MiniBooNE Report

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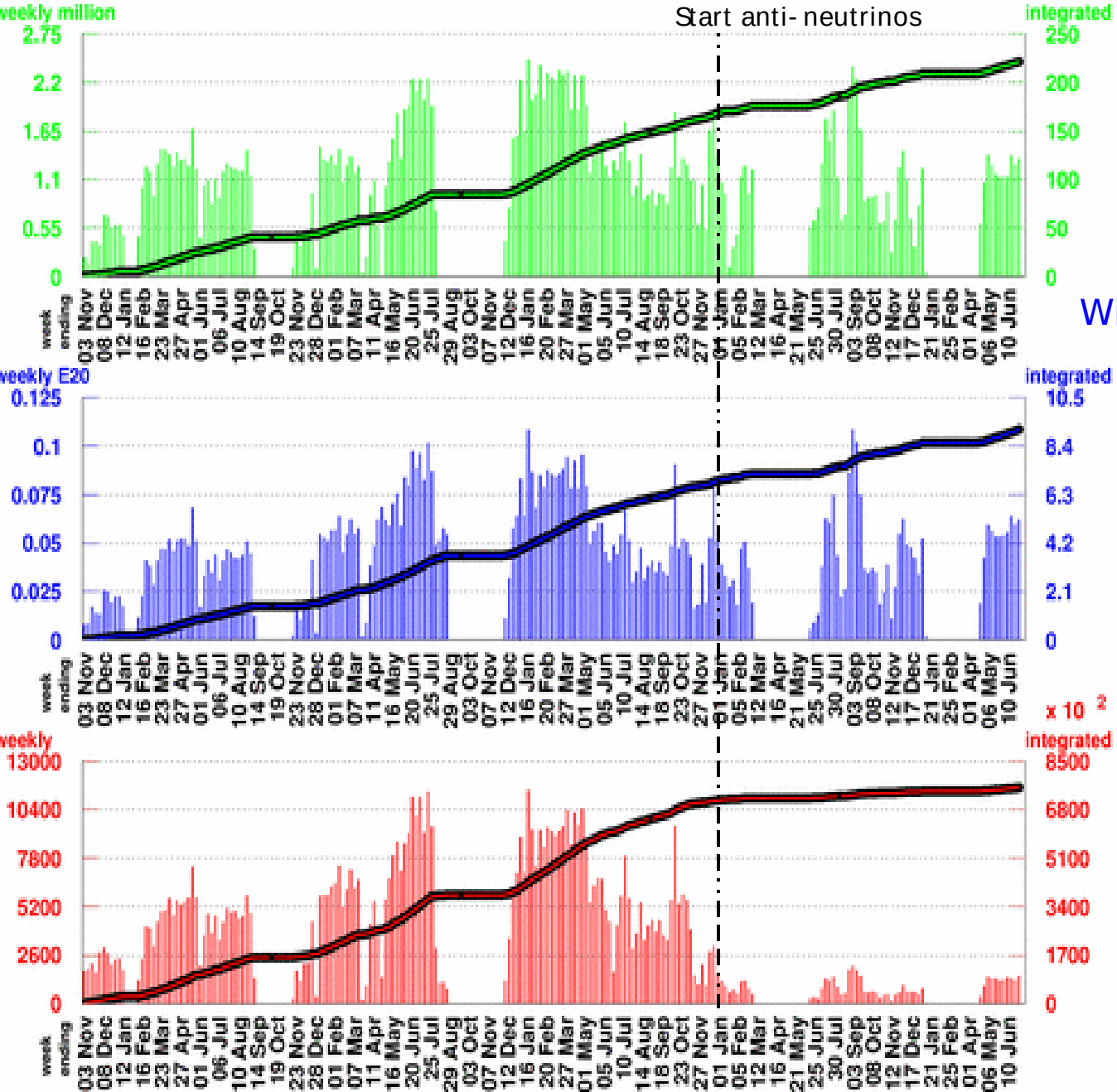
for the MiniBooNE collaboration

25 June 2007

Week Summary 18 June – 25 June 6.2E18 POT, 96% Uptime

- Booster delivering stable beam to MiniBooNE at ~4.0E16p/hr.
- Fantastic uptime of Linac and Booster!
- Major Downtime:
  - None worth mentioning!

