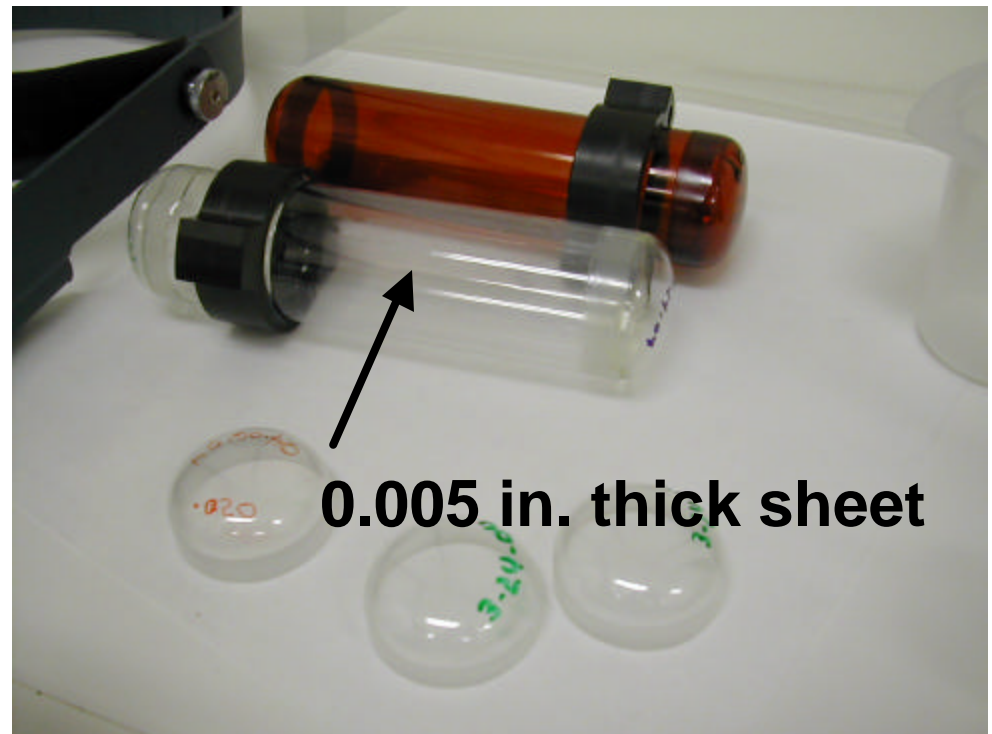
Hydrogen Flask & Vacuum Sphere

Mylar/Kapton Liquid
Hydrogen Flask



Hydrogen Flask

- Forming flask heads was difficult
 - Techs experimented with different copper sheets, different pressures, different lubricants
 - After many iterations they can now make quality consistent flasks



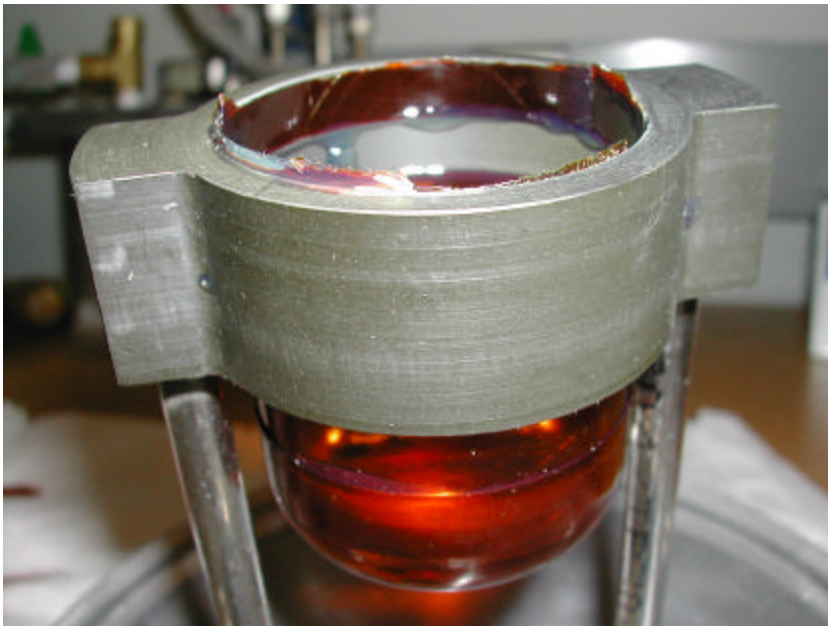
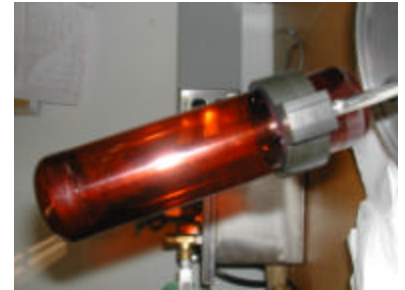
Mylar Room Temperature Pressure Test

