MiniBooNE Report

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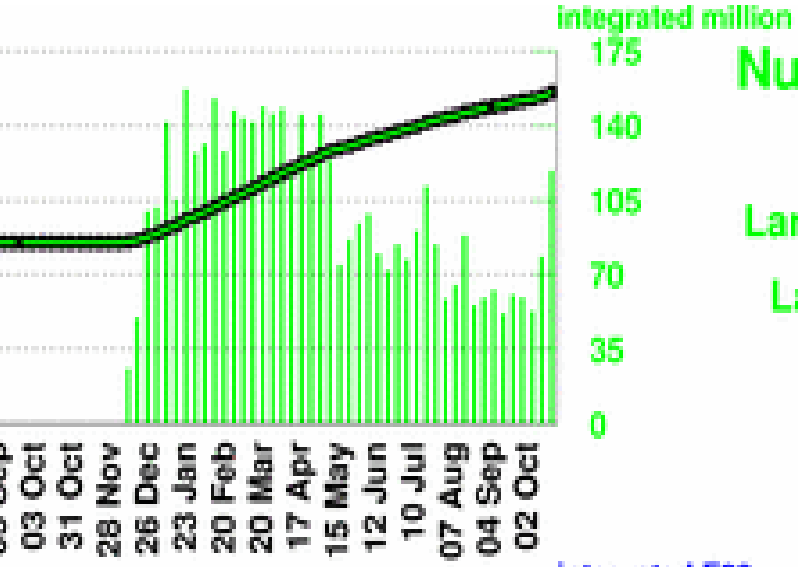
Los Alamos National Lab
for the MiniBooNE collaboration

