MiniBooNE Report

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for the MiniBooNE collaboration

07 January 2008

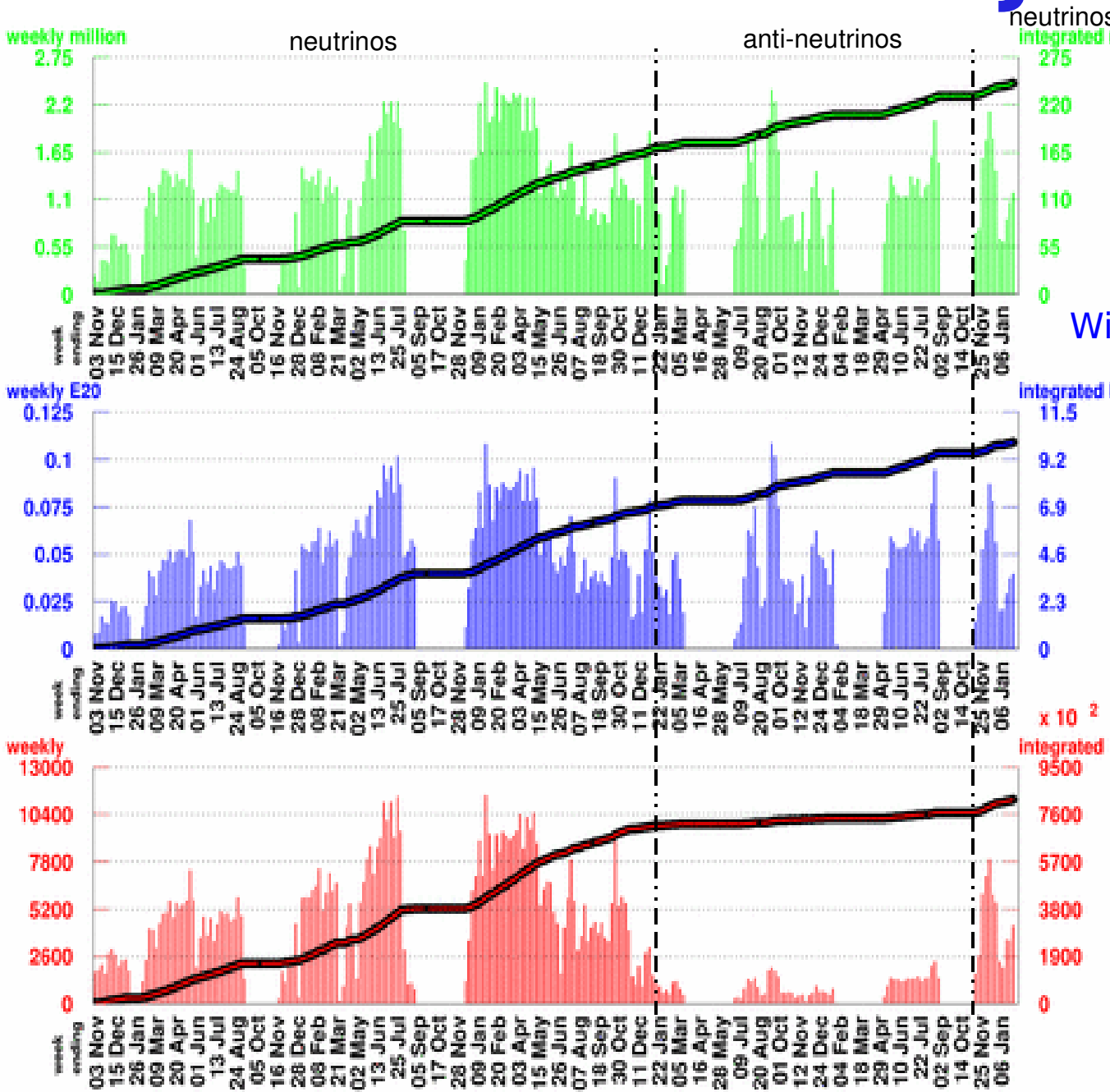
Week Summary 17 Dec – 24 Dec
3.0E18 POT, 83.1% Uptime
Week Summary 24 Dec – 31 Dec
3.7E18 POT, 78% Uptime
Week Summary 31 Dec – 07 Jan
4.0E18 POT, 93% Uptime

- Overall, the last three weeks had good uptime and good Booster/Linac beam output.
  - Accumulated 1.1E19 POT.
- Detector up 100%.
- Reached 1E21 POT milestone last week!

