MiniBooNE Report

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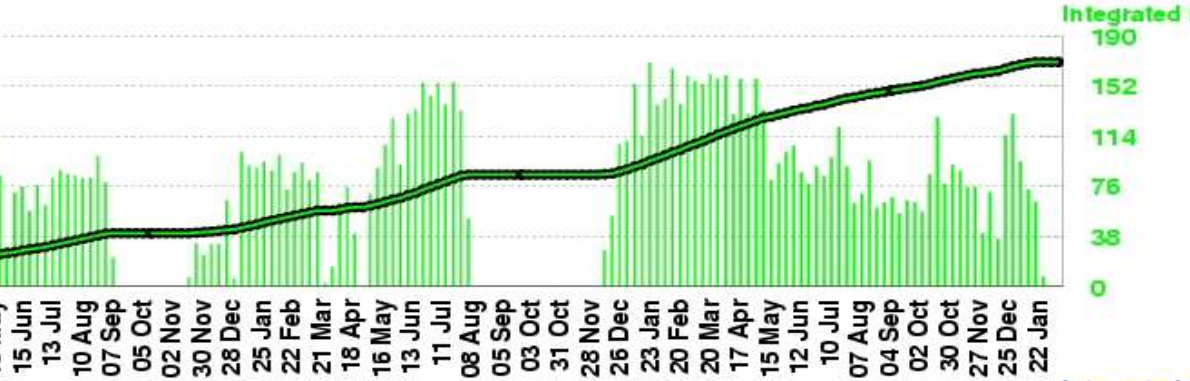
for the MiniBooNE collaboration

30 January 2006

Weekly Summary 23 Jan - 30 Jan: 1.8E18 POT, 59% Up.

- Jan 19: switched to anti-neutrino running (horn current at -175kA).
- Major down time:
  - 16 hrs: Booster and MI access (Jan 24).
  - 2 hrs: Detector trigger repairs (Jan 25).
  - 20 hrs: multi-wire installation, vacuum leak repair (Jan 26).
  - 2 hrs: Booster magnet repair (Jan 27).
  - 8 hrs: Booster water leak repair (Jan 29).