18 June – 25 June



Number of Horn Pulses

To date: 221.45 million

Largest week: 2.46 million

Latest week: 1.34 million

With Beam Information Cuts

Number of Protons on Target

To date: 9.1145 E20

Largest week: 0.1085 E20

Latest week: 0.062 E20

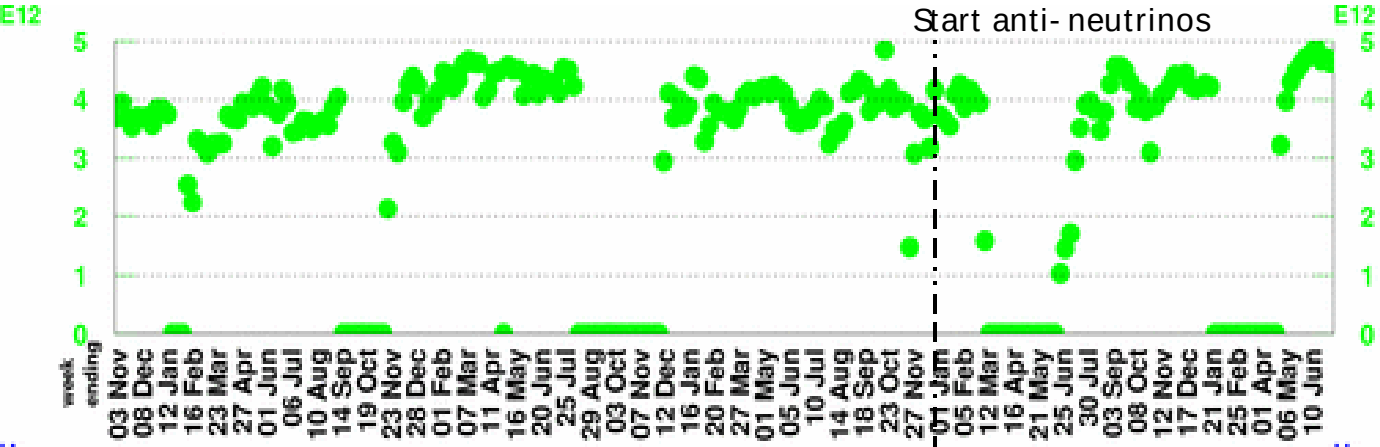
Number of Neutrino Events

To date: 757550

Largest week: 11447

Latest week: 1455

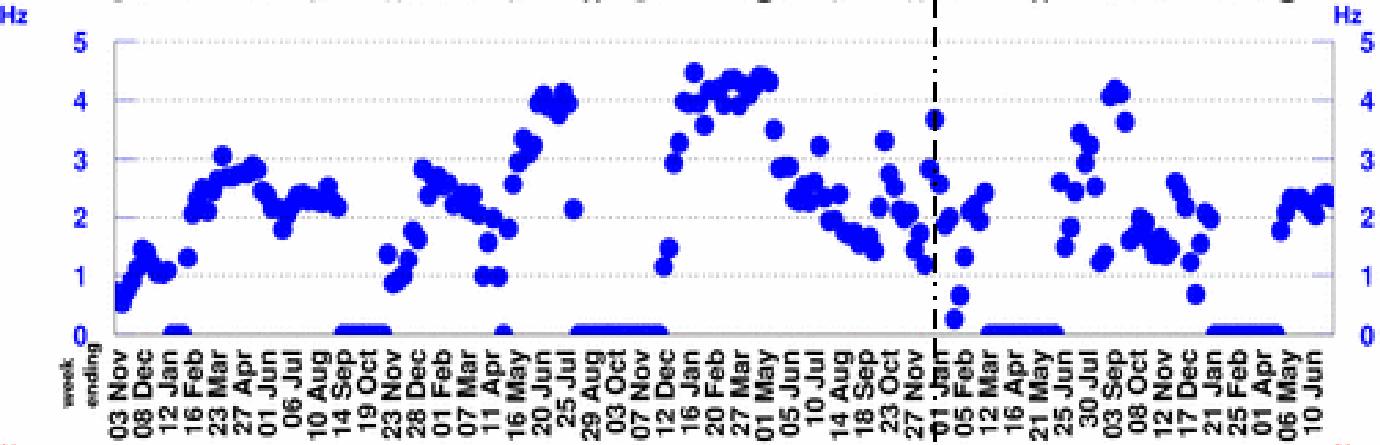
18 June – 25 June



