MiniBooNE Report

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for the MiniBooNE collaboration

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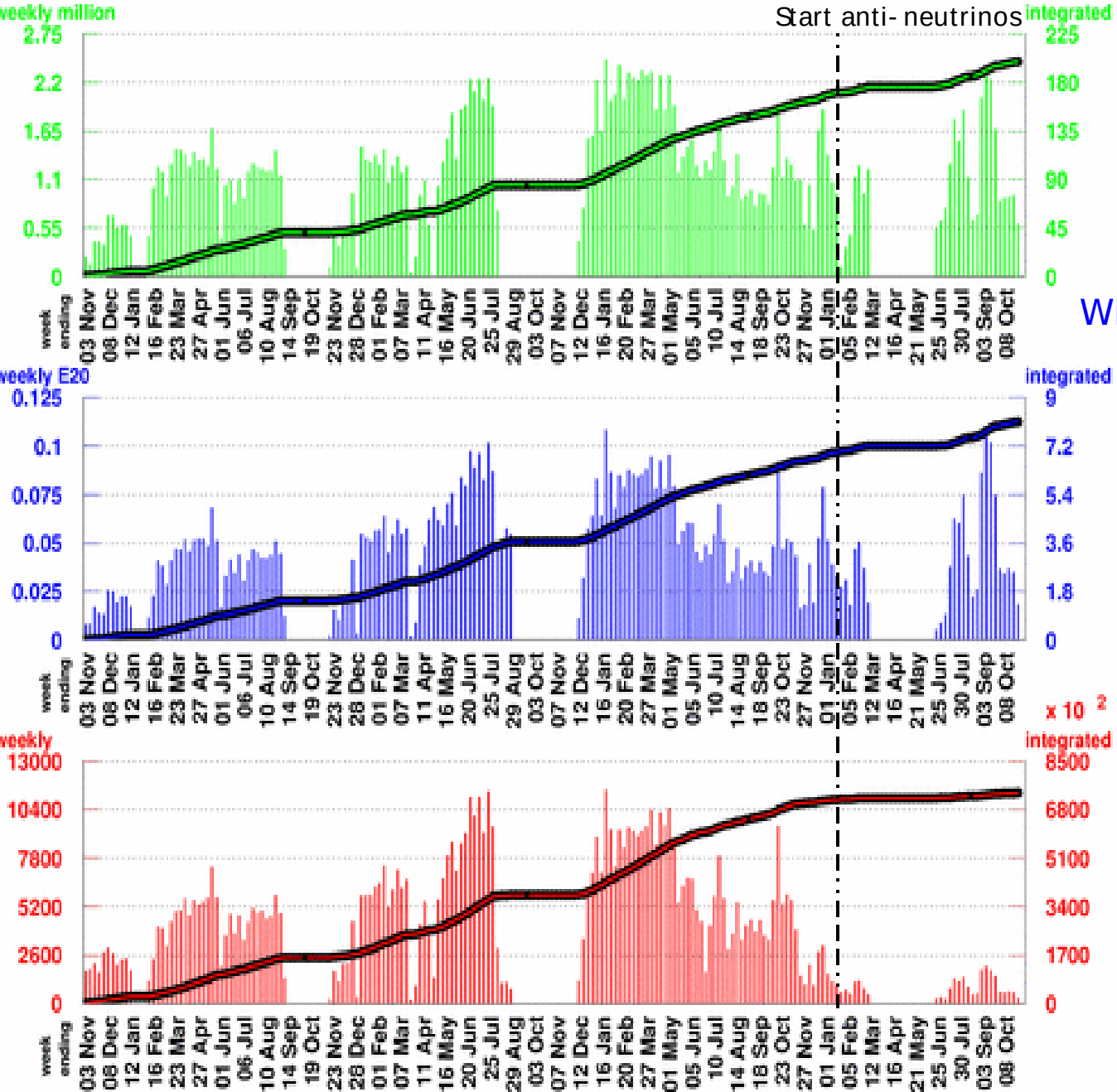
Week Summary 09 Oct – 16 Oct 0.19E19 POT, 64% Uptime

- Uptime hit from Feeder 46B fault
  - Linac LRF2 repairs.
  - H- source fault required switch to I- source.
- Low current output from I- source (~18mA instead of ~50mA).
- Major Downtime:
  - 40 hrs, Night of the mouse, Feeder 46B fault recovery (Oct 10).
  - 5 hrs, Booster vacuum leak and safety inspection (Oct 13).