Last Three Weeks of Running

- Major Downtime:
  - 9 hrs, Booster/Linac access (Dec 18).
  - 4 hrs, Booster MH2 repair (Dec 21).
  - 6 hrs, Linac repairs (Dec 25).
  - 20 hrs, MI and Tev access (Dec 27).
  - 6 hrs, MI access (Dec 28).
  - 4 hrs, Linac repairs (Jan 3).
- Up 427 out of 504 hours!
- Detector HVAC compressor #1 died Jan 4. Running on compressor #2 and axillary HVAC during repairs (on going).

17 Dec – 07 Jan



Number of Horn Pulses

To date: 244.79 million

Largest week: 2.46 million

Latest week: 1.18 million

With Beam Information Cuts

Number of Protons on Target

To date10.0325 E20

Largest week: 0.1085 E20

Latest week: 0.0396 E20

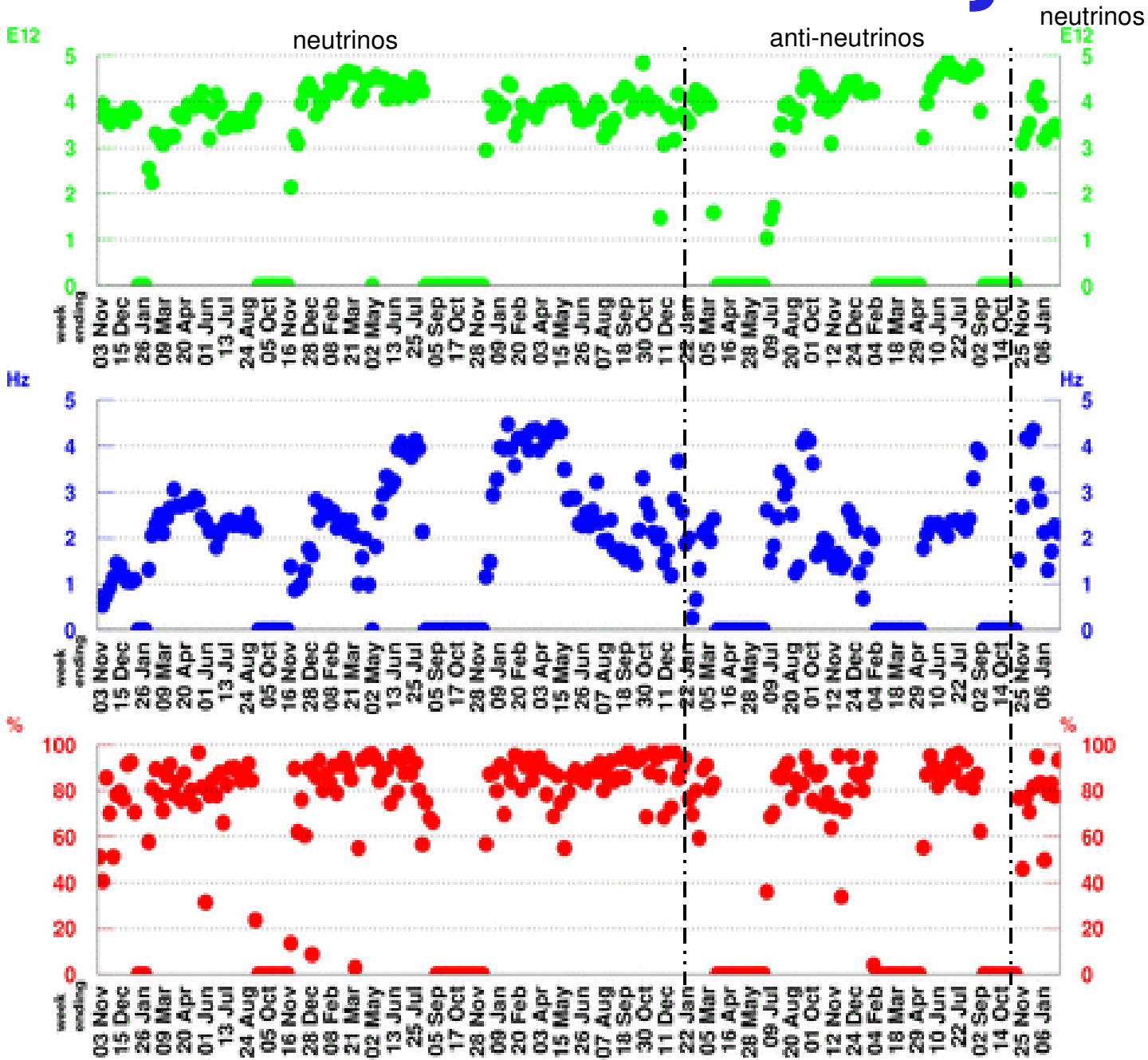
Number of Neutrino Events

To date:820229

Largest week: 11447

Latest week: 4280

17 Dec – 07 Jan



POT per Horn Pulse

Largest week: 4.89 E12

Latest week: 3.36 E12

Horn Rate

(for time periods with beam)