POT per Horn Pulse

Largest week: 4.89 E12

Latest week: 4.63 E12

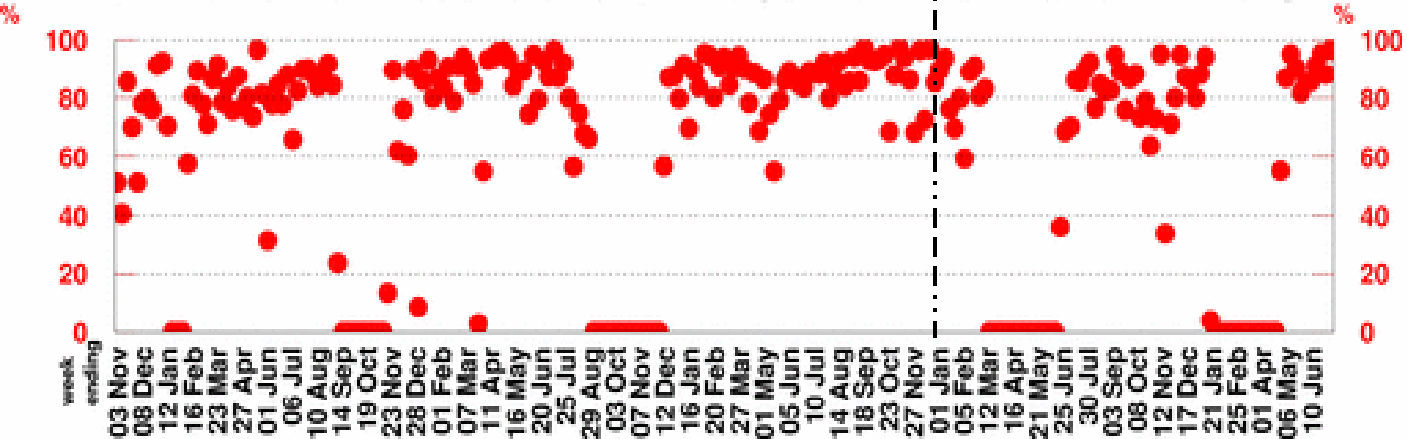


Horn Rate

(for time periods with beam)

Largest week: 4.48 Hz

Latest week: 2.34 Hz



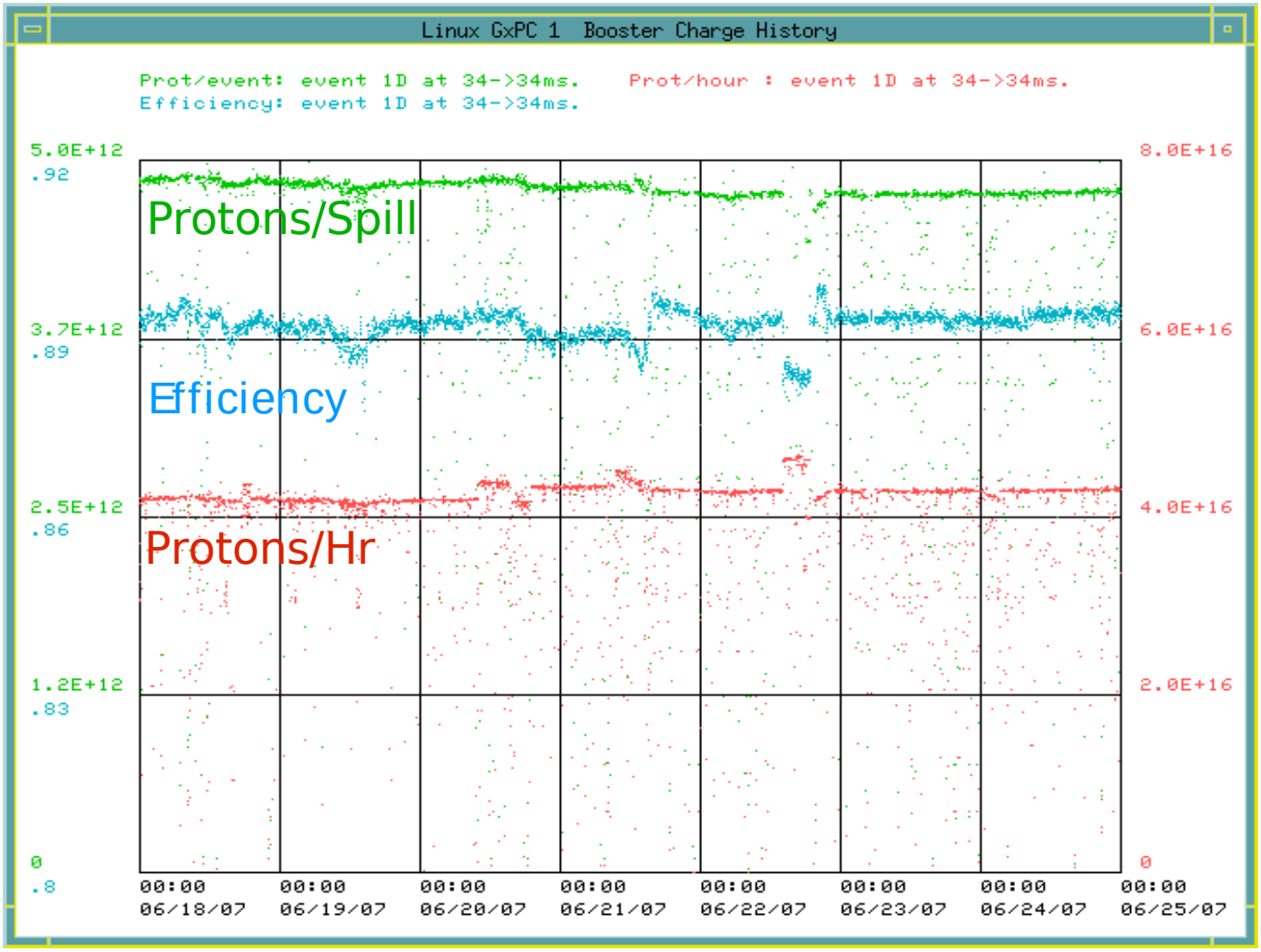
Beam Uptime Fraction

(fraction of time with beam)

Largest week: 97.4 %

Latest week: 96.4 %

One Week MB Proton/Hr Summary



18 June

25 June

Continued steady running at 11 turns and 89% Eff.

