MiniBooNE Report

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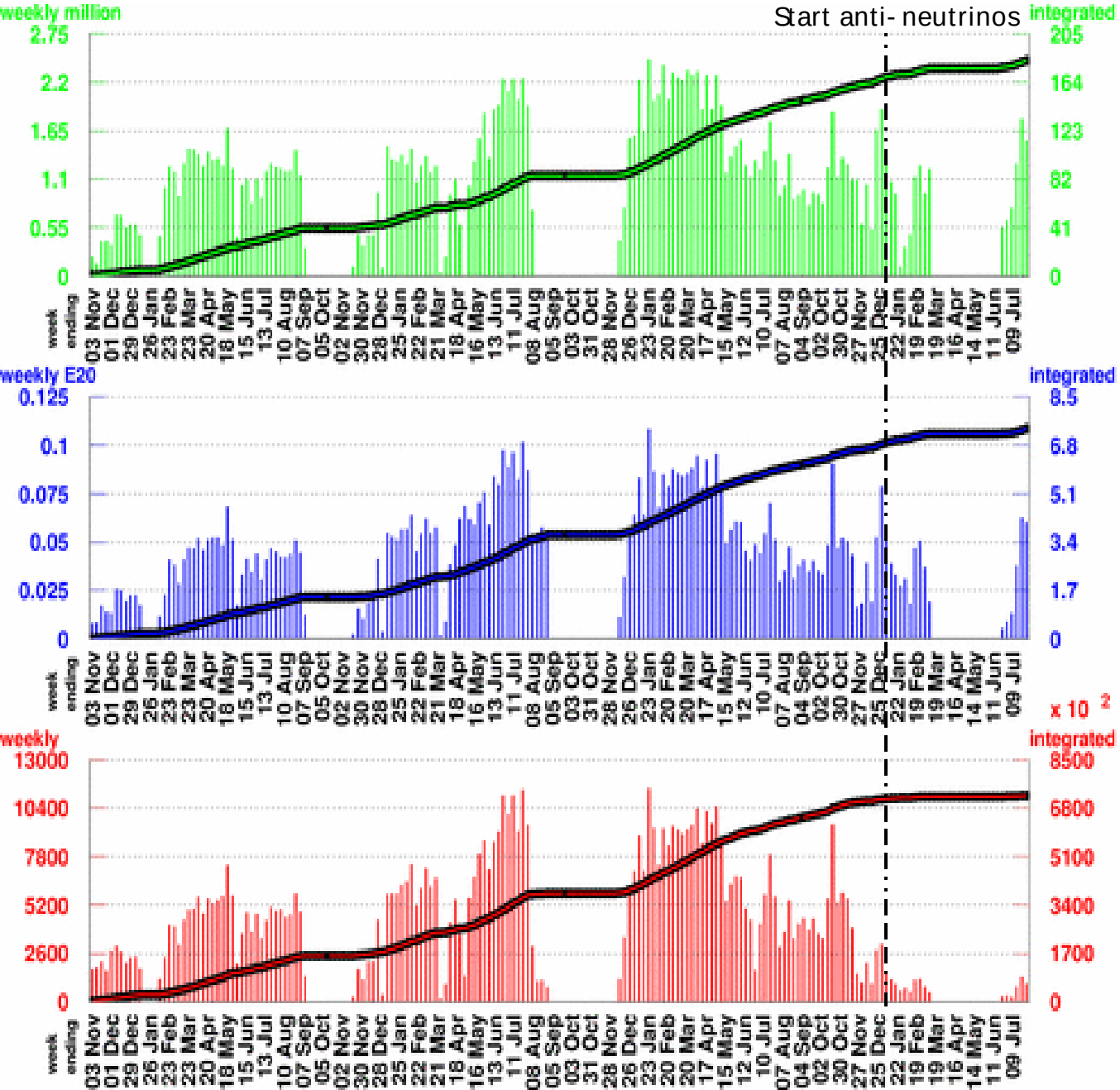
for the MiniBooNE collaboration

17 July 2006

Weekly Summary 10 July – 17 July
6.0E18 POT, 89.9% Uptime

- Major Downtime:
  - 4 hrs, Booster quad supplies Q2 and Q5 repairs (July 12).
  - 7 hrs, Booster RF and chopper repairs, MI12 cooling repairs (July 13).
  - 3 hrs, Booster RF problems (July 14).
- Booster chopper and RF problems reduced beam quality mid week.
- MI-12 cooling leak fixed, cleaned coils, ran well through hot weekend.
- Running consistently at 10-11 turns, ~4E12 protons/spill, pre-shutdown levels.

