MiniBooNE Report

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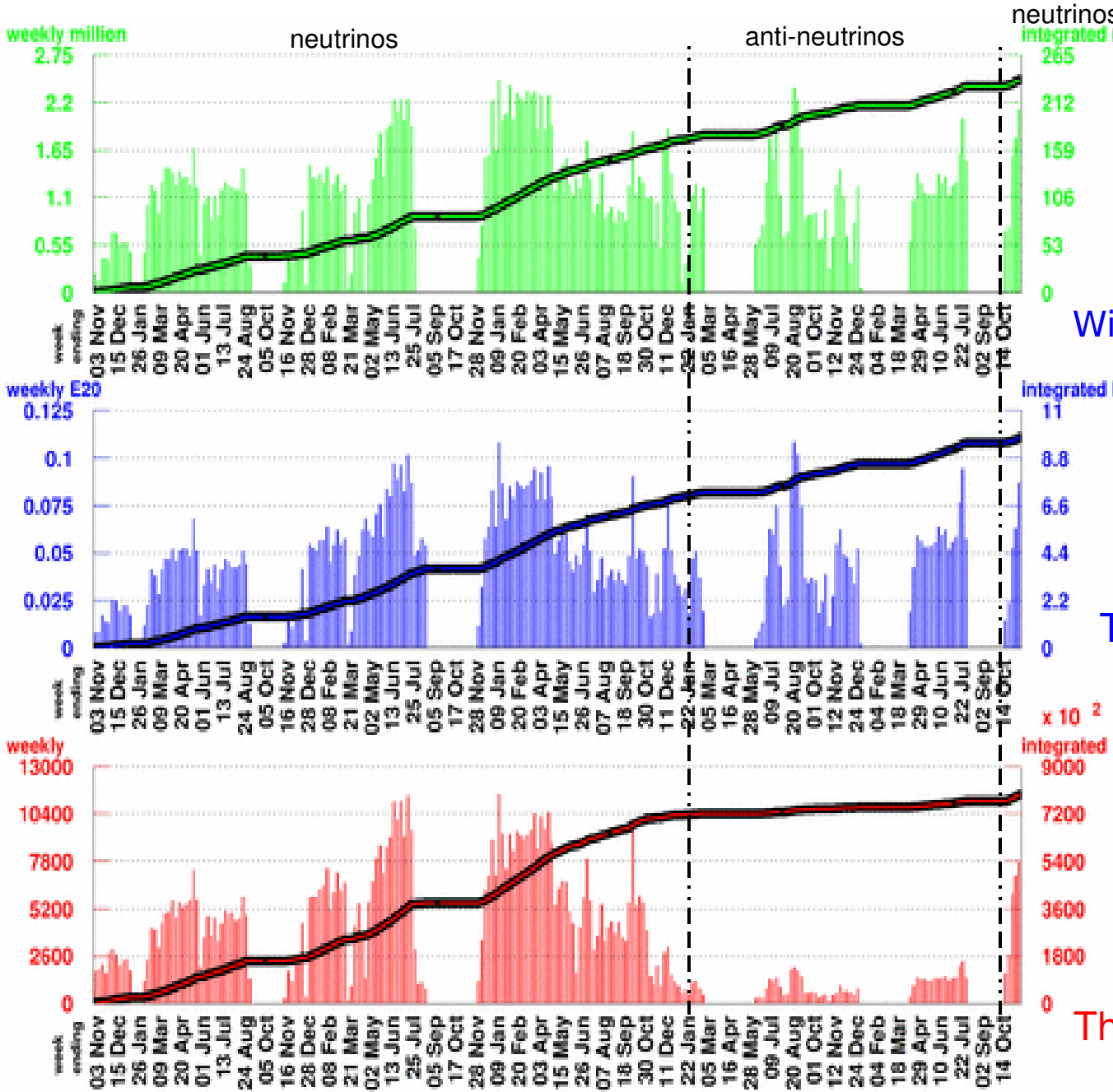
26 November 2007

Week Summary 19 Nov – 26 Nov 7.8E18 POT, 95% Uptime

- Booster delivering steady beam to MiniBooNE,
  - 7E16p/hr when NuMI off
  - 4E16p/hr when NuMI on
- Beam uptime > 98% outstanding!
- Problems with weekly summary plots.
- Major Downtime:
  - 6 hrs, Detector DAQ problems related to AFS outage (Nov 24).