23 Jan – 30 Jan

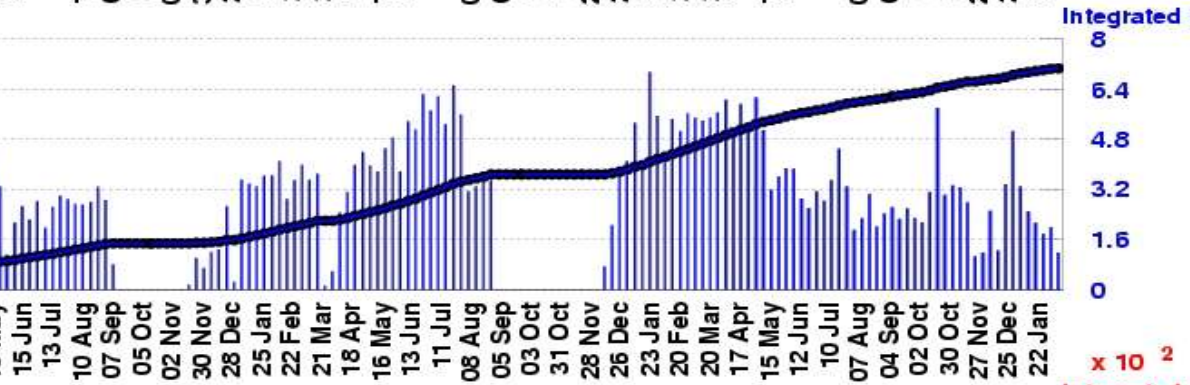


Number of Horn Pulses

To date: 170.6 million

Largest week: 2.46 million

Latest week: 0.63 million

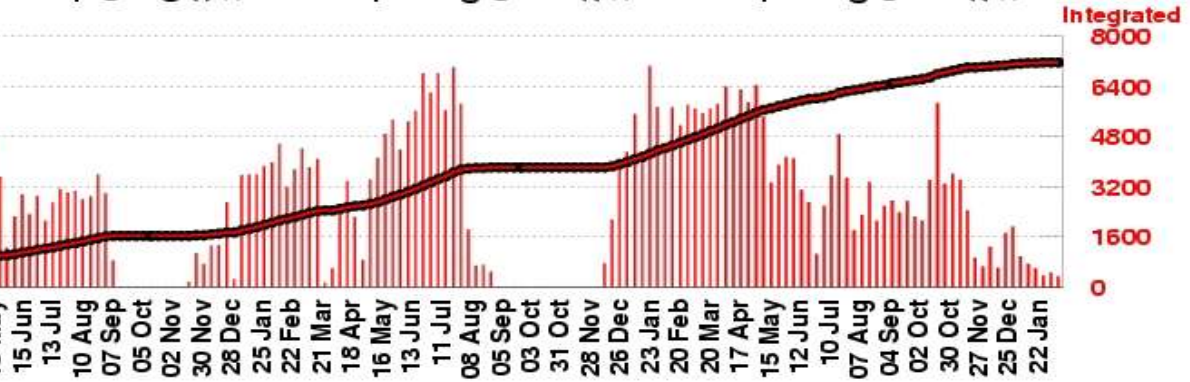


Number of Protons on Target

To date: 7.0494 E20

Largest week: 0.1084 E20

Latest week: 0.0183 E20



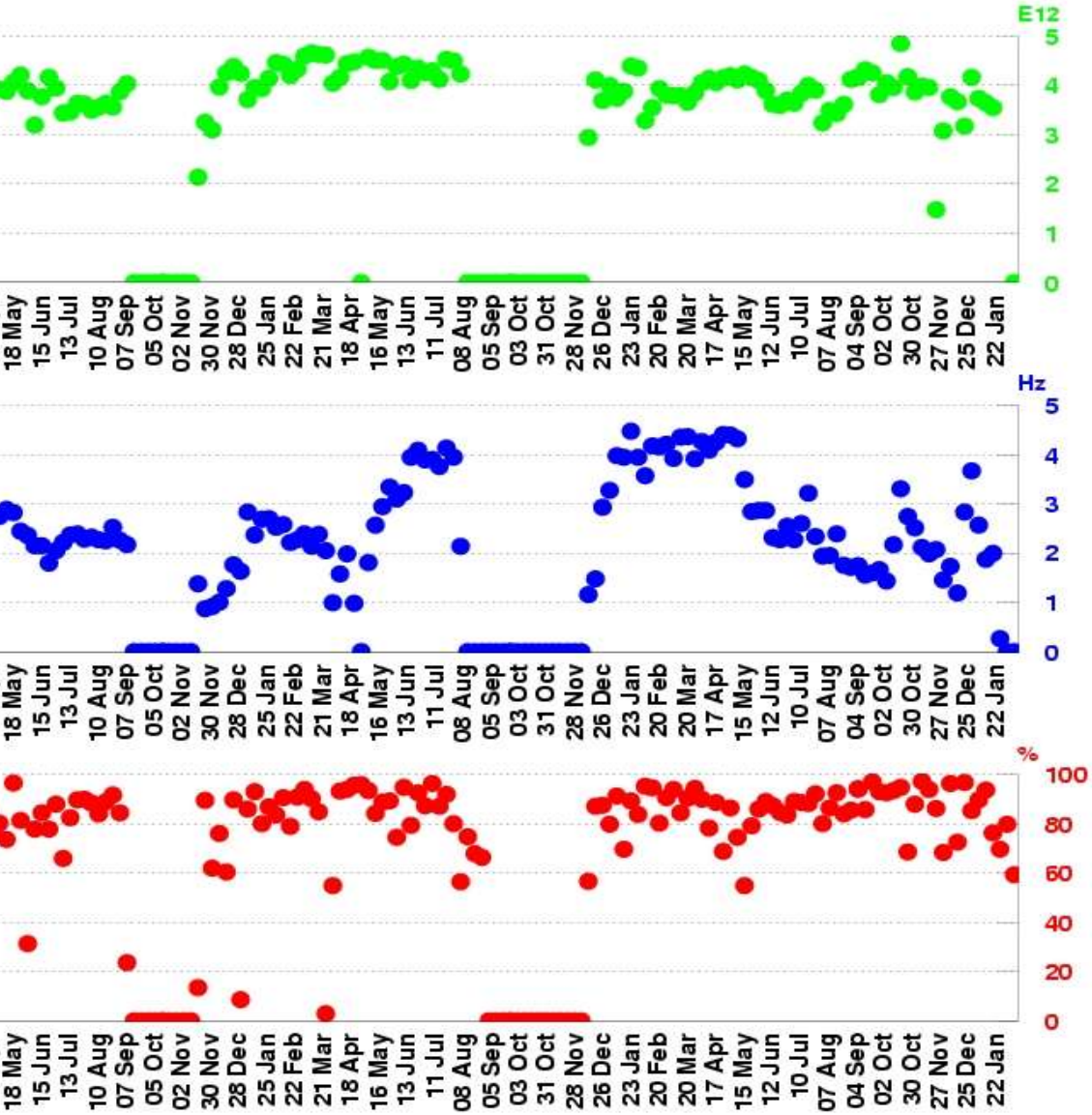