Largest week: 4.48 Hz

Latest week: 2.13 Hz

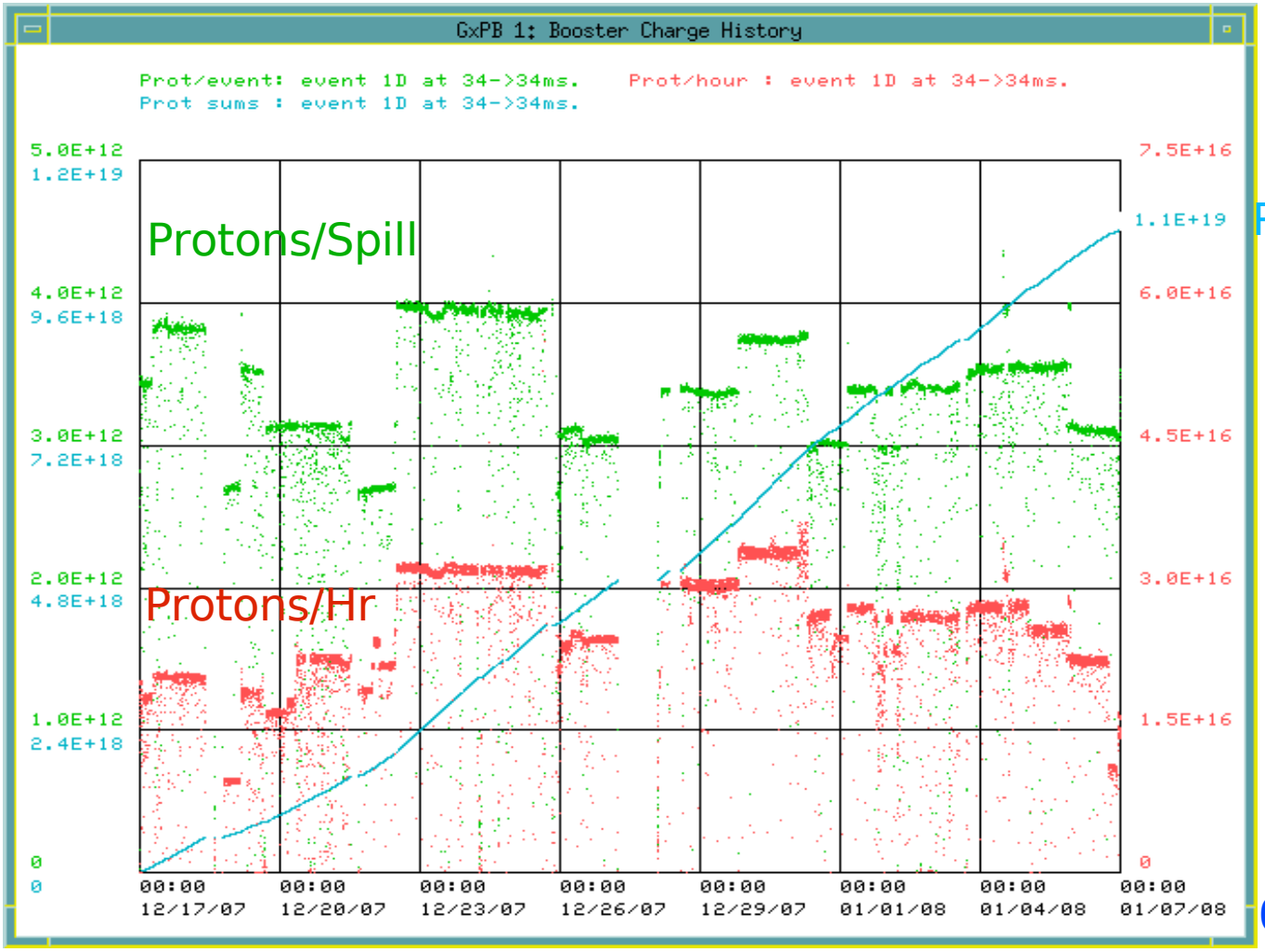
Beam Uptime Fraction

(fraction of time with beam)