09 Oct – 16 Oct



Number of Horn Pulses

To date: 199.29 million

Largest week: 2.46 million

Latest week: 0.6 million

With Beam Information Cuts

Number of Protons on Target

To date: 8.09 E20

Largest week: 0.1085 E20

Latest week: 0.0185 E20

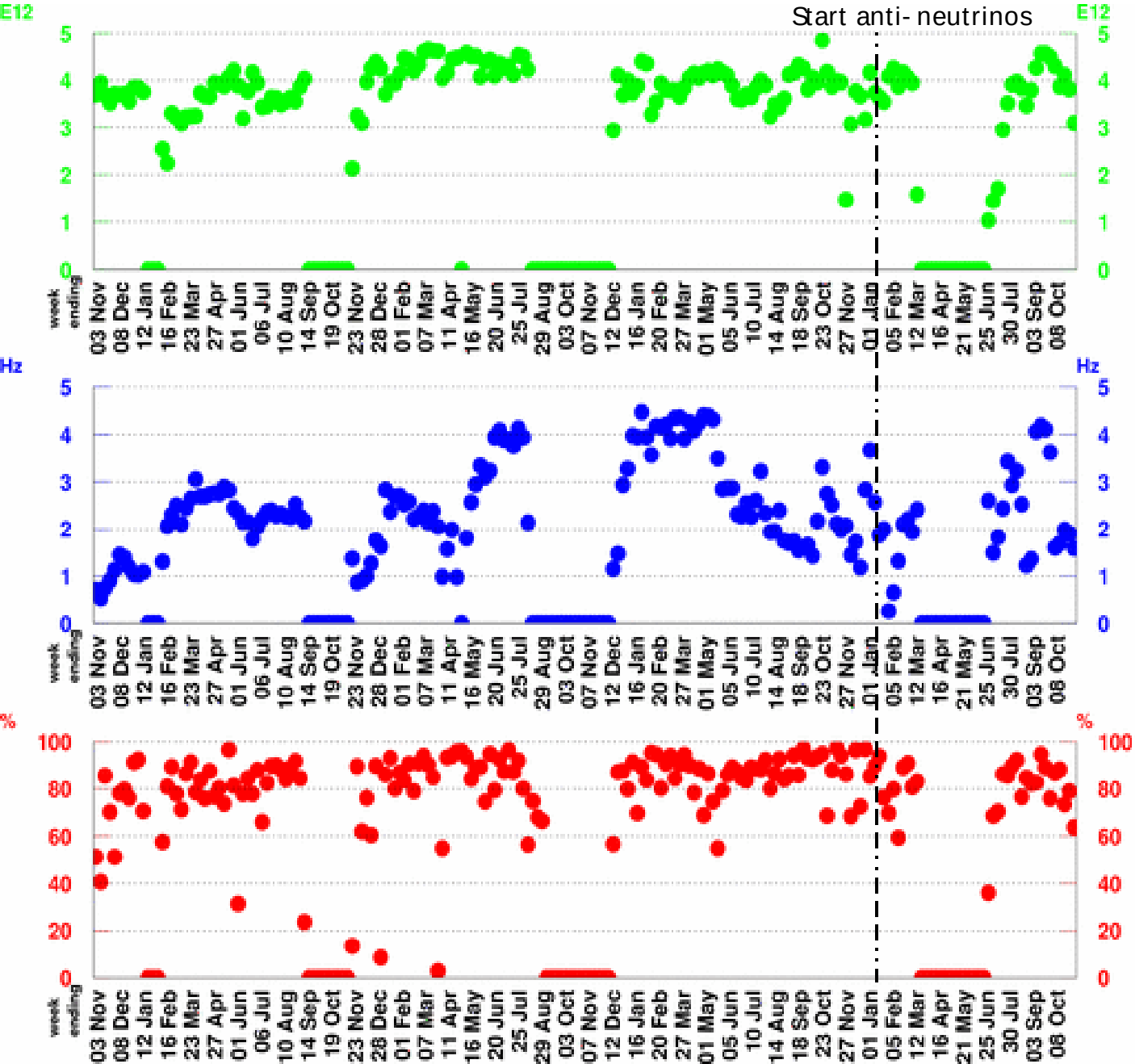
Number of Neutrino Events

To date:738041

Largest week: 11447

Latest week: 320

09 Oct – 16 Oct



POT per Horn Pulse

Largest week: 4.85 E12

Latest week: 3.1 E12

Horn Rate

(for time periods with beam)

