

Search for time-dependent fluctuations in cosmic rays spectra with the AMS01 detector

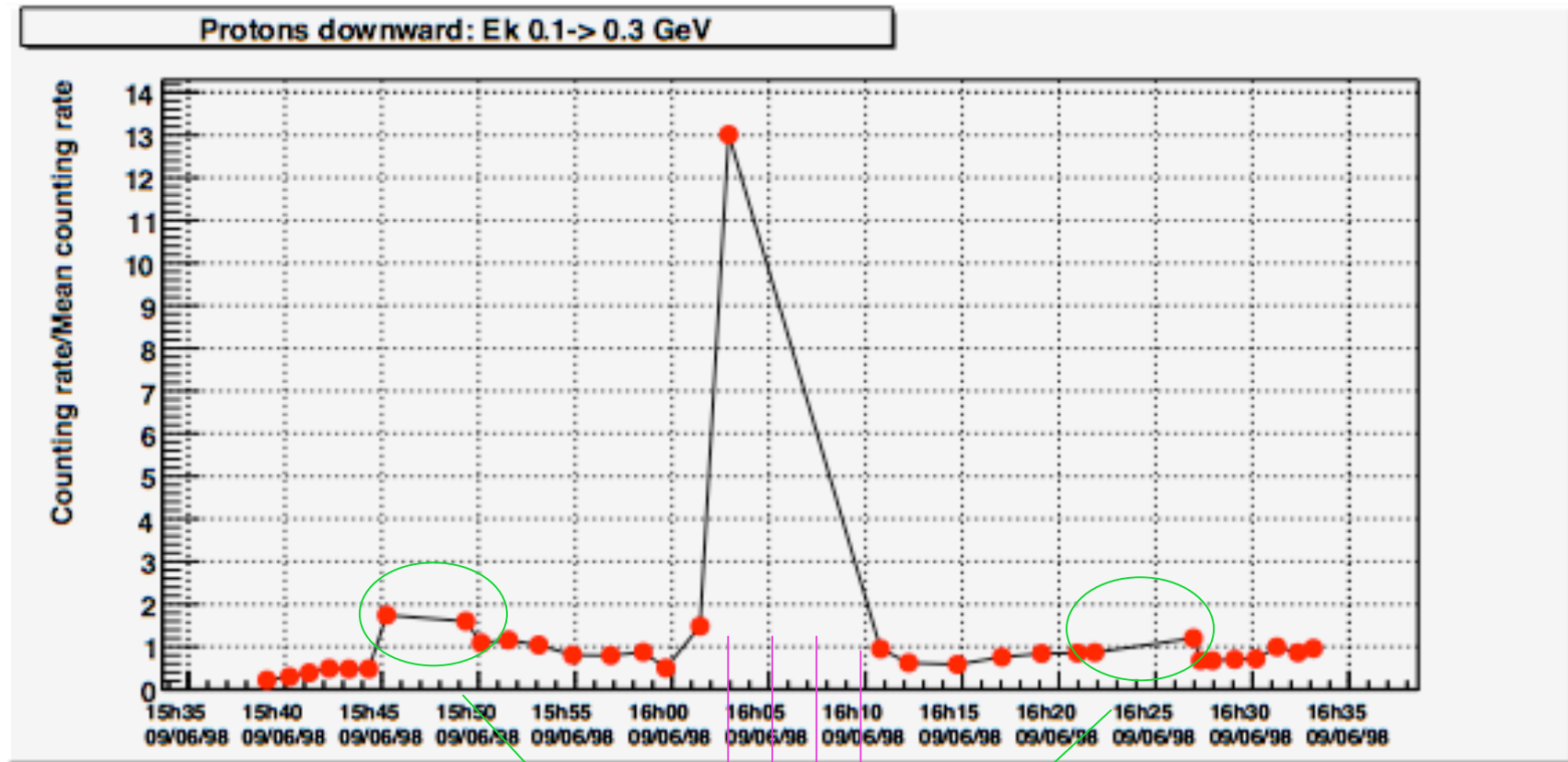
Flux fluctuations:

Data taking period: 9/06/98 15h39-> 16h34

AMS Z-axis pointing 1° within Zenith:

New binning for actual flux: $\Delta T \sim 1$ min

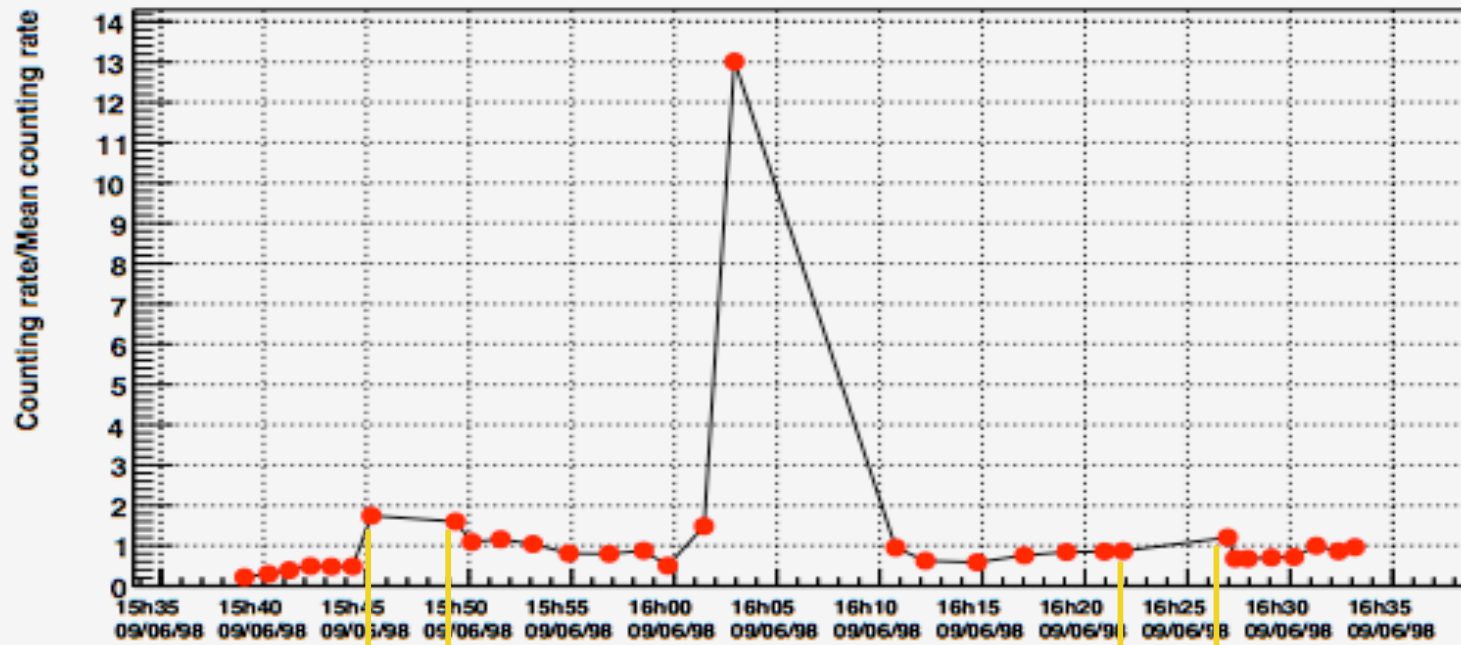
New binning for actual flux: $\Delta T \sim 1$ min