Largest week: 97.4 %

Latest week: 93.4 %

One Week MB Proton/Hr Summary



POT/3 weeks

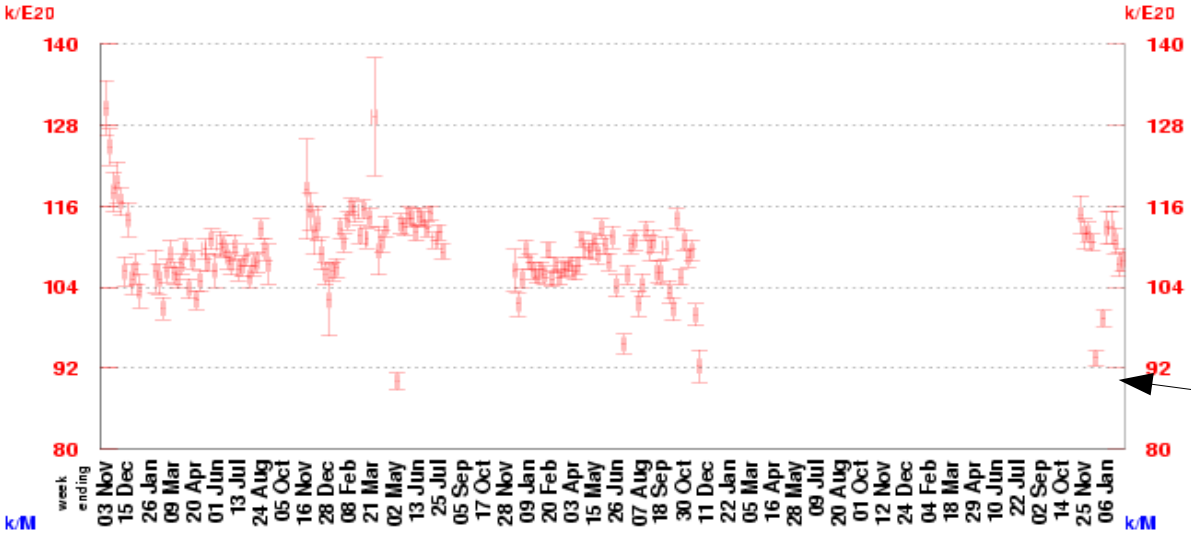
17 Dec

07 Jan

Steady running at ~3.5E12 protons/spill (8-9 turns).

Nearline Neutrinos Rates

(does not include data quality corrections)