10 July – 17 July



Number of Horn Pulses

To date: 182.49 million

Largest week: 2.46 million

Latest week: 1.53 million

Number of Protons on Target

To date: 7.3908 E20

Largest week: 0.1084 E20

Latest week: 0.06 E20

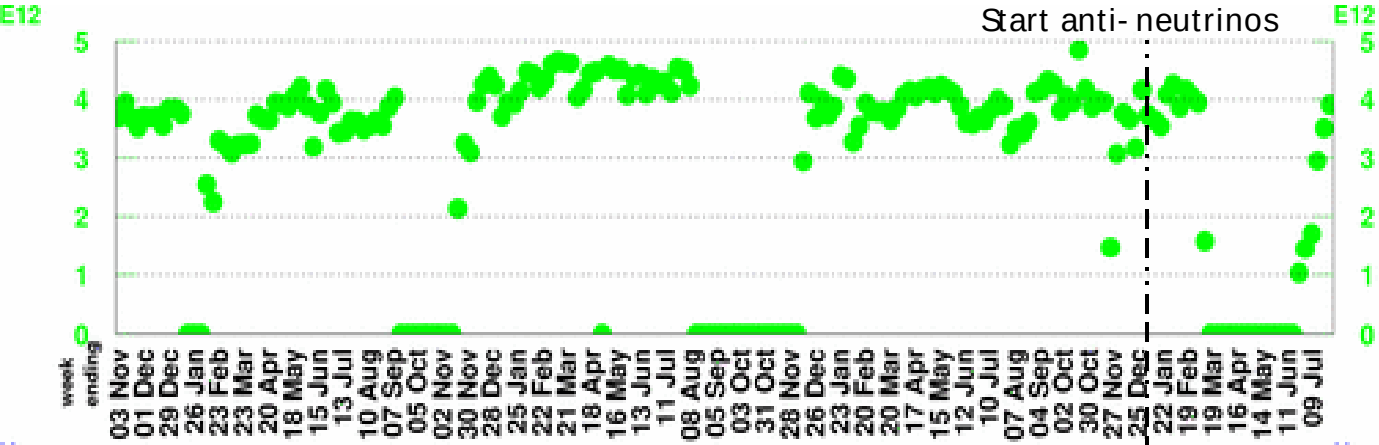
Number of Neutrino Events

To date:724754

Largest week: 11447

Latest week: 983

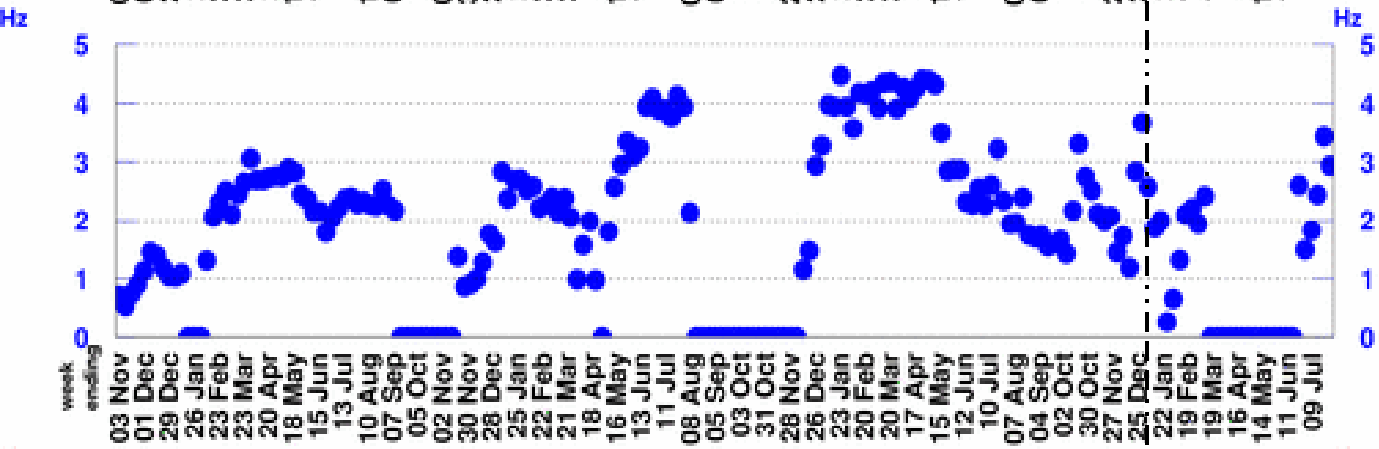
10 July – 17 July



POT per Horn Pulse

Largest week: 4.85 E12

Latest week: 3.91 E12

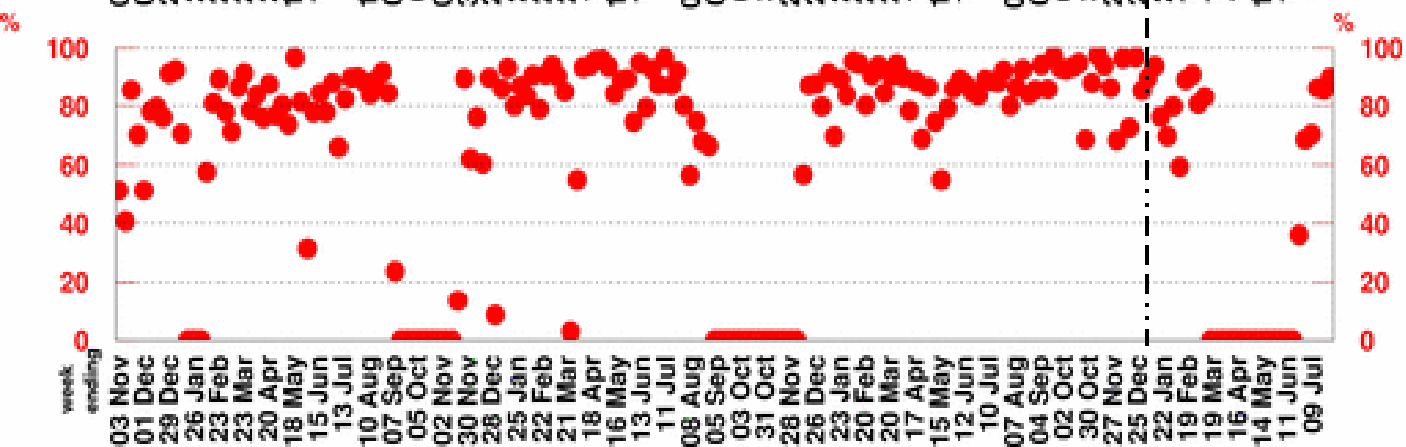


Horn Rate

(for time periods with beam)