10 OCTOBER 2005

03 – 10 Oct

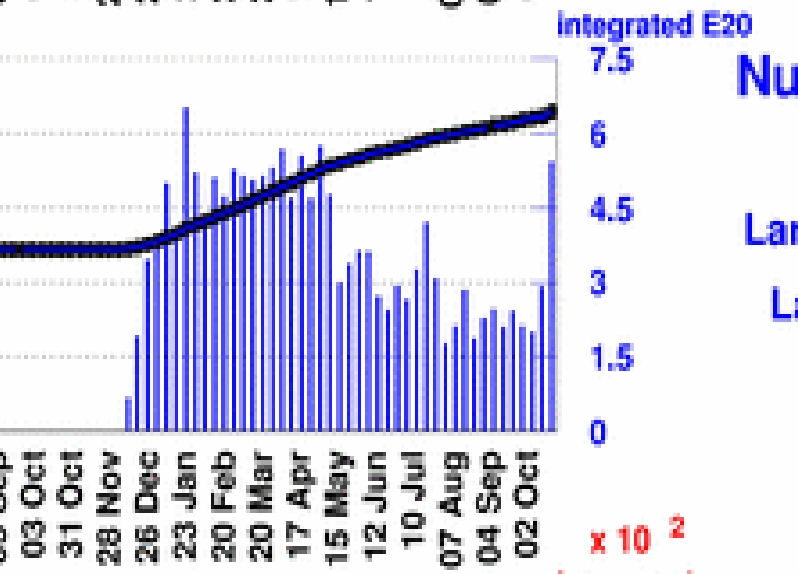


Number of Horn Pulses

To date: 155.5 million

Largest week: 2.46 million

Latest week: 1.86 million

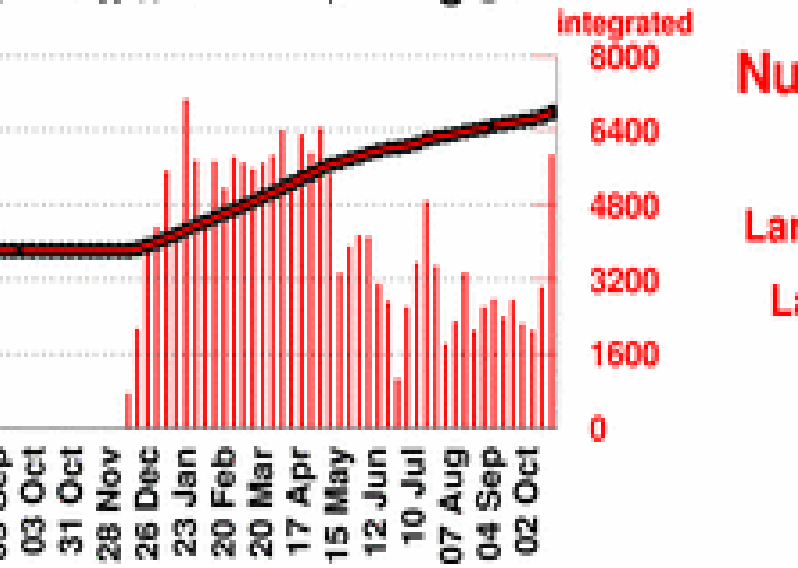


Number of Protons on Target

To date: 6.4324 E20

Largest week: 0.1084 E20

Latest week: 0.0903 E20



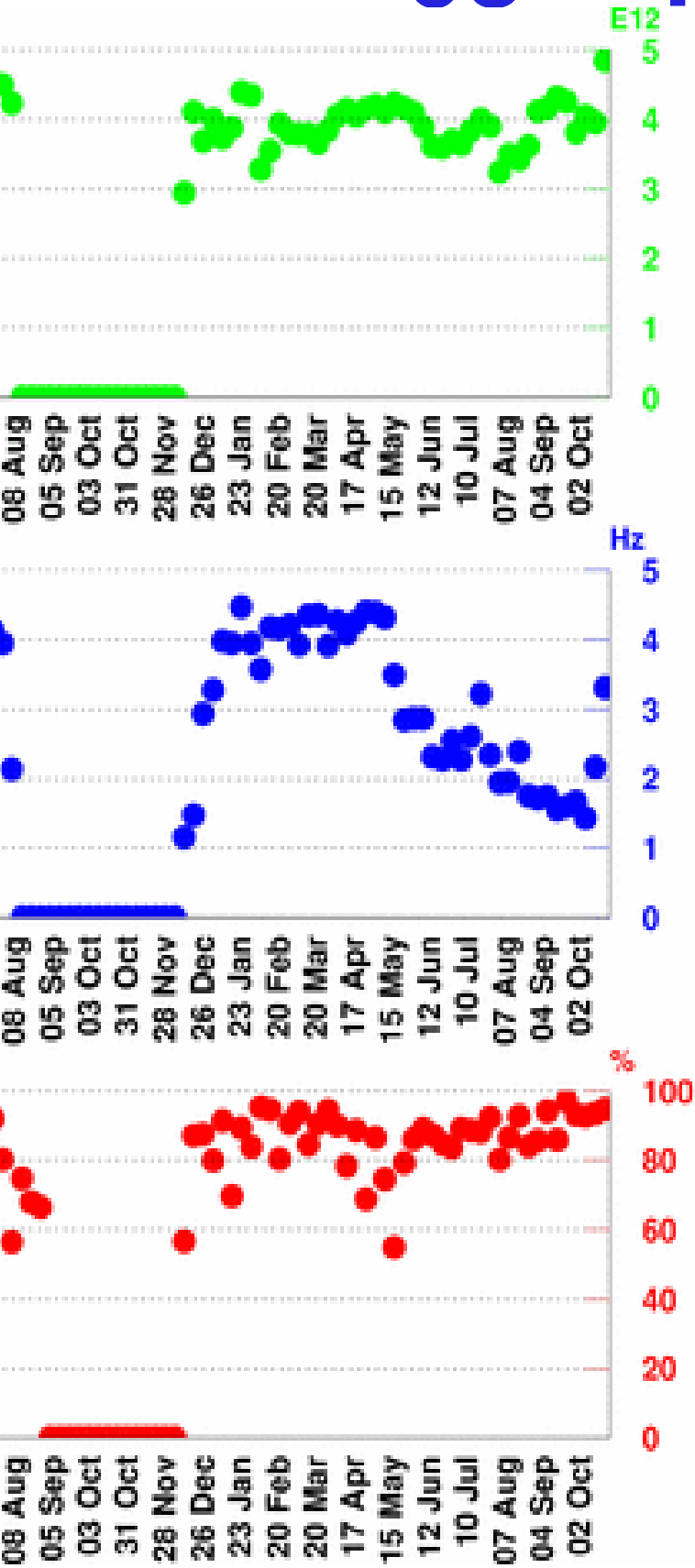
Number of Neutrino Events

To date:678671

Largest week: 11447

Latest week: 9528

03 – 10 Oct



POT per Horn Pulse

Largest week: 4.85 E12

Latest week: 4.85 E12

Horn Rate

(for time periods with beam)

