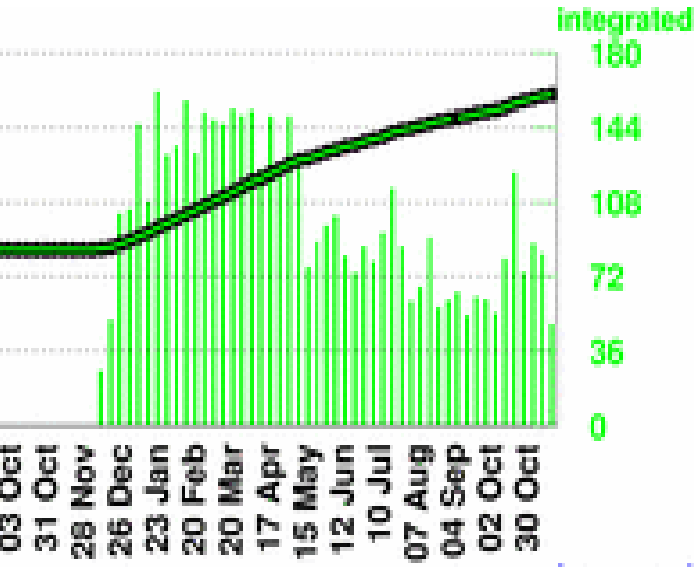
MiniBooNE Report

Richard Van de Water
Los Alamos National Lab
for the MiniBooNE collaboration

07 November 2005

31 Oct – 7 Nov

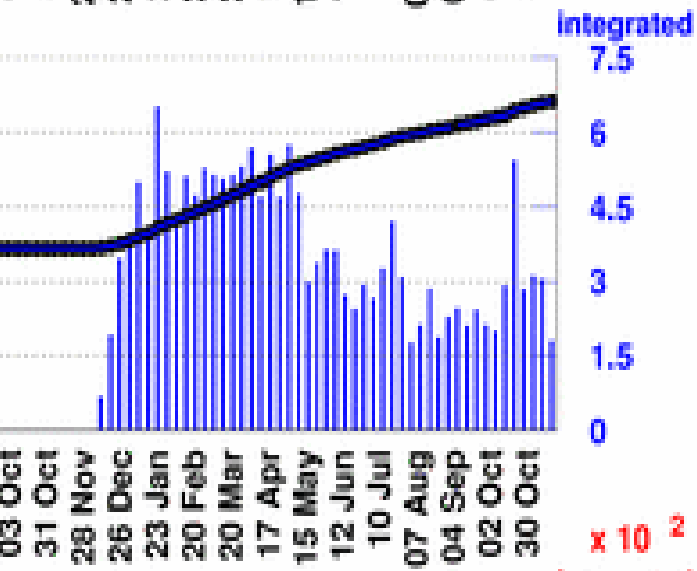


Number of Horn Pulses

To date: 159.99 million

Largest week: 2.46 million

Latest week: 0.75 million

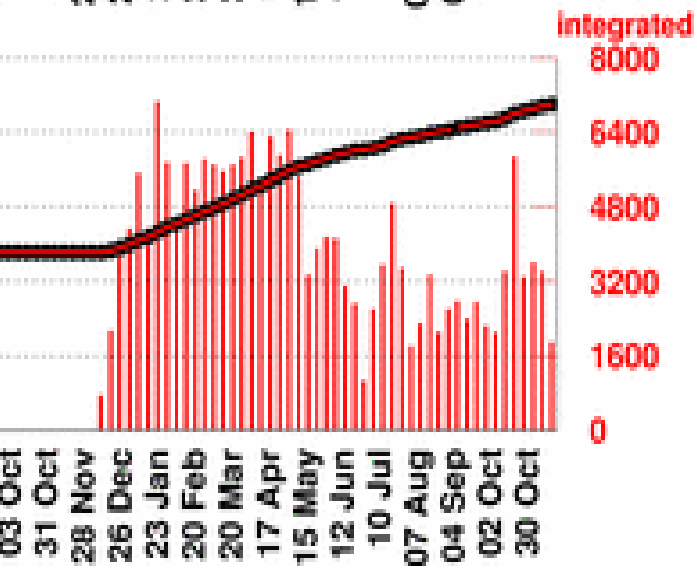


Number of Protons on Target