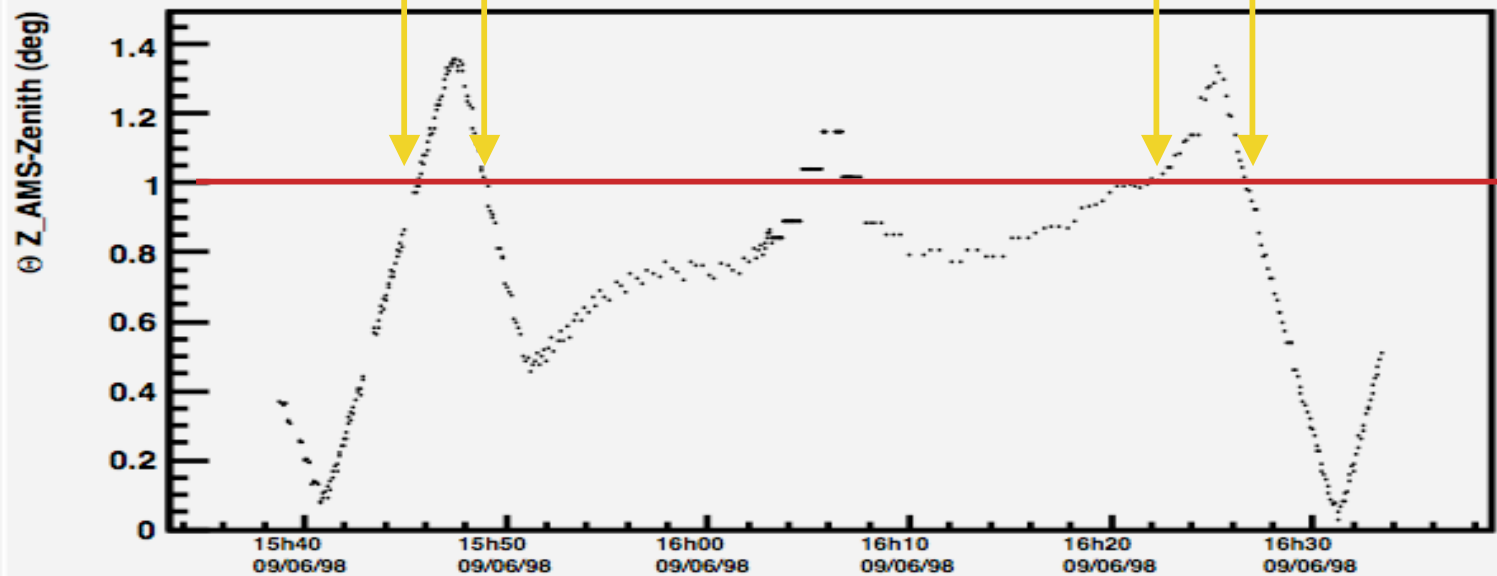
DAQ Lifetime=0

Pointing cut

Protons downward: Ek 0.1-> 0.3 GeV

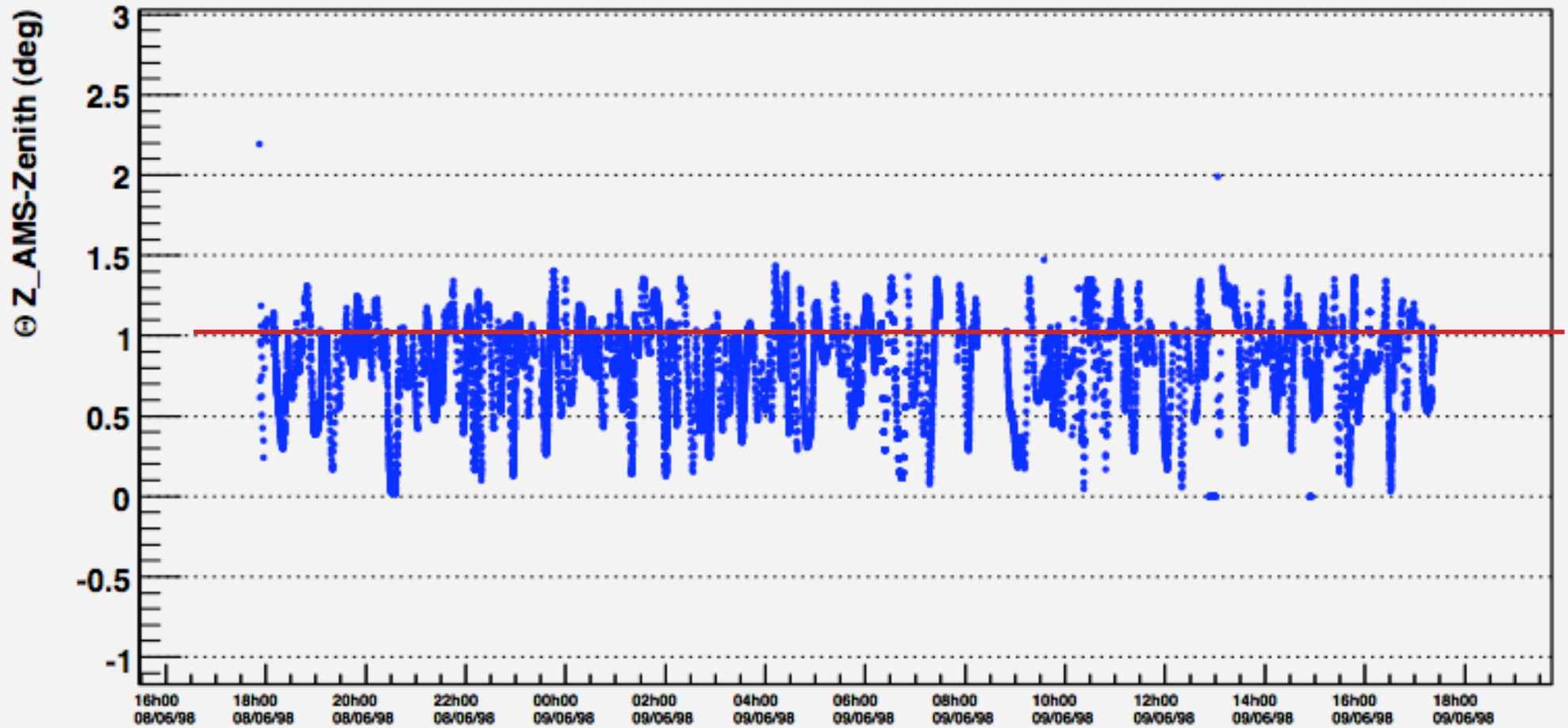


Angle from AMS-z-axis to Zenith vs time