Largest week: 4.48 Hz

Latest week: 2.93 Hz



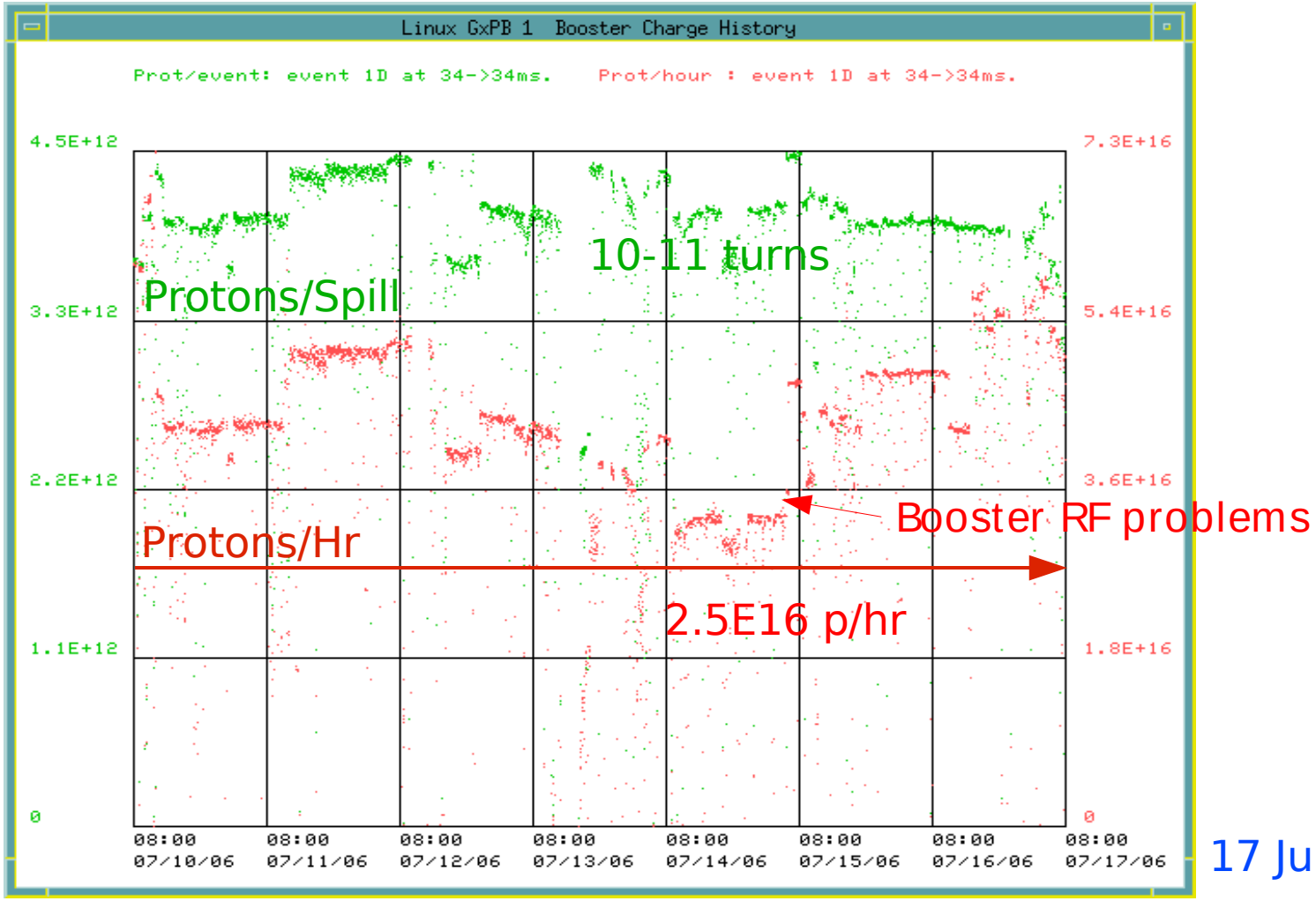
Beam Uptime Fraction

(fraction of time with beam)

Largest week: 97.4 %

Latest week: 89.9 %

One Week MB Proton/Hr Summary



10 July

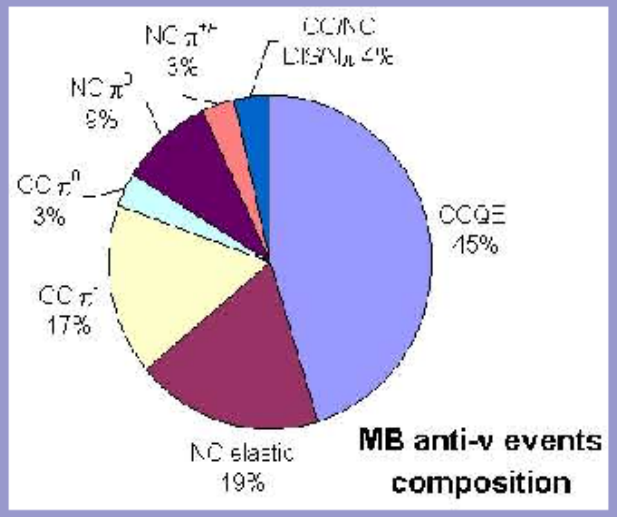
17 July

NUMI Off, running at 10-11 turns. Lots of protons!

Antineutrino Scattering with MiniBooNE