To date: 6.6121 E20

Largest week: 0.1084 E20

Latest week: 0.0301 E20



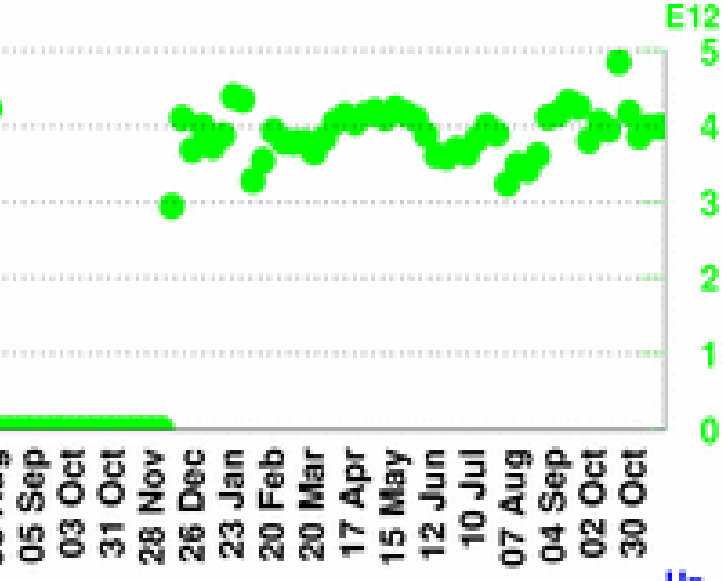
Number of Neutrino Events

To date:699138

Largest week: 11447

Latest week: 3074

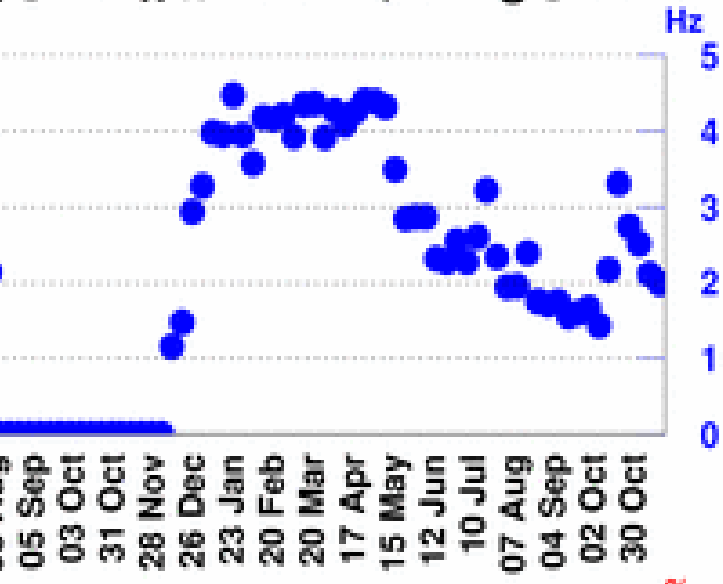
31 Oct – 7 Nov



POT per Horn Pulse

Largest week: 4.85 E12

Latest week: 4 E12

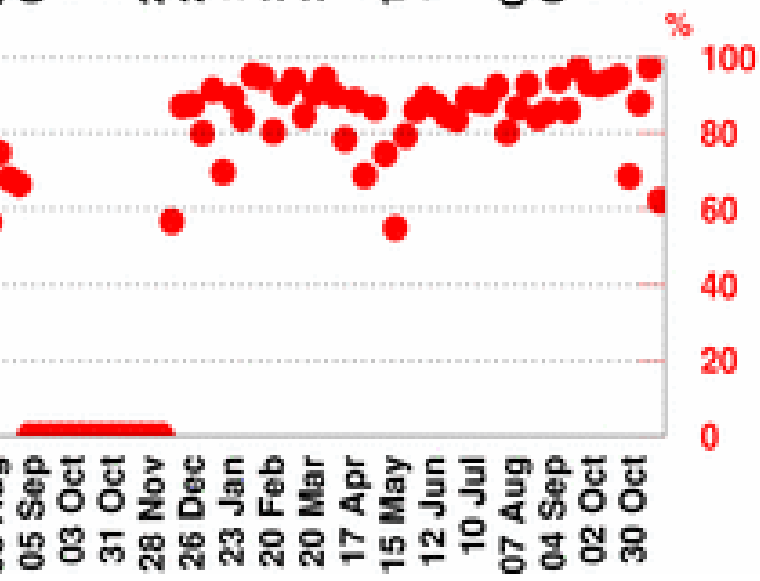


Horn Rate

(for time periods with beam)