19 Nov – 26 Nov



Number of Horn Pulses

To date: 237.17 million

Largest week: 2.46 million

Latest week: 2.12 million

This week: ~1.7 million

With Beam Information Cuts

Number of Protons on Target

To date: 9.7508 E20

Largest week: 0.1085 E20

Latest week: 0.0872 E20

This week: 0.078E20 POT

Number of Neutrino Events

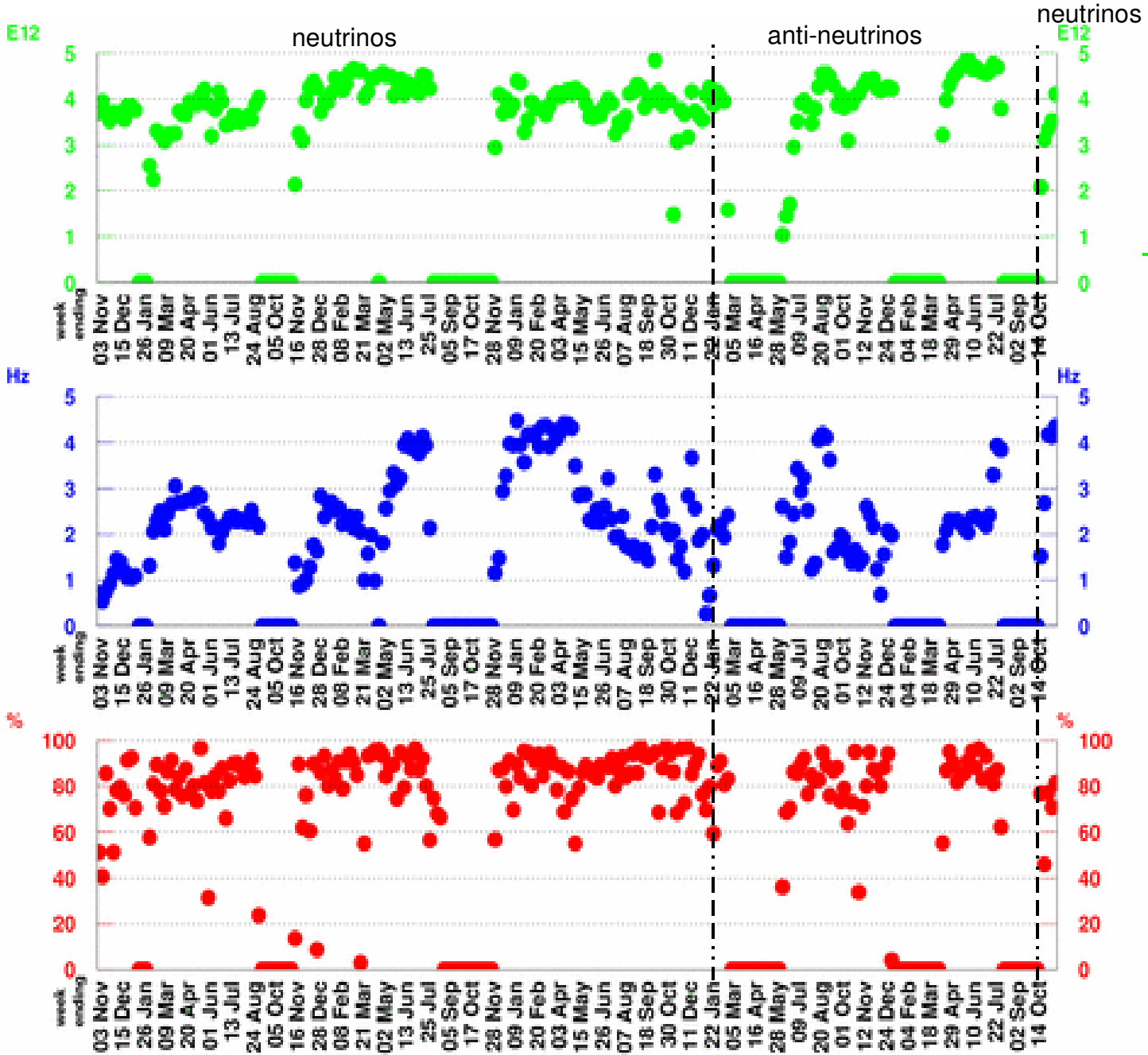
To date:792885

Largest week: 11447

Latest week: 7740

This week: ~8000 neutrinos

19 Nov – 26 Nov



POT per Horn Pulse

Largest week: 4.89 E12

Latest week: 4.11 E12

This week: 4.4E12

Horn Rate

(for time periods with beam)