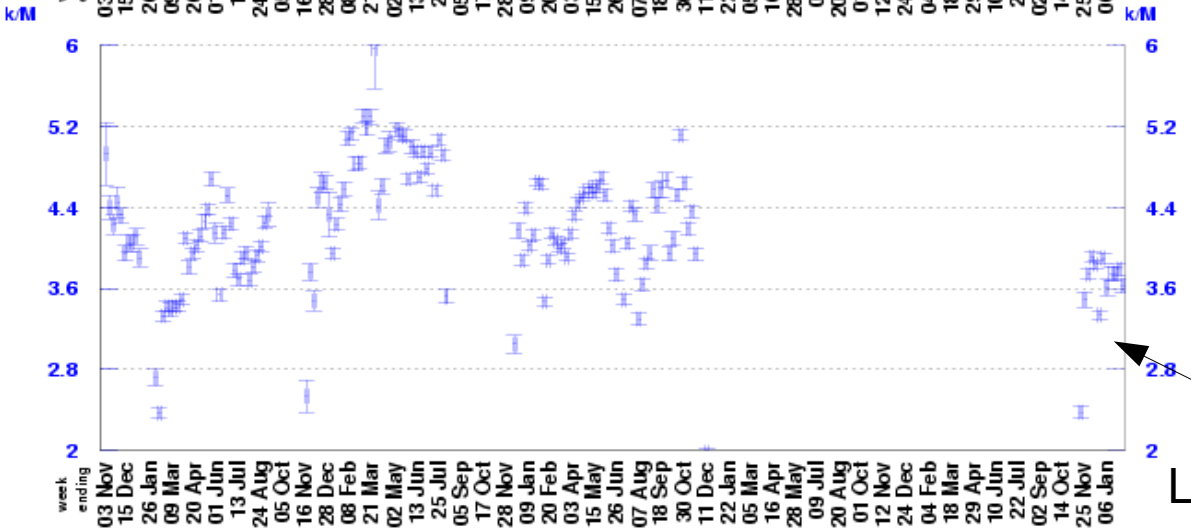


Neutrino Events per POT

Largest week: 178.5 k/E20

Latest week: 108 k/E20

Missing full RWM signal, data okay



Neutrino Events per Horn Pulse

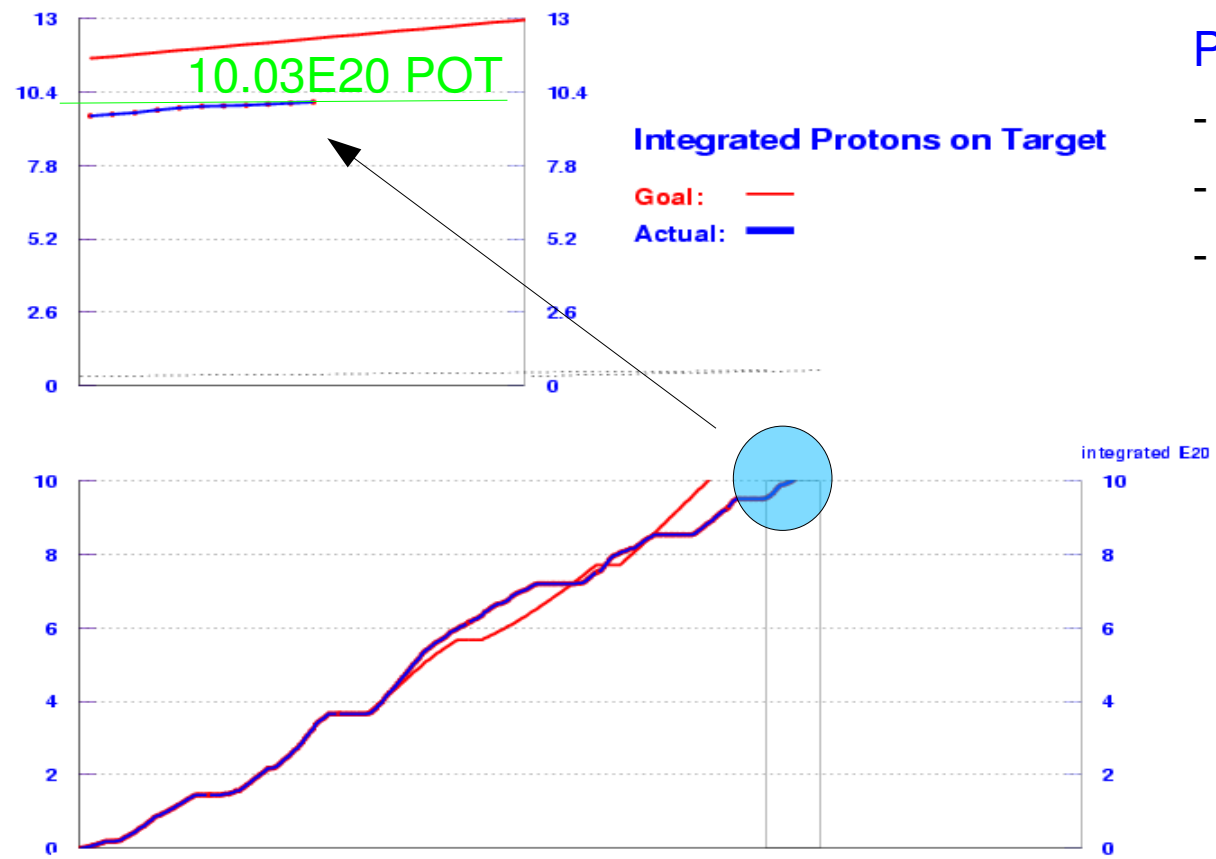
Largest week: 90.91 k/M

Latest week: 3.63 k/M

Lower average POT/pulse

Reached 1E21 POT Delivered and Written to Tape!!

1E21 protons is equivalent in weight to ~10 Ants!