Number of Neutrino Events

To date: 717036

Largest week: 11447

Latest week: 515

23 Jan – 30 Jan



POT per Horn Pulse

Largest week: 4.85 E12

Latest week: 3.21 E12

Horn Rate

(for time periods with beam)

Largest week: 4.48 Hz

Latest week: 1.74 Hz

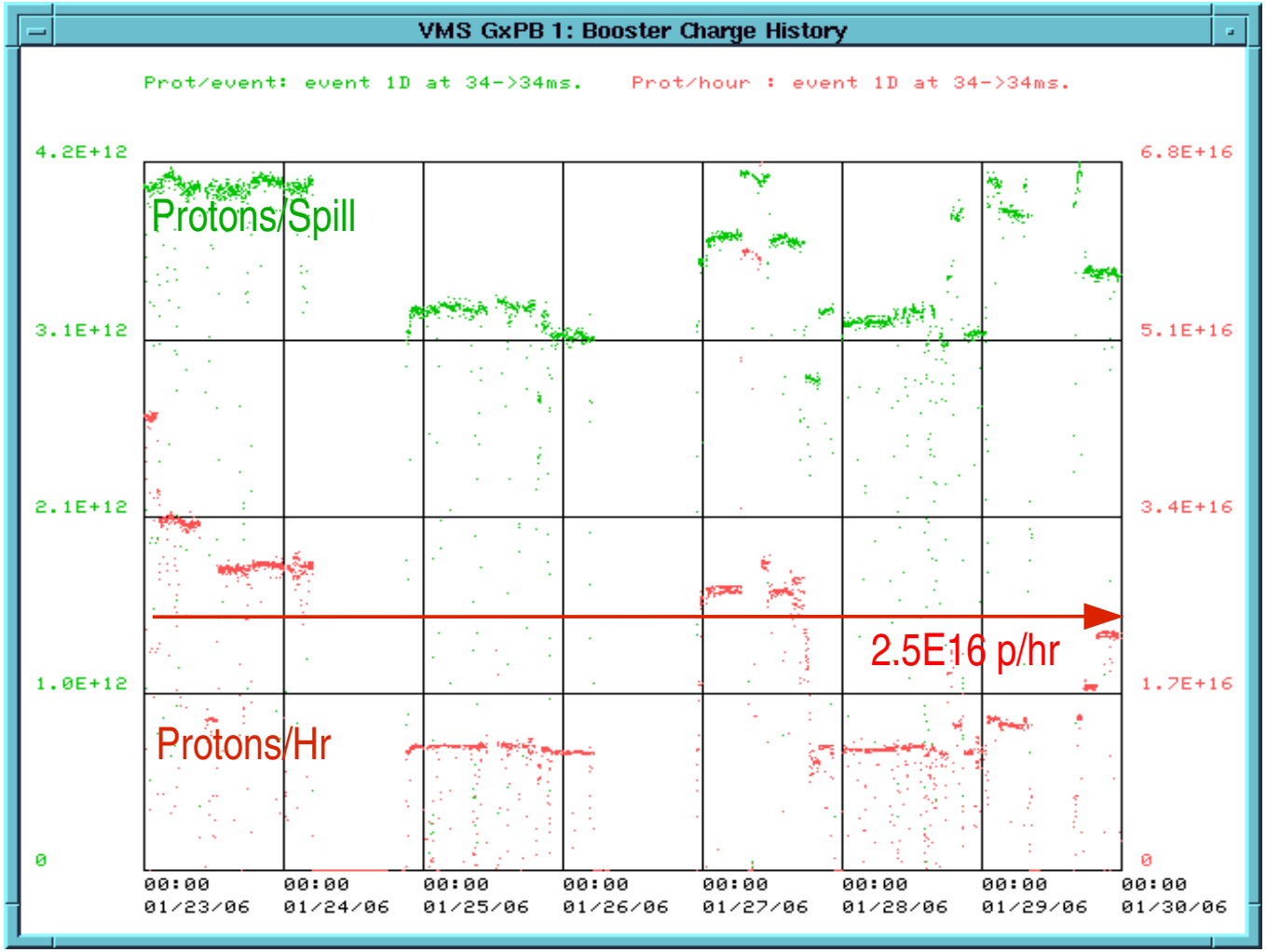
Beam Uptime Fraction

(fraction of time with beam)