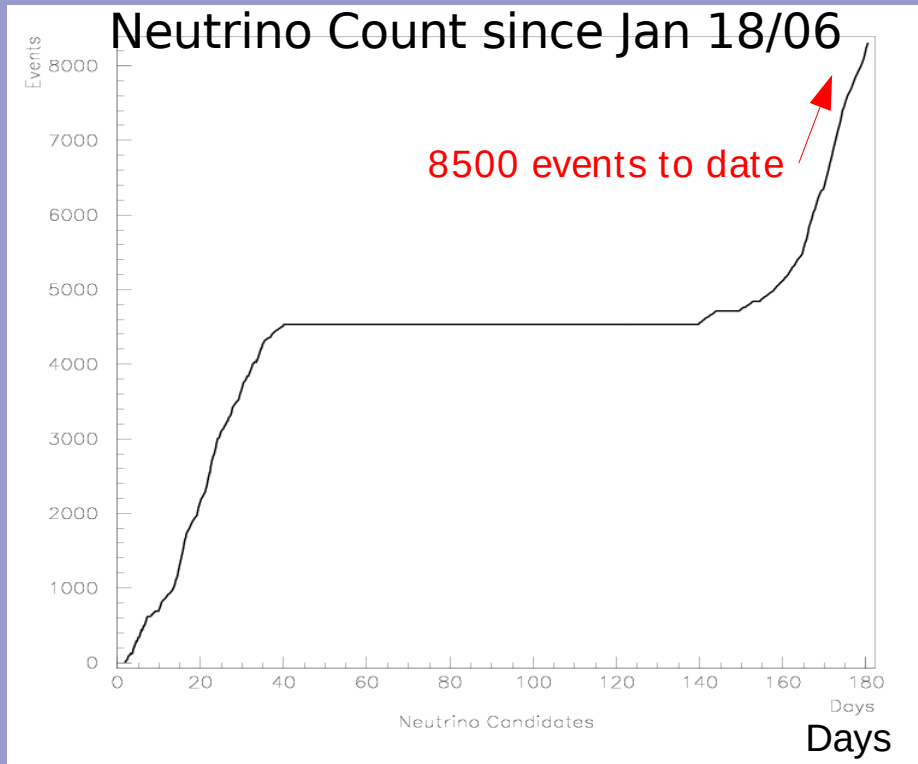
$\bar{\nu}$ events expected in next year:

- 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



0.37E20 POT collected so far....

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

This Weeks Plan

- Try to maintain high uptime.
- Continue taking quality anti-neutrino physics data!