Largest week: 4.48 Hz

Latest week: 3.31 Hz

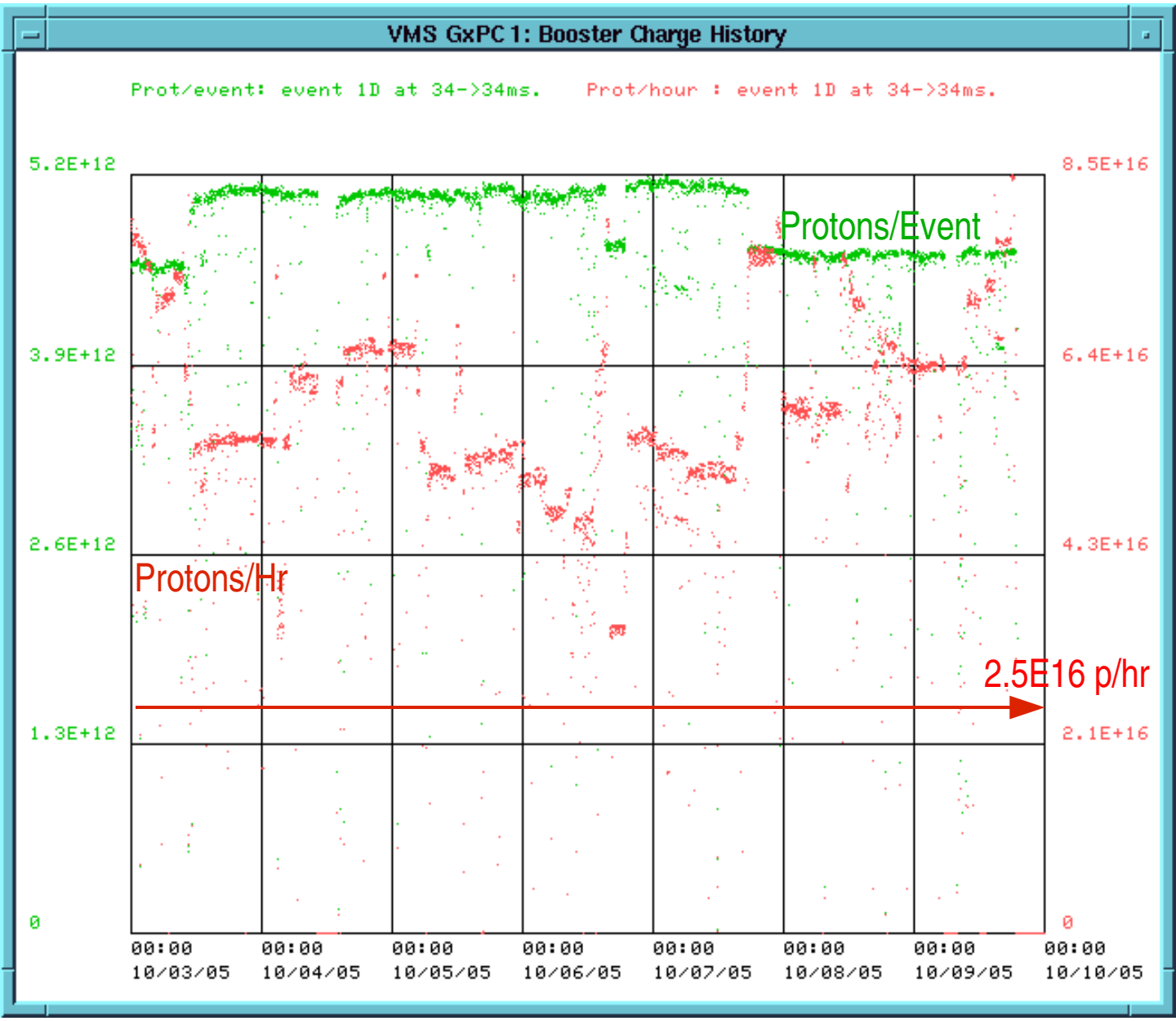
Beam Uptime Fraction

(fraction of time with beam)

Largest week: 97 %

Latest week: 94.8 %

MiniBooNE One Week Proton/hr Summary



03 Oct

10 Oct

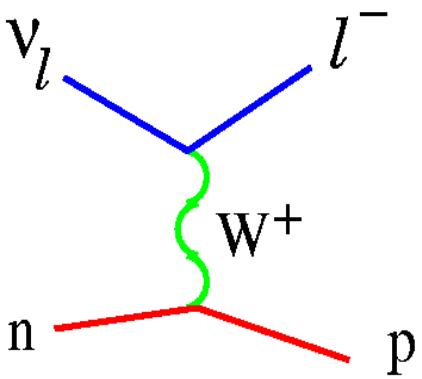
Steady running with excellent intensity!