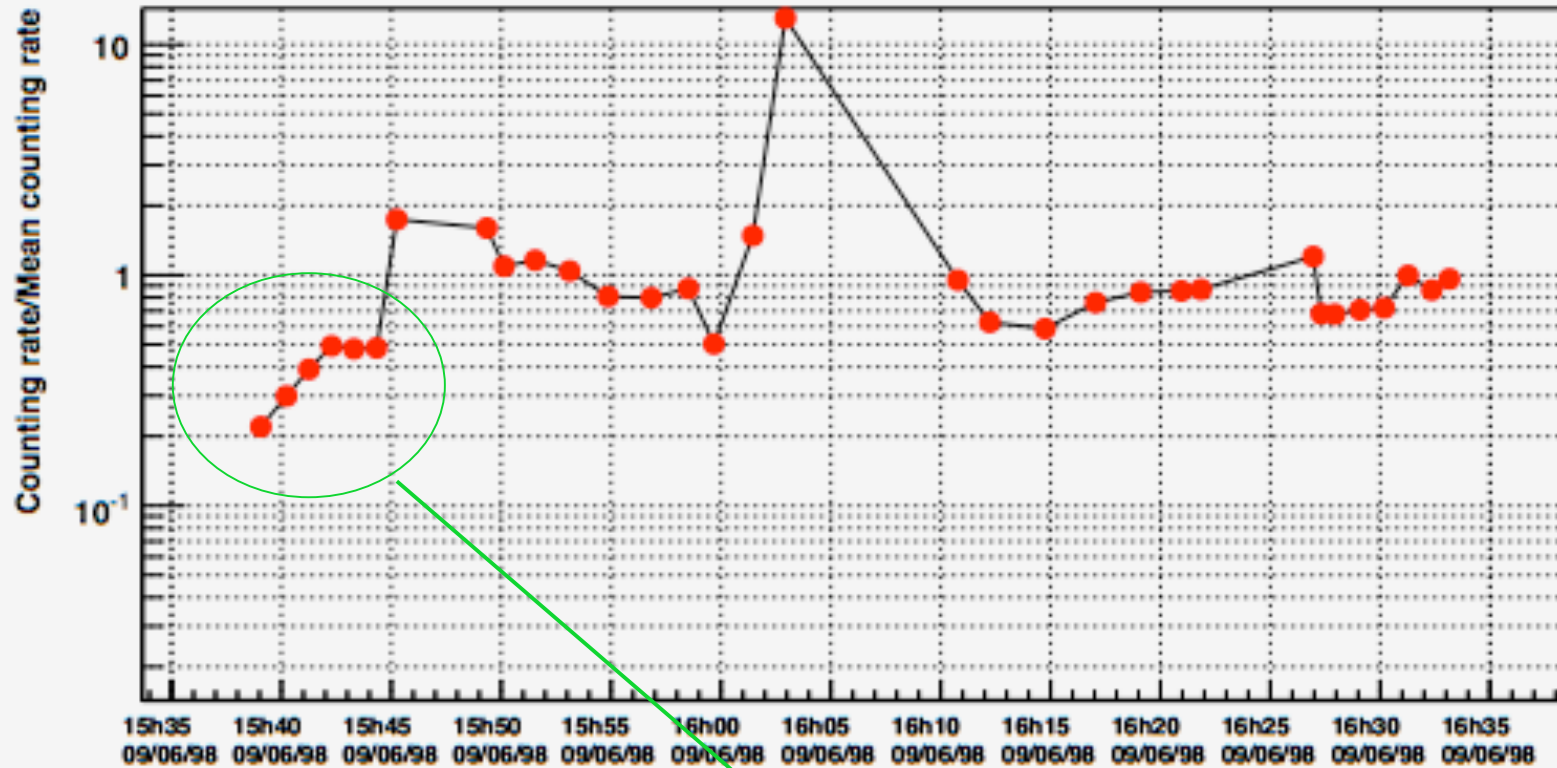


Cut out

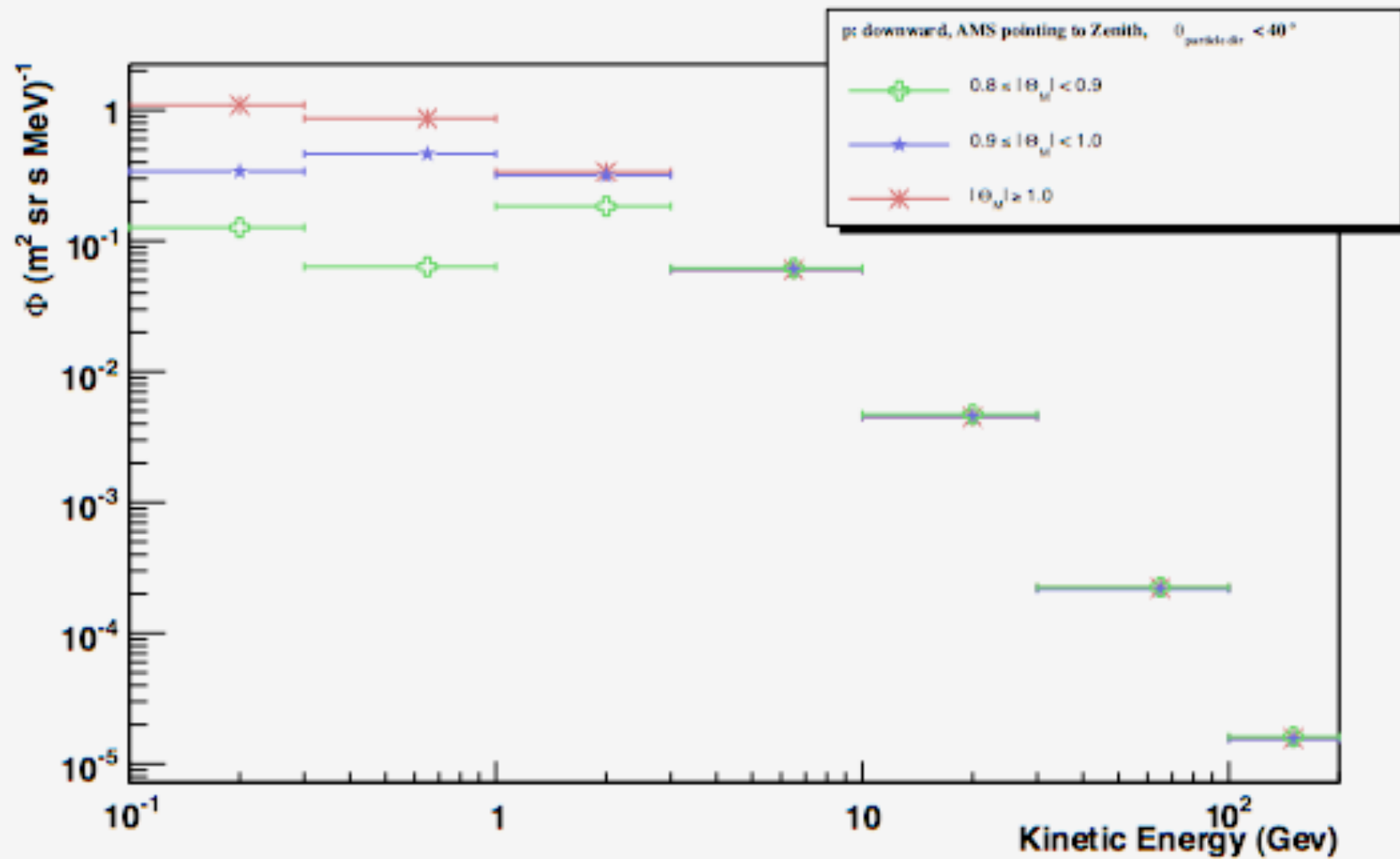
