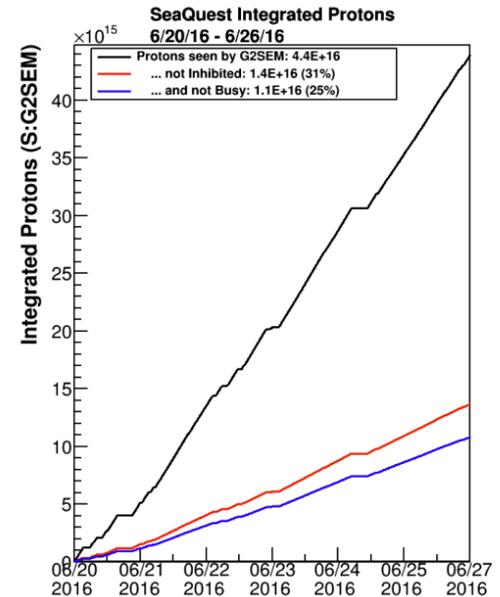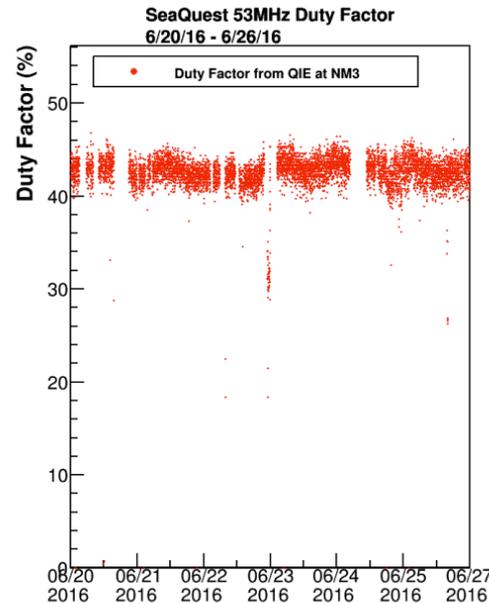# SeaQuest AEM report
June 27th, 2016

Arun Tadepalli

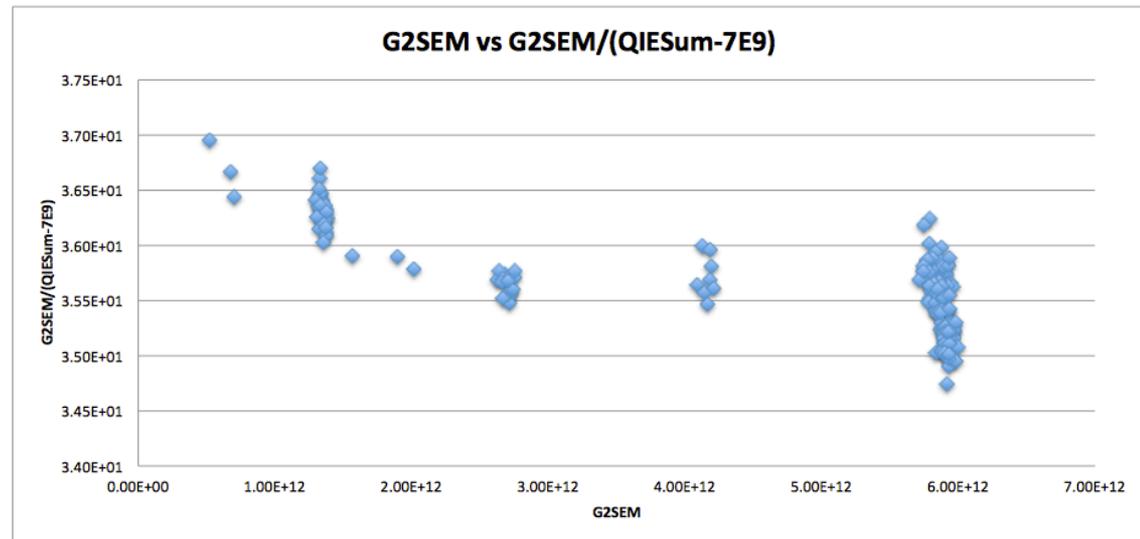## Rutgers University

1

Beam, integrated protons and duty factor

- 4.4e16 ppp provided to SeaQuest during last week with intermittent beam issues
  - Oil in Septa in MI52 overheating issue
  - Booster cogging front issues
  - Power supply down on
- Intensity studies completed on June 23rd

SeaQuest 53MHz Duty Factor
6/20/16 - 6/26/16

Duty Factor (%)

• Duty Factor from QIE at NM3

06/20 06/21 06/22 06/23 06/24 06/25 06/27
2016 2016 2016 2016 2016 2016 2016

SeaQuest Integrated Protons
6/20/16 - 6/26/16

Integrated Protons (S:G2SEM)

$\times 10^{15}$

— Protons seen by G2SEM: 4.4E+16
— ... not Inhibited: 1.4E+16 (31%)
— ... and not Busy: 1.1E+16 (25%)