- Flask burst at 87.7 PSID
- Only had to exceed 31 PSID



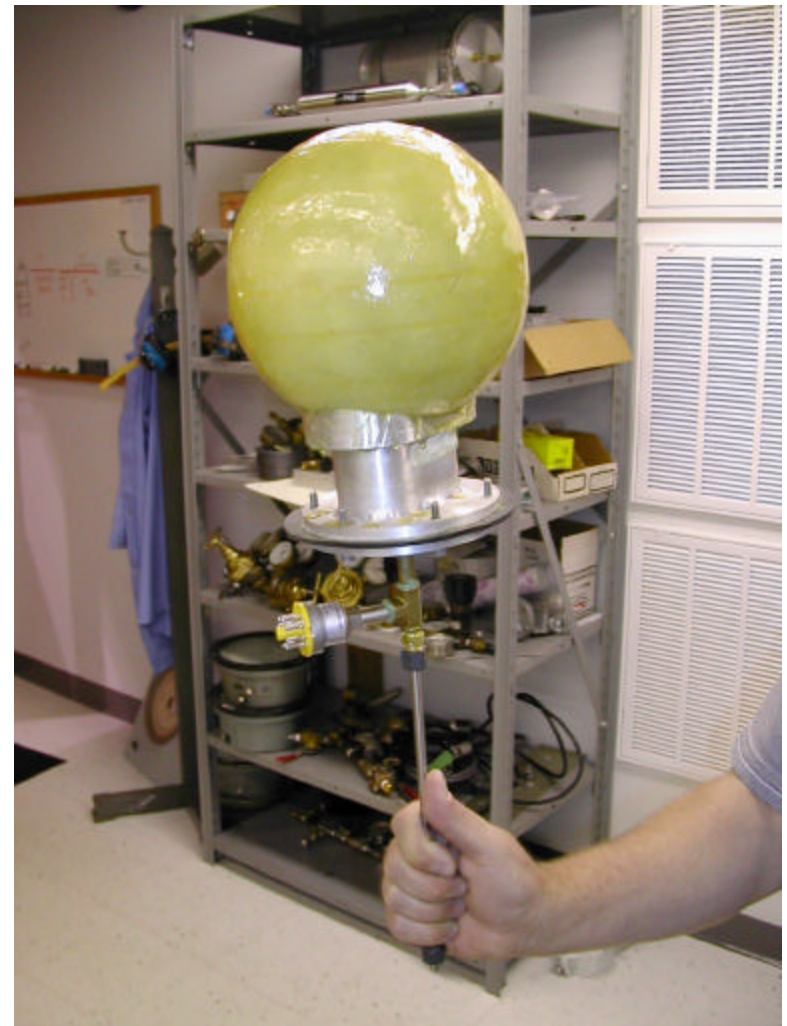
Kapton Room Temperature Pressure Test

- Flask burst at 99.2 PSID
- Only had to exceed 31 PSID



Rohacell Foam Vacuum Vessel

- Fabricated 3 spheres.
 - 1 for testing
 - 2 for experiment
- 1 in. thick layers of Rohacell foam glued together and machined
- Coated with thin fiberglass sheets and epoxy for vapor barrier