Angle from AMS-z-axis to Zenith vs time



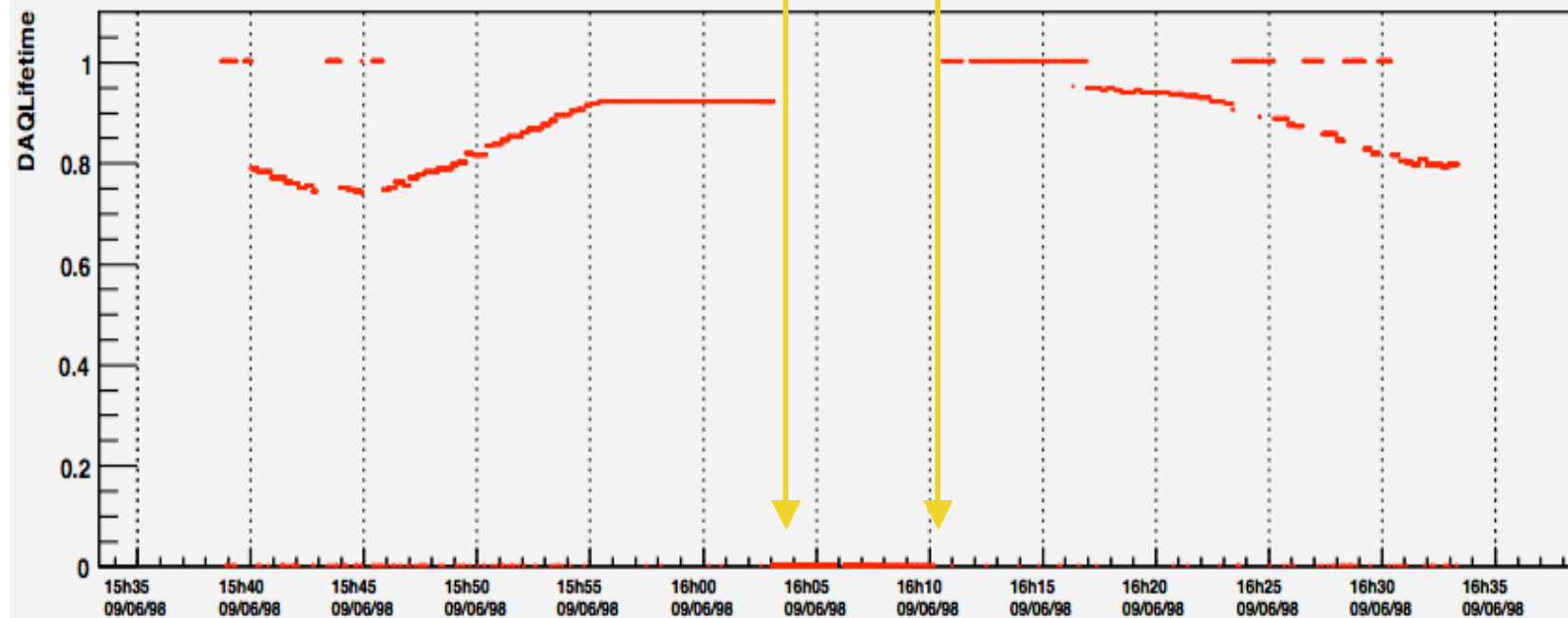