Largest week: 4.48 Hz

Latest week: 1.6 Hz

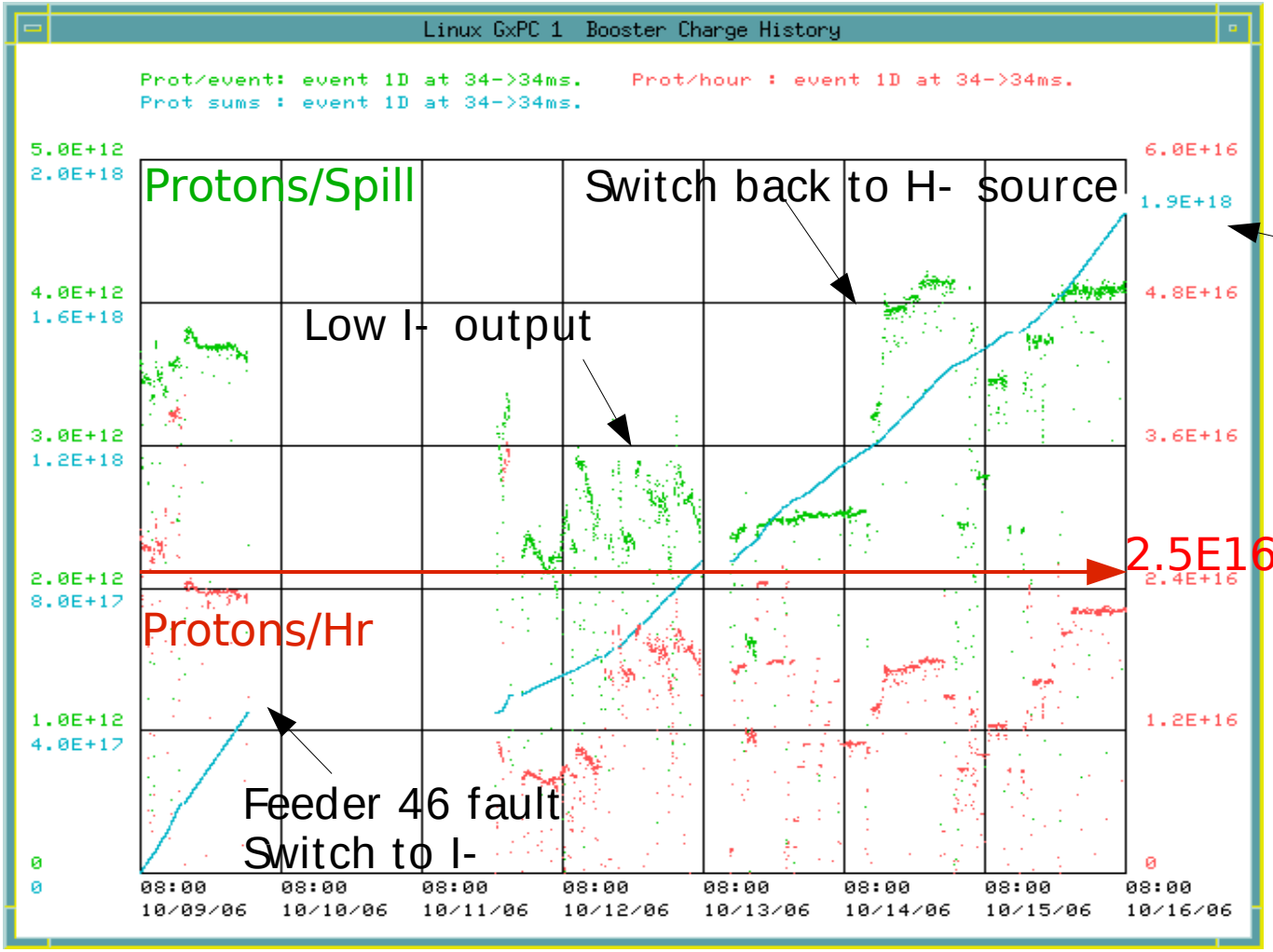
Beam Uptime Fraction

(fraction of time with beam)