Rohacell Foam Vacuum Vessel

- Placed bag around outside of vessel and sprayed helium
- No leak found at leak detector limit of 10^{-10} atm-cc/sec.
- Exceeded 10^{-9} atm-cc/sec requirement



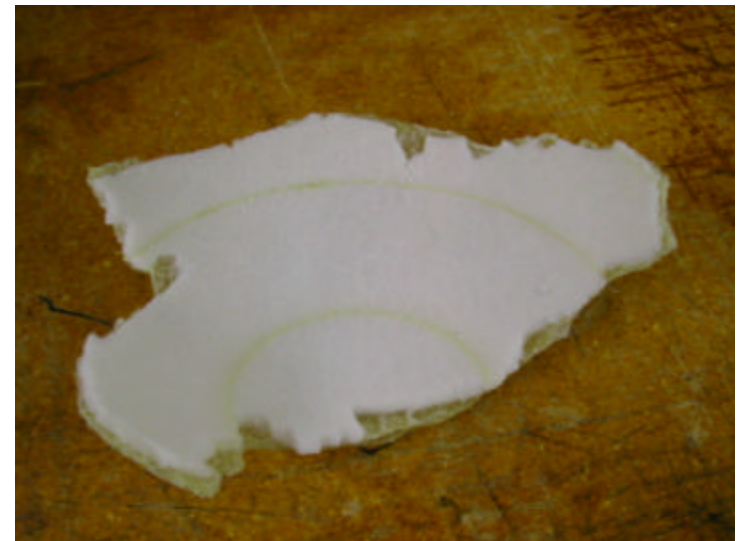
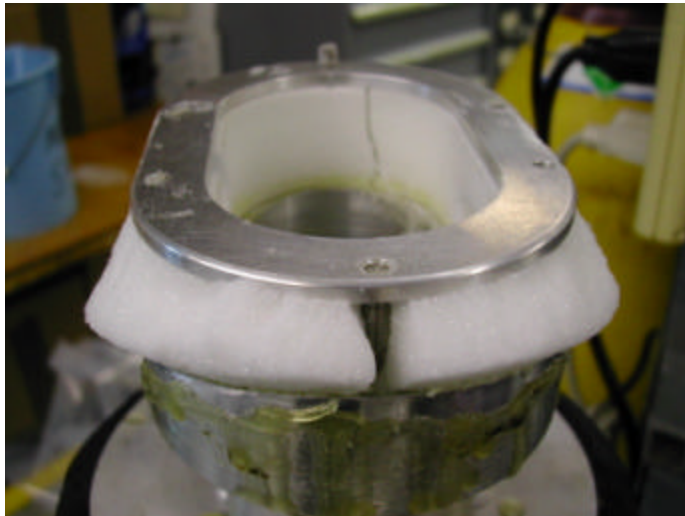
Rohacell Foam Vacuum Vessel

- Pressure Test
- Info to be added Friday morning after testing



Rohacell Foam Vacuum Vessel

- Pressure Test
 - Sphere exploded at 60 psig internal pressure
 - 2.67x needed 22.5 psig test pressure



Major Tasks Accomplished

- Hydrogen flask fabrication is successful
- Rohacell foam vacuum sphere fabrication is successful
- Refrigerator, compressor, and chiller all run
 - 9 Watts of cooling at 20 Kelvin
- Materials testing
- Significant \$\$ items have been procured

Major Tasks Left

- Finish design of stand and fabricate transfer line.
- Re-wire pump cart for modern controls
- Update safety document
- Write control programs
- Pull wires from MC7 to MTEST for controls
- Test Assembly