Beam Uptime 95%
9.0E18 POT Delivered

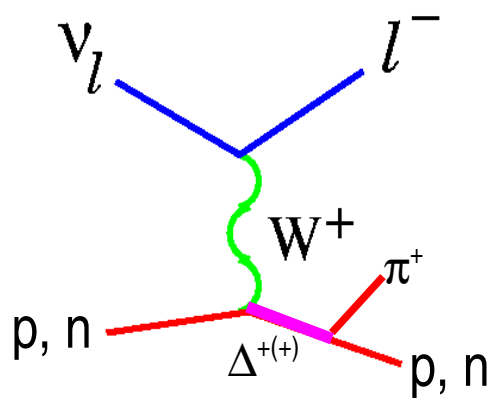
- Detector running well, ~100% livetime.
- Excellent beam intensity this week!
- This weeks W&C seminar by Geoff Mills on HARP results.

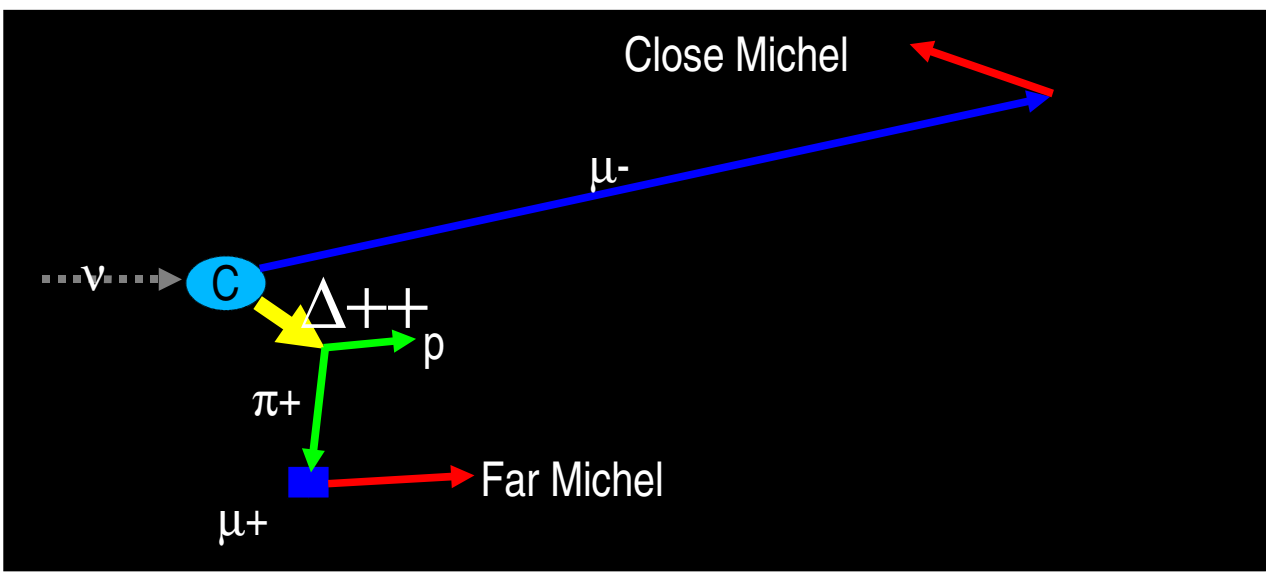
$CC\pi^+$ Events in MiniBoonE

- Quasi-Elastic (CCQE)