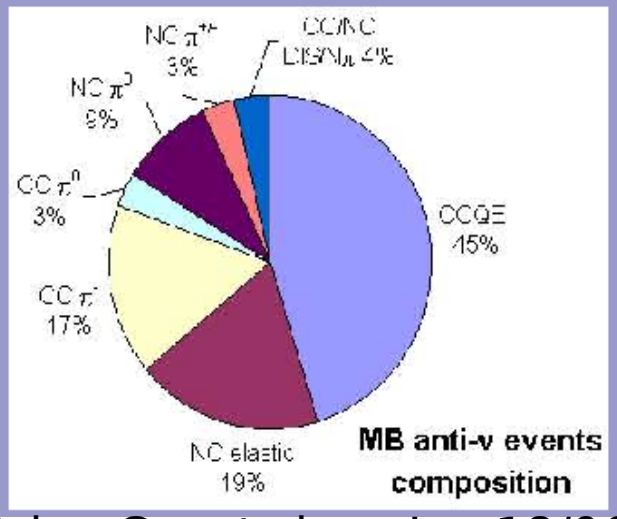
Antineutrino Scattering with MiniBooNE

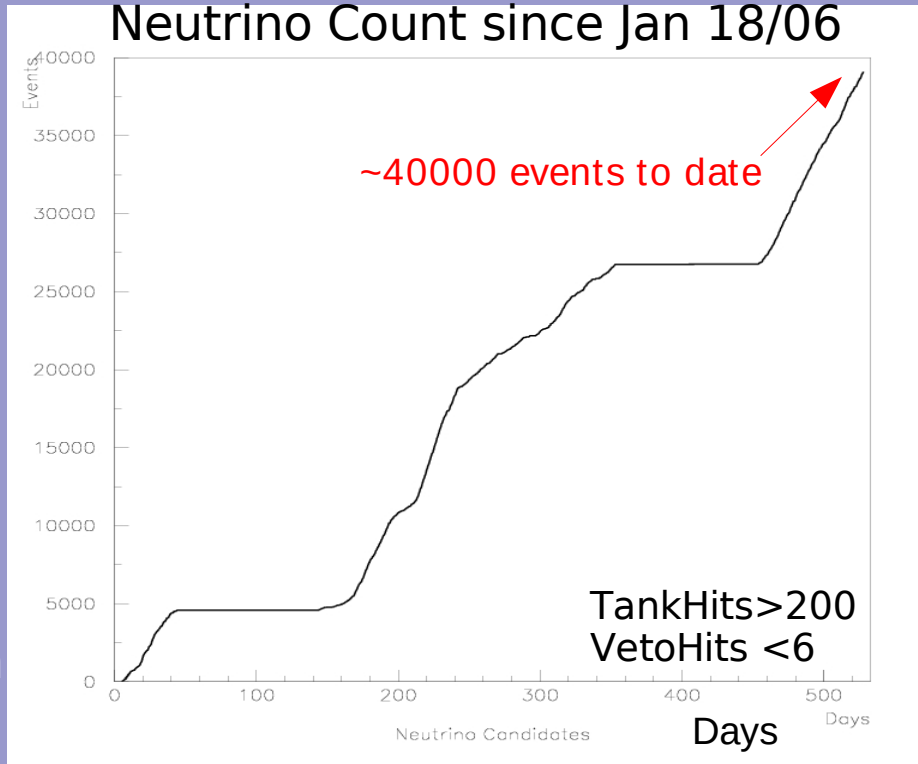
$\bar{\nu}$ events expected in next year:

- 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





2.1E20 POT collected so far....

1.7E20 POT de-rated for absorber problem

This Week's Plan

- Continue running, take advantage of good Booster output.
- Antineutrino mode POT totals:
  - 0.2E20 POT no absorber.
  - 0.7E20 POT absorber #10 down.
  - 0.6E20 POT absorber #10 and #7 down.
  - 0.54E20 POT since startup 10 weeks ago (no absorber).
- Have collected a total of 2.1E20 POT (1.7E20 de-rated for absorber problem). Goal is to collect 0.3E20POT more for a total of 2.0E20 POT after de-rating!