Largest week: 97.4 %

Latest week: 59.3 %

One Week Proton/Hr Summary



23 Jan

30 Jan

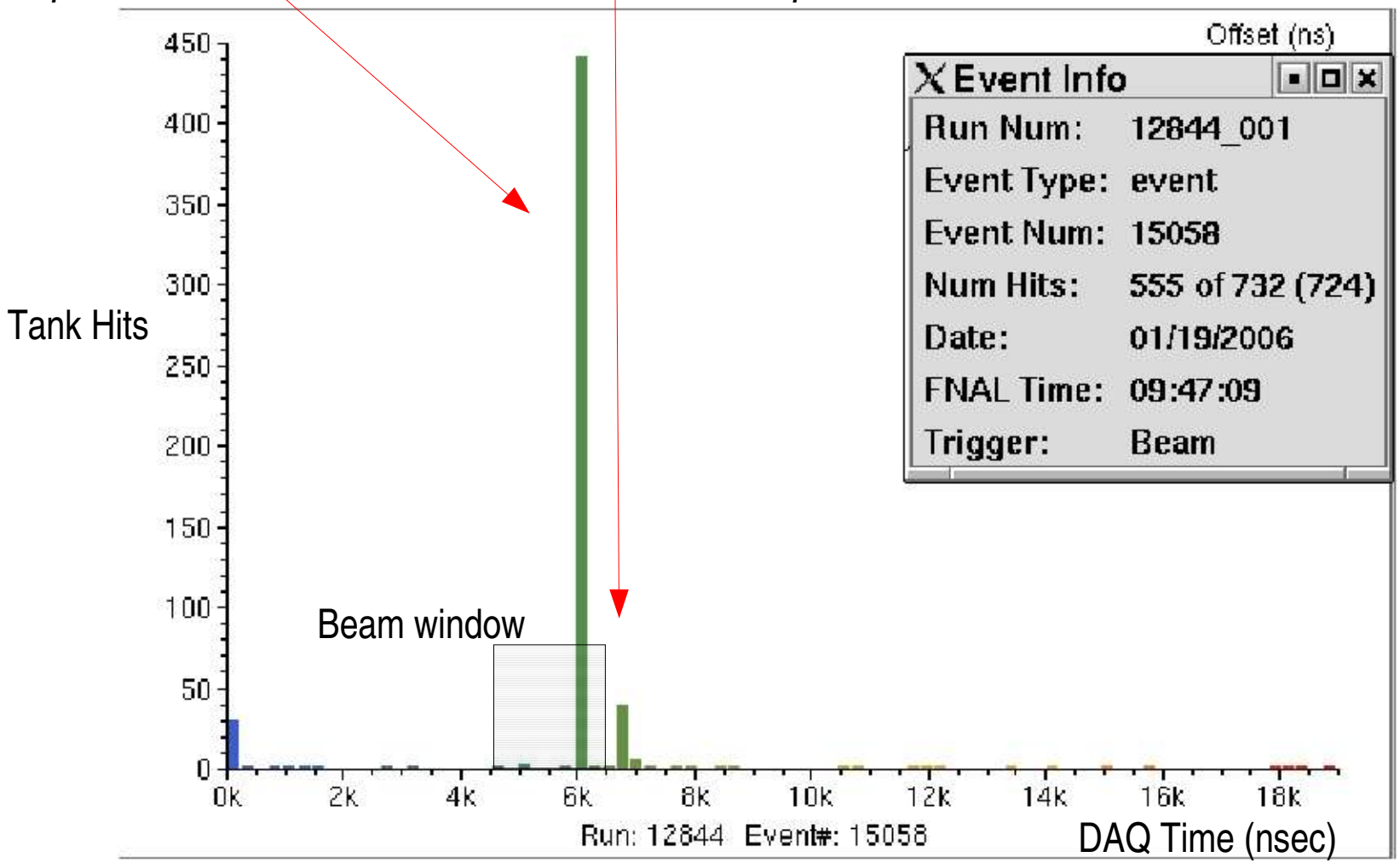
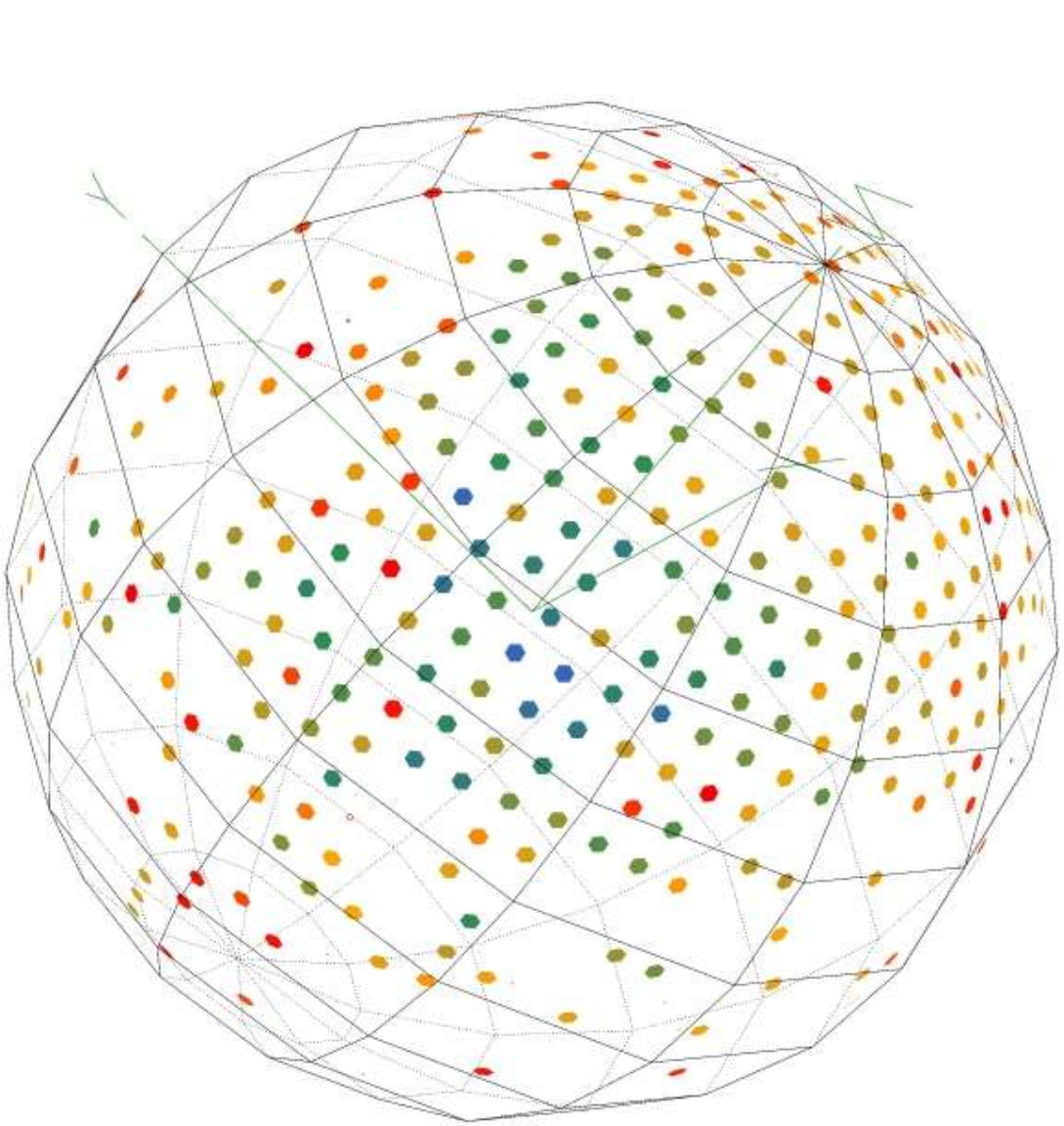
Anti-neutrino run mode.

Summary, Plan of the Week

- Running anti-neutrino mode to shutdown, and beyond.
  - In neutrino mode, observe ~11 events per 1E16 POT.
  - Anti-neutrino flux and cross section down by a factor of two each, expect ~3 events per 1E16 POT.
  - So far, we see ~2.7 events per 1E16 POT in anti-neutrino mode.

First Anti-neutrino Event (probably ~75%)

- $\bar{\nu}_\mu$ p -> μ^+ n ; μ^+ -> e^+ ν_e $\bar{\nu}_\mu$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