06/20 06/21 06/22 06/23 06/24 06/25 06/27
2016 2016 2016 2016 2016 2016 2016
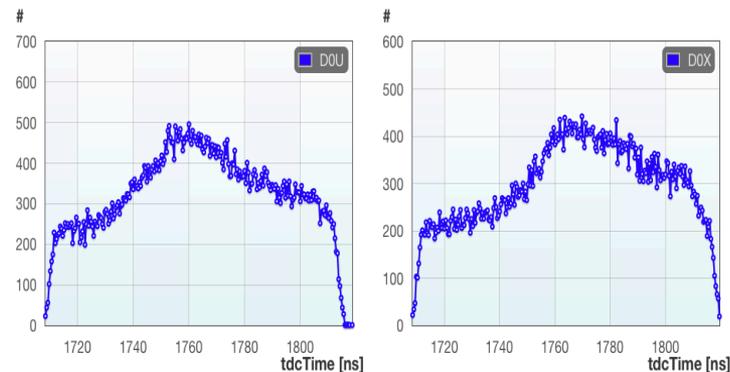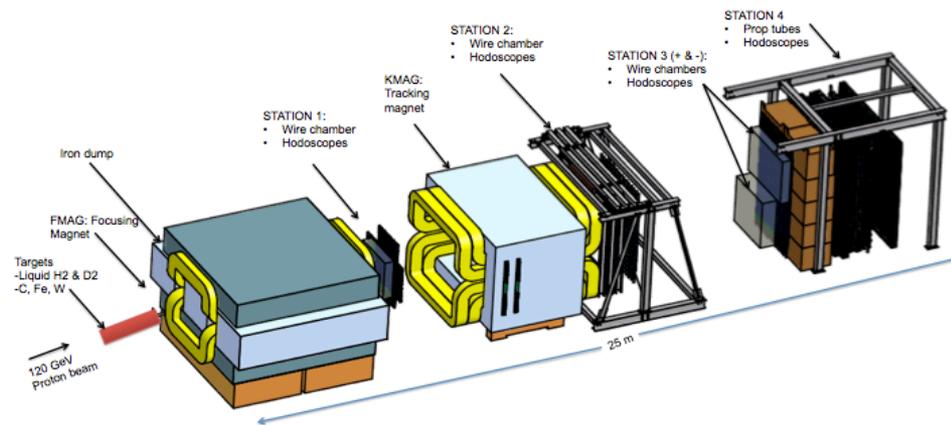
Cerenkov counter + QIE readout issues

- QIE data missing since June 3rd – 20th
  - Microcode problems
  - Ribbon cable connected wrongly
- Intensity scan done on Jun 24th to make sure that the QIE is working as expected

G2SEM/QIE sum ratio is reasonably constant over a wide range of beam intensities
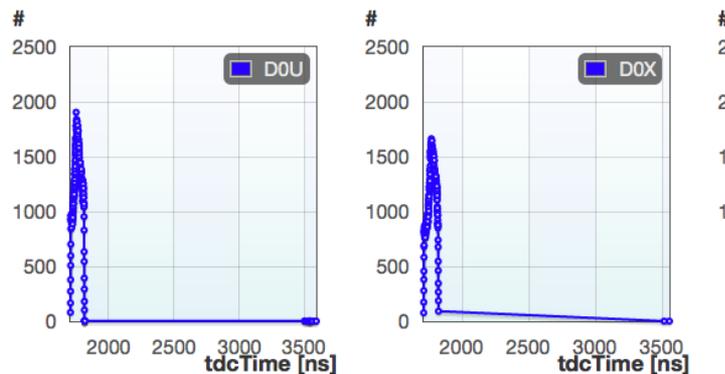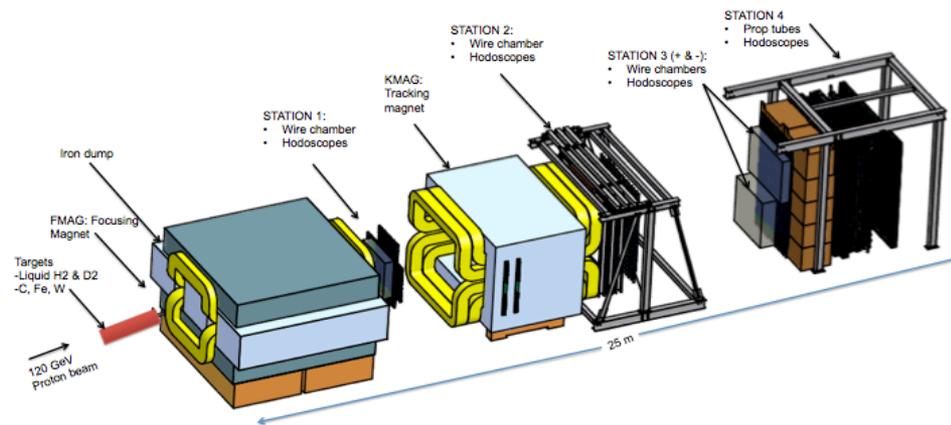
Spectrometer

- Cerenkov
  - Problems reported in the previous slide
- Targets
  - Occasional EPICS script issues

- Magnets
  - LCW temperature being monitored

- Drift chambers
  - D0 ✔
  - D1 - occasional CAEN module trips ✔
  - D2 - occasional trips
  - D3+ & D3- ✔
  - Occasional readout issues with the TDC time windows (known problem)

- Hodoscopes
  - Bad PMT replaced H2T11
  - H2T11 and H2B1 seem to be inefficient

- DAQ
  - Occasional BeamDAQ and MainDAQ crashes
  - Scalar DAQ issues fixed by active night shifters!

normal tdc spectra

Spectrometer

- Cerenkov
  - Problems reported in the previous slide
- Targets
  - Occasional EPICS script issues

- Magnets
  - LCW temperature being monitored

- Drift chambers
  - D0 ✔
  - D1 - occasional CAEN module trips ✔
  - D2 - occasional trips
  - D3+ & D3- ✔
  - Occasional readout issues with the TDC time windows (known problem)

- Hodoscopes
  - Bad PMT replaced H2T11
  - H2T11 and H2B1 seem to be inefficient

- DAQ
  - Occasional BeamDAQ nd MainDAQ crashes
  - Scalar DAQ issues fixed by active night shifters!

Bogus events observed in the tdc time plot

Plan

Continue taking good data!