

# Status of E-906/SeaQuest

– an unpolarized fixed-target Drell-Yan experiment



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# Target status

- After intensive tests during the week and fixing a few remaining problems with the target system, our target experts successfully cooled down our **liquid deuterium target (11/06)** and **liquid hydrogen target (11/08)**.
- Remaining problems:
  - The lower level sensor of the LH2 system is not working.
  - There are also fluctuations seen in the readout of the upper level sensor.
- **Rolling power outage on 11/4**: There were backup supplies for the critical parts of the SeaQuest target, also to test the backup supply requirements when the LH2 and LD2 target are cooled down. This test went well. **Many thanks for the help with the backup supplies!**

# The return of beam

- The plan of AD was to establish a few pulses of beam as soon as possible. There were three *obstacles*:
  - 10/31 – 11/04: problem with the Helium pipe (critical device)
    - hole in the downstream window (made of Al mylar)
    - 11/04: window was replaced with a Kapton window.
  - flow issues in the NM3 raw system had to be resolved.
  - readiness of SeaQuest target system
- 11/08: Carol Johnstone started beam tuning
- 11/08: begin of beam commissioning with two-turn injection into the booster and a low beam intensity of about  $5e11$  ppp

**Many thanks to AD and in particular Carol Johnstone, Michael Backfish, and many operators for the return of beam!**

# Spectrometer status

- Beam-line Cherenkov detector (essential for beam diagnostics and trigger inhibit) working; need to be timed in; indication for a leak in the pipe.
- The **hodoscopes** appear to work fine.
- **Trigger timing** studies ongoing for RF-clock-synchronized trigger firmware.
- There is problem in the readout of **wire chamber D3p**: noisy channels; low efficiency in U and U' planes.
- **Wire chambers** D1, D2, D3m appear to work fine.
- The **proportional tubes** appear to work fine (despite the known dead channels).
- The beamDAQ, scalerDAQ, and mainDAQ appear to work fine.
- The online monitoring software works fine.

**SeaQuest is looking forward  
to resume data taking!**