Largest week: 4.48 Hz

Latest week: 1.98 Hz



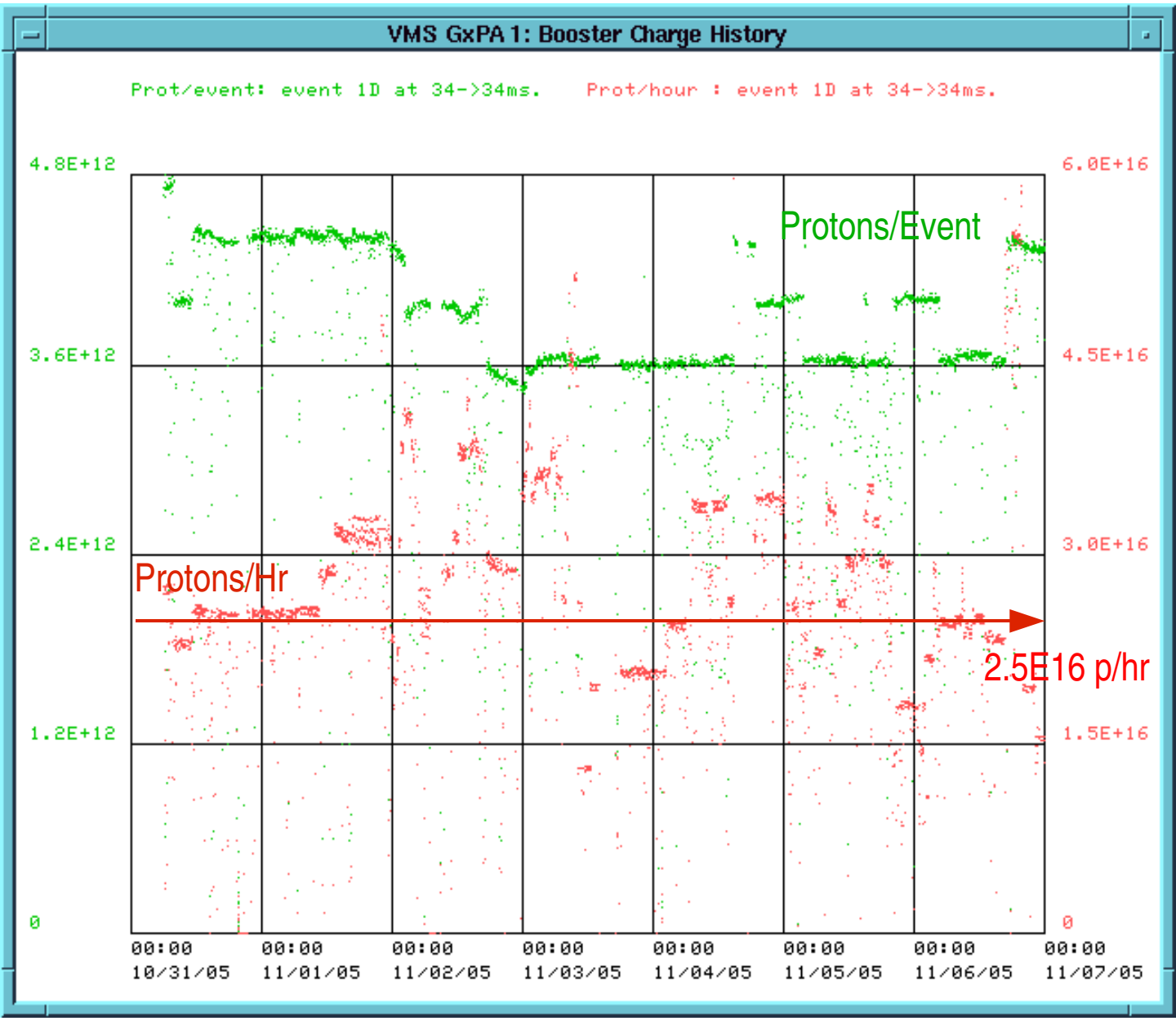
Beam Uptime Fraction

(fraction of time with beam)

Largest week: 97.4 %

Latest week: 62.2 %

MiniBooNE One Week Proton/hr Summary



17 Oct

24 Oct

Steady running with good intensity!

Beam Uptime 94%
4.4E18 POT Delivered

- Detector running well, ~100% livetime.
- Beam downtime:
  - 5 hr HV860 water leak repair.
  - 2 hr horn VCAP trip.
  - 2hr booster beam studies.
- Good beam intensity this week!