Largest week: 97.4 %

Latest week: 63.8 %

One Week MB Proton/Hr Summary



Weekly Integrated POT

09 Oct

16 Oct

Rocky running, Feeder 46B and Linac problems

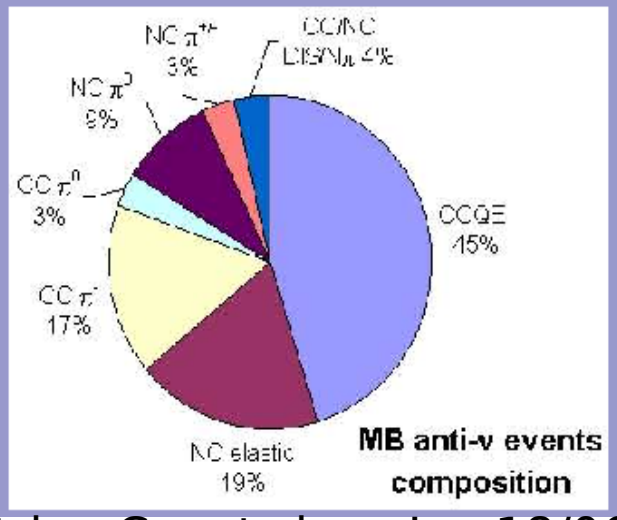
Antineutrino Scattering with MiniBooNE

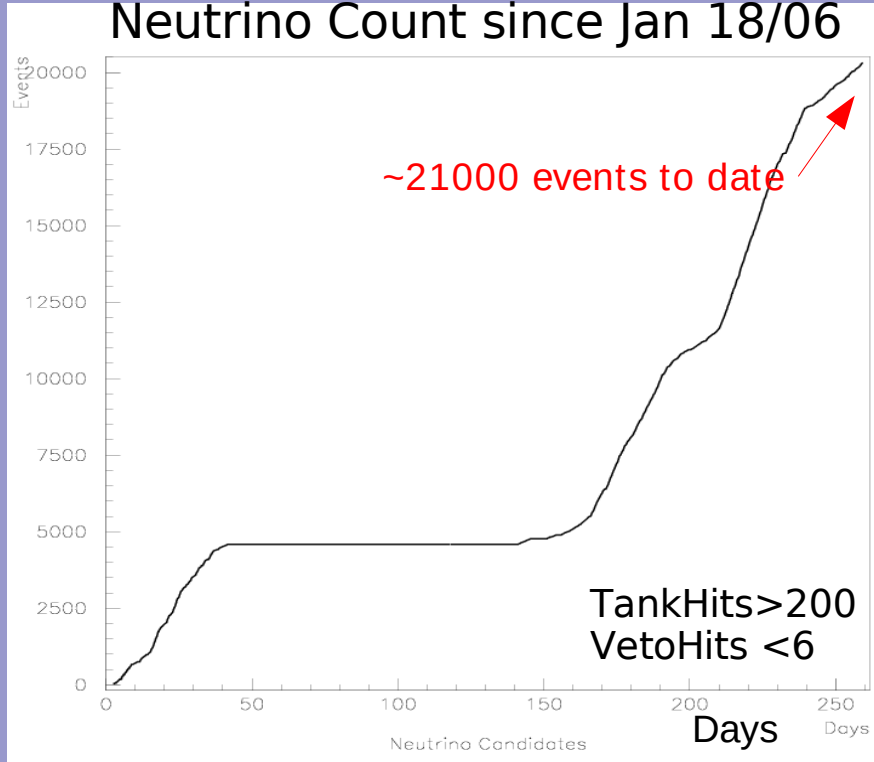
$\bar{\nu}$ events expected in next year:

- from 2E20 "protons-on-target" (POT)
- with fiducial radius of 500cm
- before cuts
- ν event (wrong-sign) contribution not included

$\bar{\nu}$ channel	events
all channels	54k
CC quasielastic	24k
NC elastic	10k
CC π^-	8.9k
CC π^0	1.7k
NC π^0	4.9k
NC $\pi^{+/-}$	1.8k

"CC" = charged current
"NC" = neutral current





1.11E20 POT collected so far....

2.5E16 Pr/Hr => 1.5E20 POT/yr

This Week's Plan

- Hope proton source can get tuned back up and deliver pre-fault intensities.
  - Thanks to AD for getting MB back up and running soon after fault.
- One shift shutdown Tuesday (Oct 17) for SciBooNE civil construction work.
- PAC presentation this week to request continued running till June 2007 to collect a total of 2E20 POT in antineutrino mode.
- Continue taking quality anti-neutrino physics data!