Largest week: 4.48 Hz

Latest week: 4.35 Hz

This week: 3.3 Hz

Beam Uptime Fraction

(fraction of time with beam)

Largest week: 97.4 %

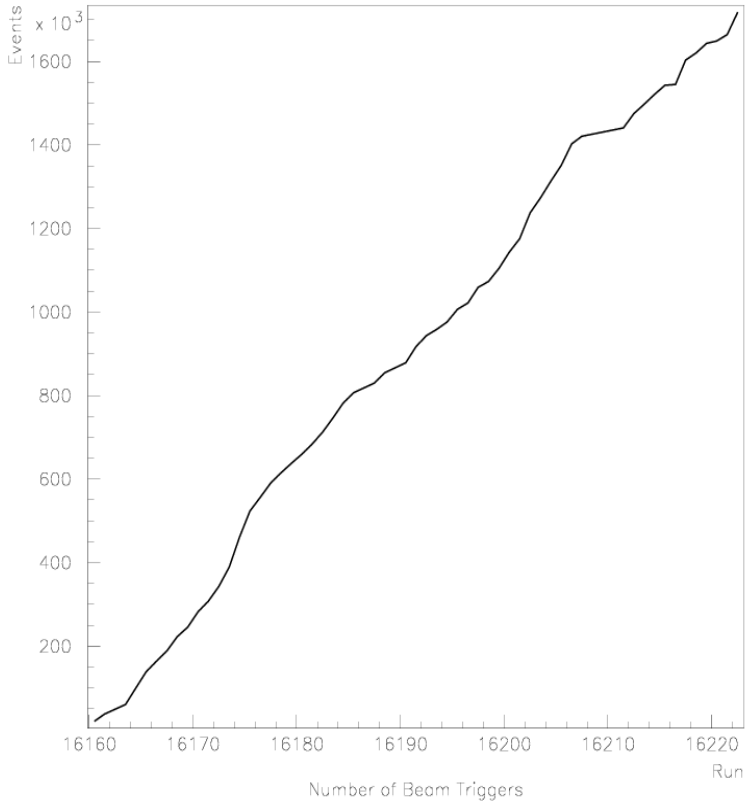
Latest week: 81.4 %

This week: 95%

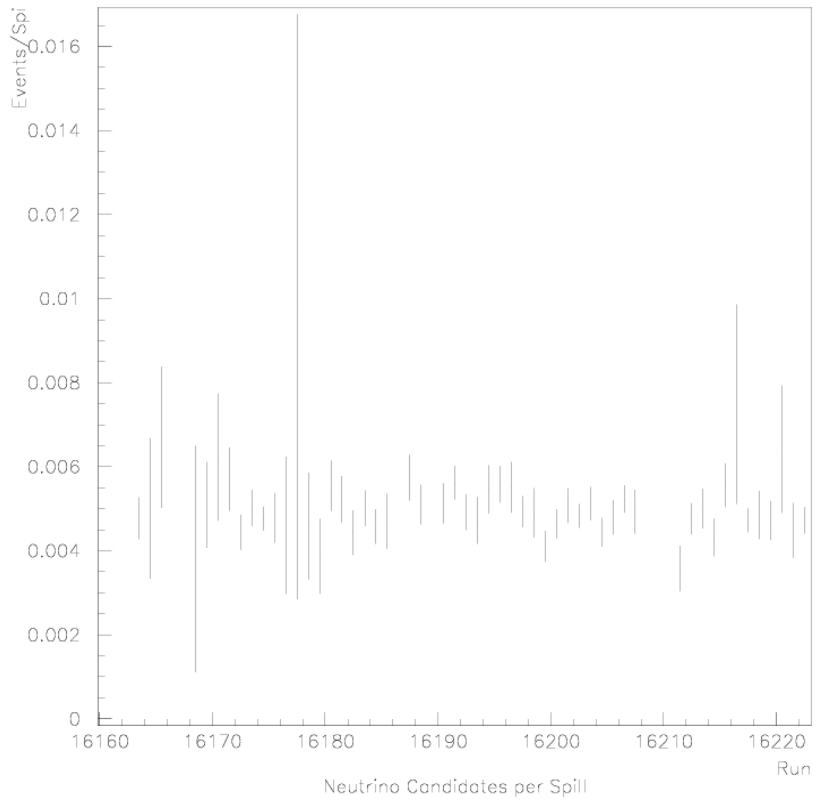
Calculating Number of Neutrinos by Hand

Nov 19 00:00 to Nov 26 00:00

Integrated number of Beam Triggers



Number of Neutrinos per trigger

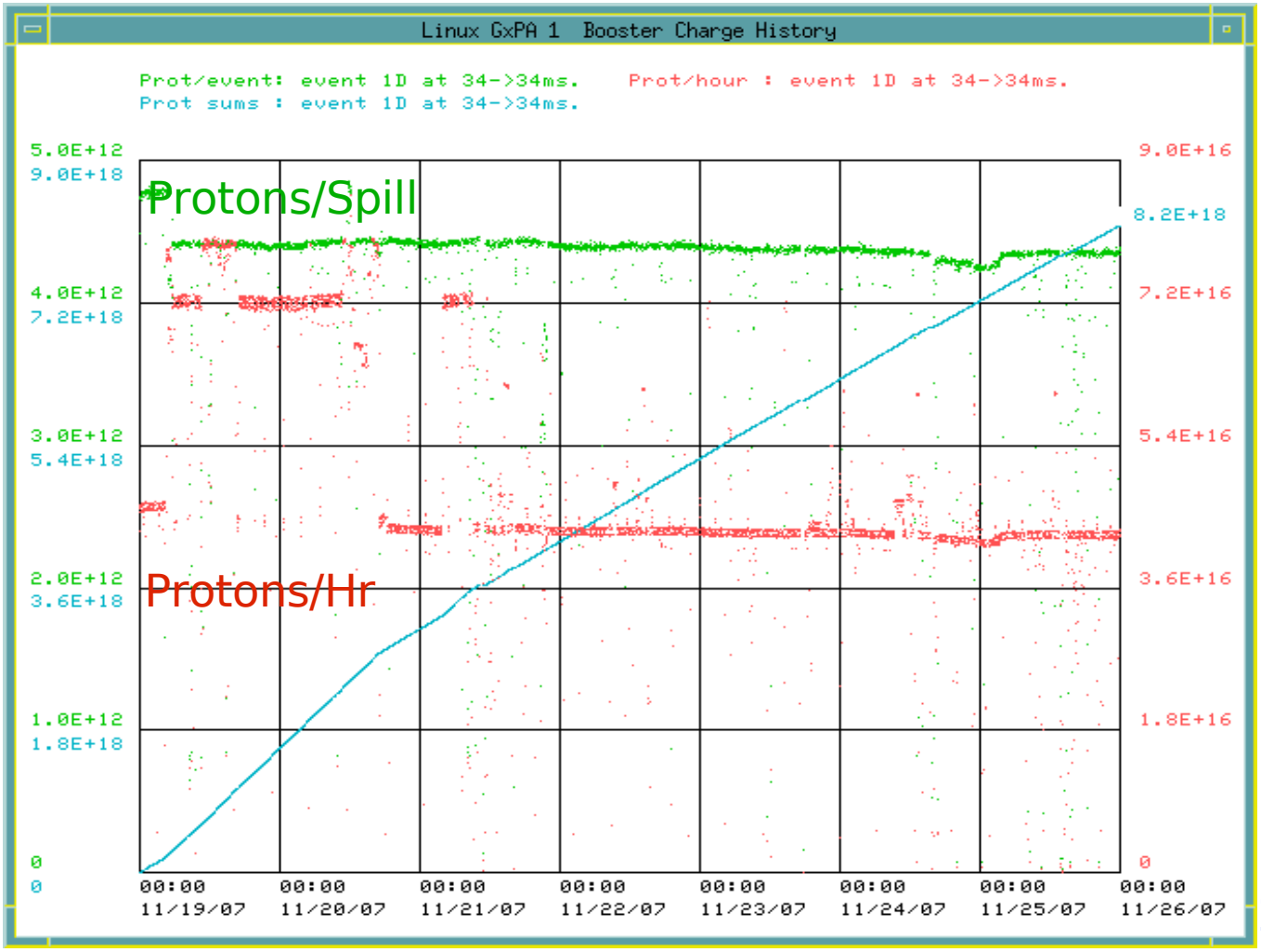


Neutrino Rate = 1.7 million triggers x 0.0047 nu/trigger = 8000 neutrinos this past week

--> assumes constant POT/trigger, which is mostly true for this week

--> does not include data quality cuts, which reduces rate.

One Week MB Proton/Hr Summary



x95%
=7.8E18POT

19 Nov

26 Nov

Good steady running at ~10 turns.

This Week's Plan

- Continue neutrino running, take advantage of stable Booster output.
- Fix weekly summary plots.