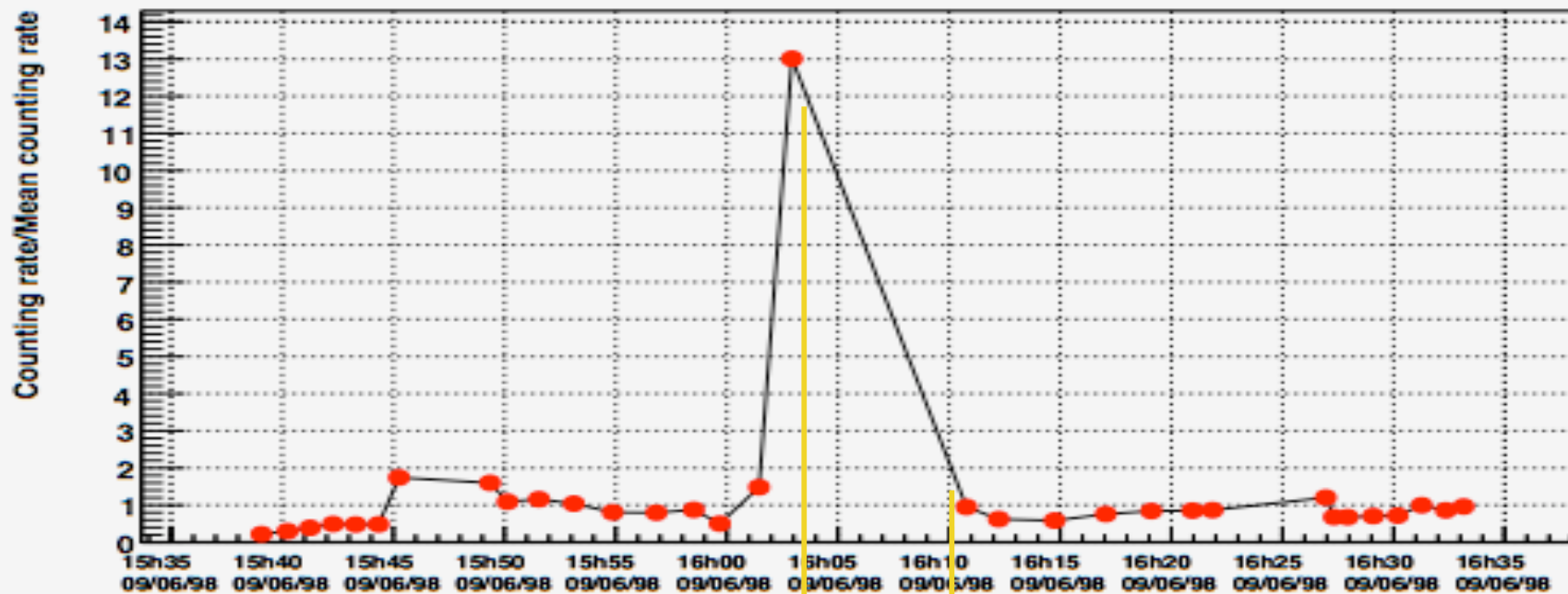
Protons downward: Ek 0.1-> 0.3 GeV