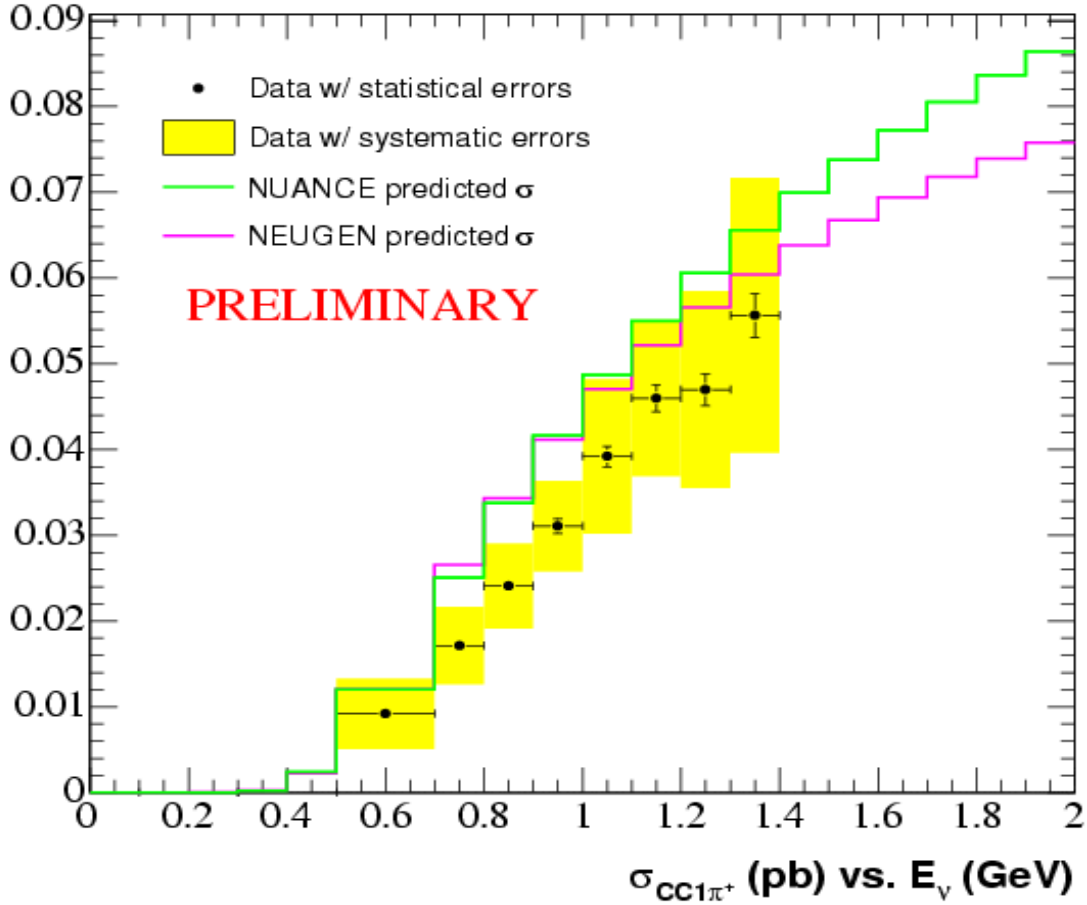
Single π^+ ($CC1\pi^+$)

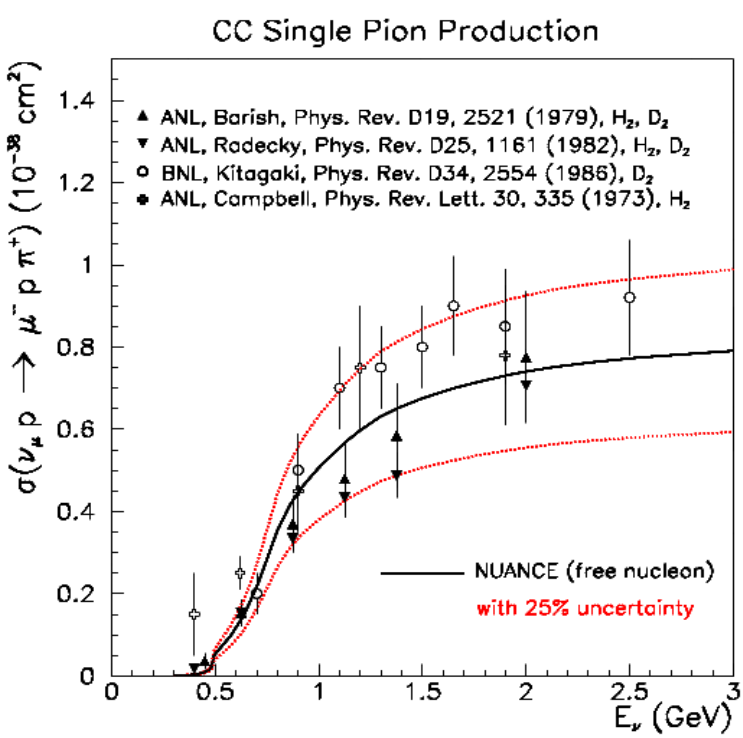




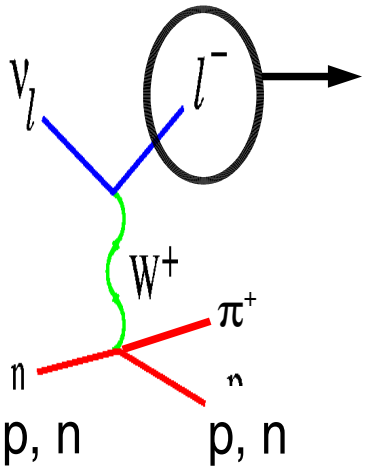
- Connections between $CC1\pi^+$ events and oscillations
  - Major background to CCQE events at MB energies.
  - NC resonant processes account for two major ν_e mis-ID background: $NC\pi^0$ production and Radiative Δ decay.

