

# Status of E-906/SeaQuest

– an unpolarized fixed-target Drell-Yan experiment



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# Maintenance during shutdown

- **target** maintenance (coldhead of cryocooler, mechanical vacuum pumps, etc.)
- identified grounding problem in **target** area ✓
- repair of spare HV system for **hodoscopes** (PREP)
- various read-out controllers (ROCs) of the VME-based **DAQ** had to be replaced during Run II:
  - purchased more spares, now Linux-based ROCs
  - Run III DAQ will use not only VxWorks-based ROCs (Run II) but also Linux-based ROCs
  - CODA supports VxWorks / Linux hybrid (as demonstrated at JLAB)

# Improvements during shutdown

- VESDA-based flammable gas detection system to reduce amount of electronics in the high-radiation **target** area ✓
- additional **shielding** wall to possibly reduce radiation dose on electronics racks ✓ :
  - required dismantlement of target plumbing
  - thanks to PPD engineering and FESS
- **trigger firmware** version that uses the RF clock for all internal operations (instead of internal clock) ✓ :
  - removing the  $\pm 2\text{ns}$  trigger output jitter
  - causing additional 100ns of trigger latency
  - possibly reducing the timing difference in the L0 / L1 trigger

# Status of UCB chamber

- repair of remaining 22 wires will be completed within this week



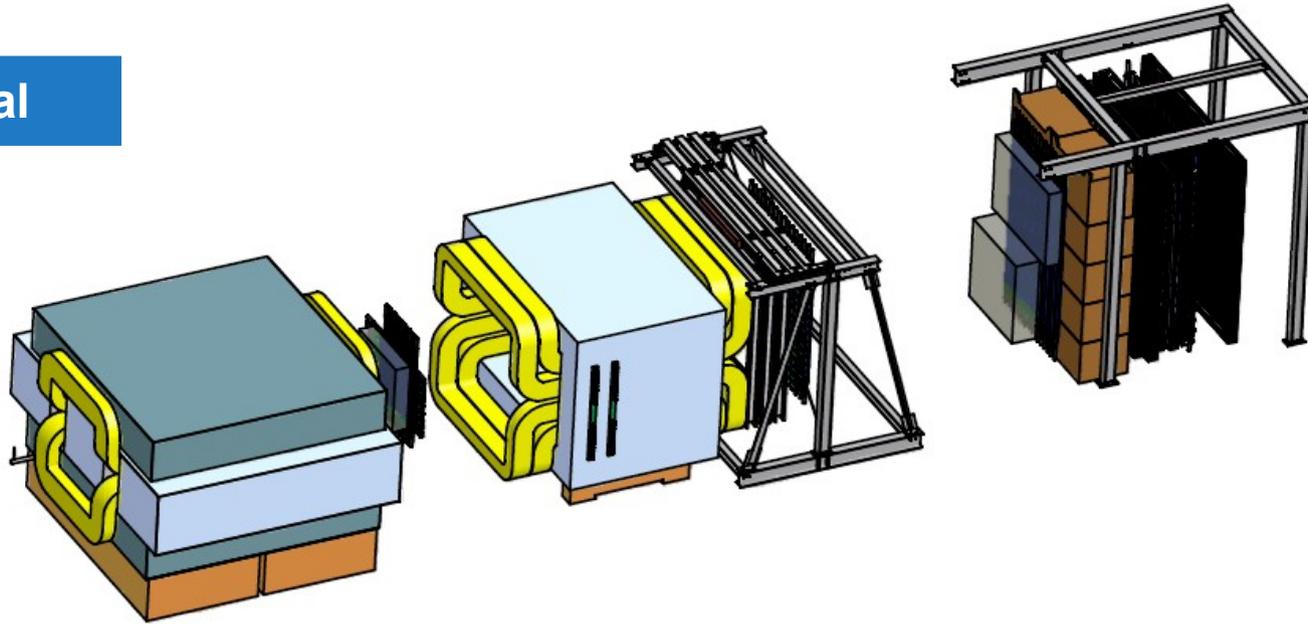
- tension of all wires will be tested extensively
- prototype for HV distribution board expected within this week
- HV distribution boards required for HV training
- possible gas mixture: 82% Argon, 15% I-butane, 3% Methylal
- read-out electronics ready

# Status of SeaQuest proton beam

- installation of 360 Hz *dampers* to improve **duty factor**
- complete MuLam replacement in G1 stub (magnet in place, work on beam pipe and vacuum system required)
- MCenter beam magnet swap in MC6
- complete installation of N3SEM (replacement of NM3ION)
- power outage on 10/25

# Spectrometer Status and Plans

Operational



Target

remaining maintenance work will be completed end of the week

FMAG, KMAG

ramped down for shutdown, NS2 system not yet ready for operations

Hodoscopes

ready for Run III, possible rearrangement of H1 to reduce background / trigger rate, coordinated with installation of new D1

Drift Chambers

ready for Run III, new D1 will be installed during Run III

DAQ

ready for Run III

Trigger

ready for Run III, identify source of RF jitter of 2ns (NIM module?)

**The SeaQuest collaboration  
is looking forward to Run III!**