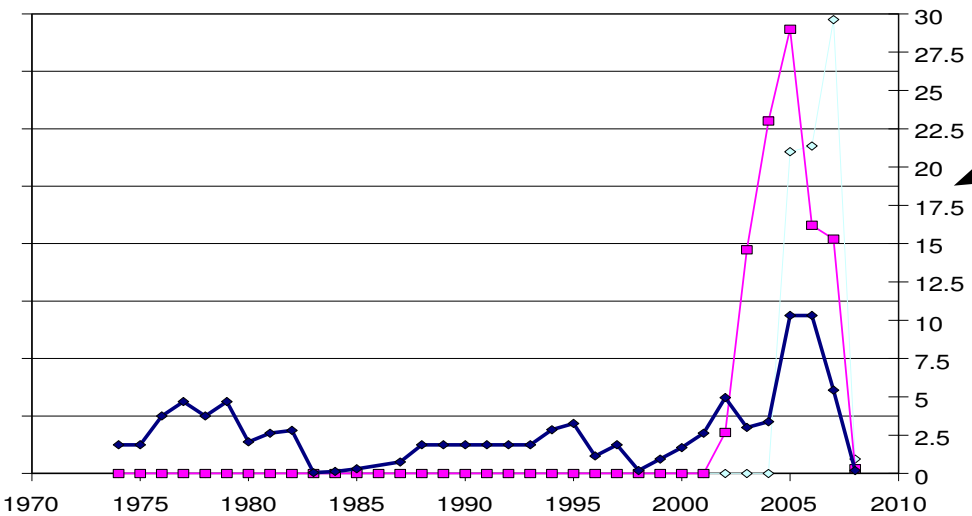


Nov 02 (5 years of running) Dec 07

POT in various run modes:

- 6.9E20 POT neutrino.
- 2.3E20 POT anti-neutrino.
- 0.7E20 POT various horn currents.

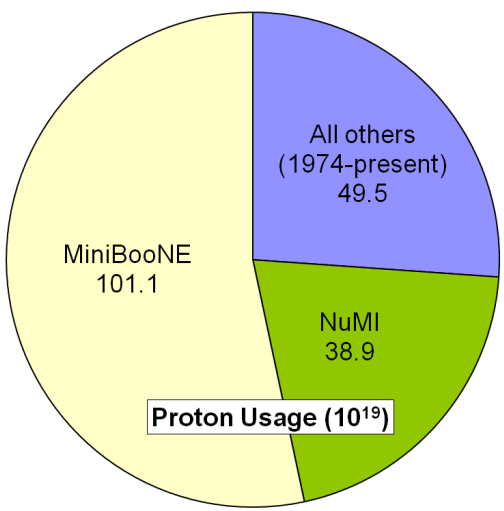
Linac/Booster Output over the Last 35 Years

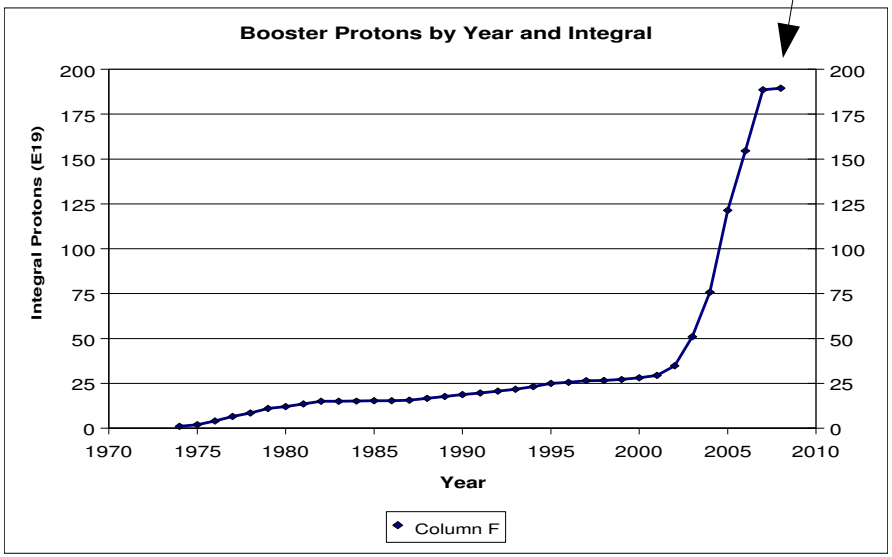


E19 POT per year:

- -Black= Stacking
- -Red= BNB
- -Blue= NuMI

Integrated POT almost twice BNB received!





Huge Thanks and a Job Well Done for…

- Proton Source Group
- Operations
- External Beams
- Electrical/Mechanical
- 25m Repair team
- FESS
- PPD
- Computing
- ….

This Week's Plan

- Repair detector HVAC.
- Keep on running for another 1E21 POT!