$CC\pi^+$/CCQE Ratio Measurement

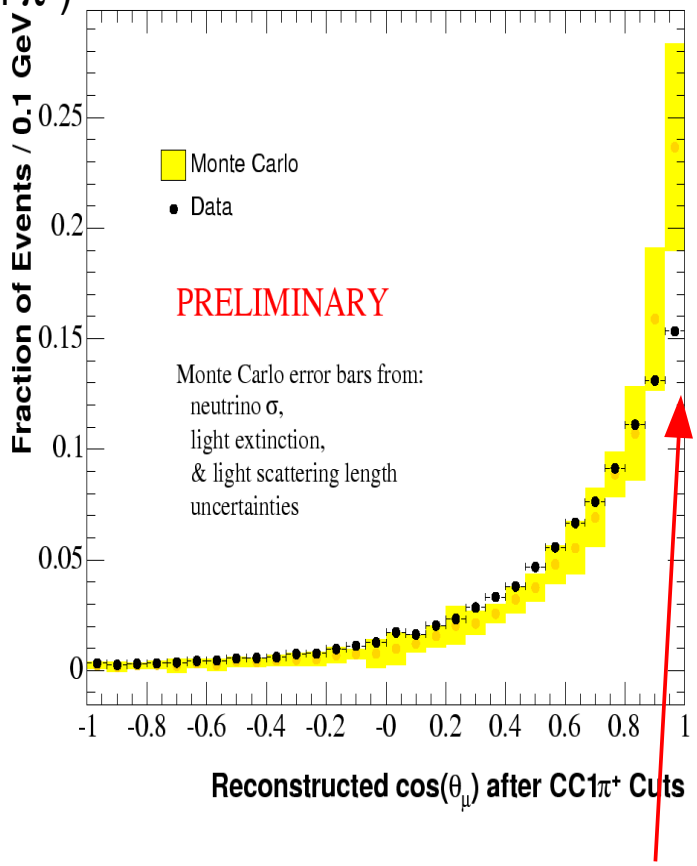


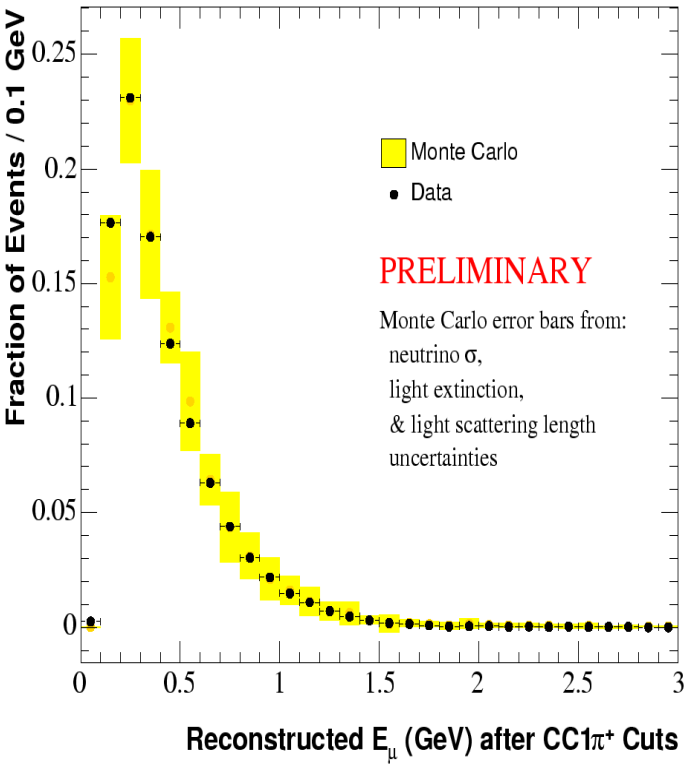


CC1π^+ Data



measure visible energy
from Cherenkov light only
(to avoid light from π^+)





- Similar deficit of low Q^2 CCQE muons
- Deficit larger than CCQE sample: clue to interesting physics?
- Working on understanding this feature