- Upcoming systematic studies:
  - LMC low intensity runs (3 days).
  - ½ current horn run (~1 week).

Beam Systematic Studies

- Vary input beam parameters, i.e. horn current, beam position, etc.
- Check output rates, energy, etc, varies as expected.
- One week run gives ~1k neutrinos.

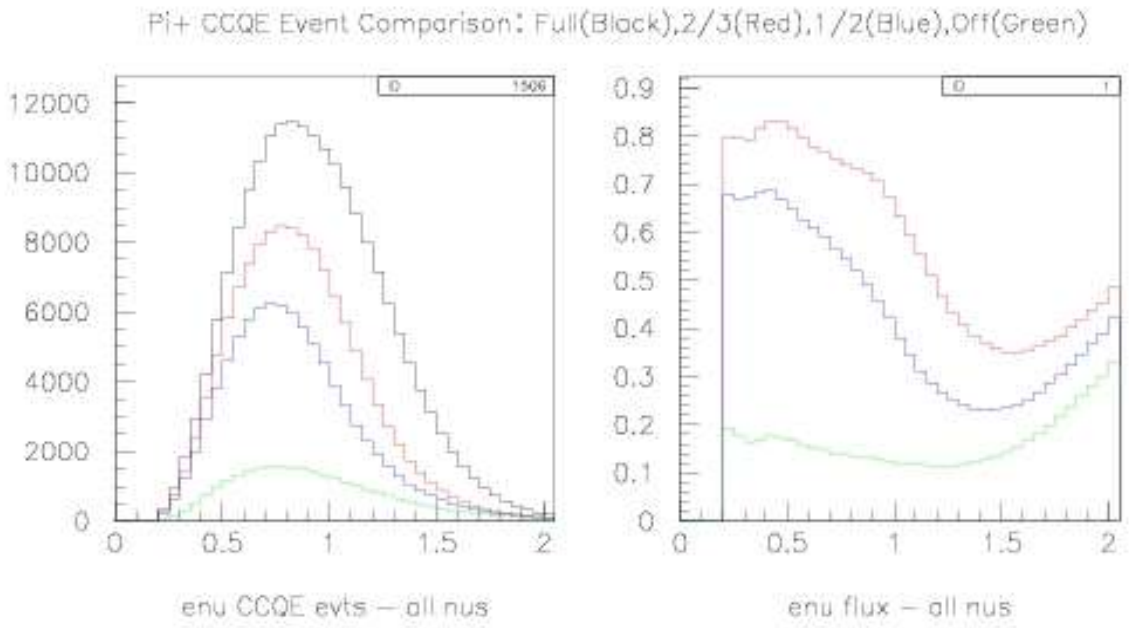


Figure 5: Neutrino charged-current quasi-elastic events in MiniBooNE from π^+ decay as a function of generated neutrino energy for different horn currents. (See Figure 4 caption for details.)