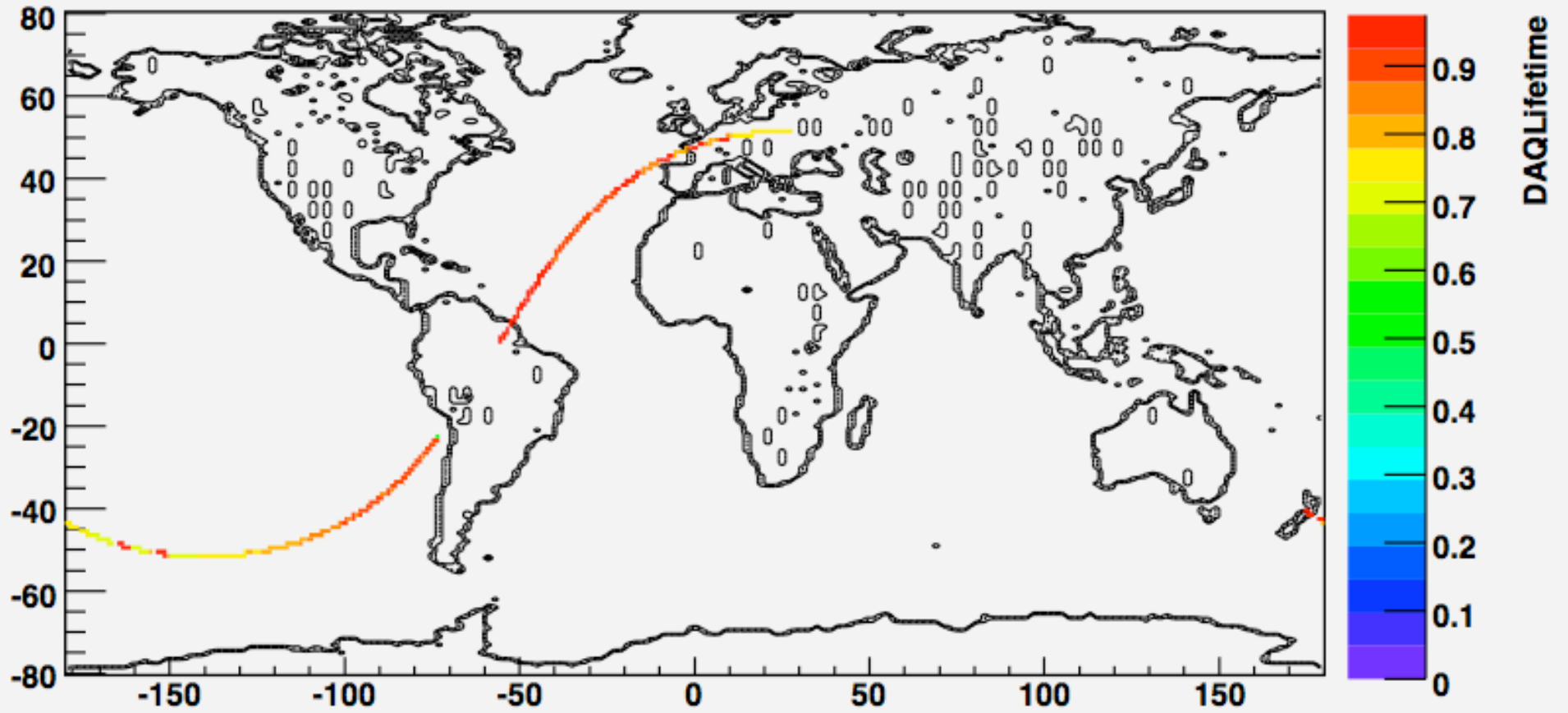
Too large Θ_M bin ($0.8 - \Theta_M^{\max}$)



Protons downward: Ek 0.1-> 0.3 GeV

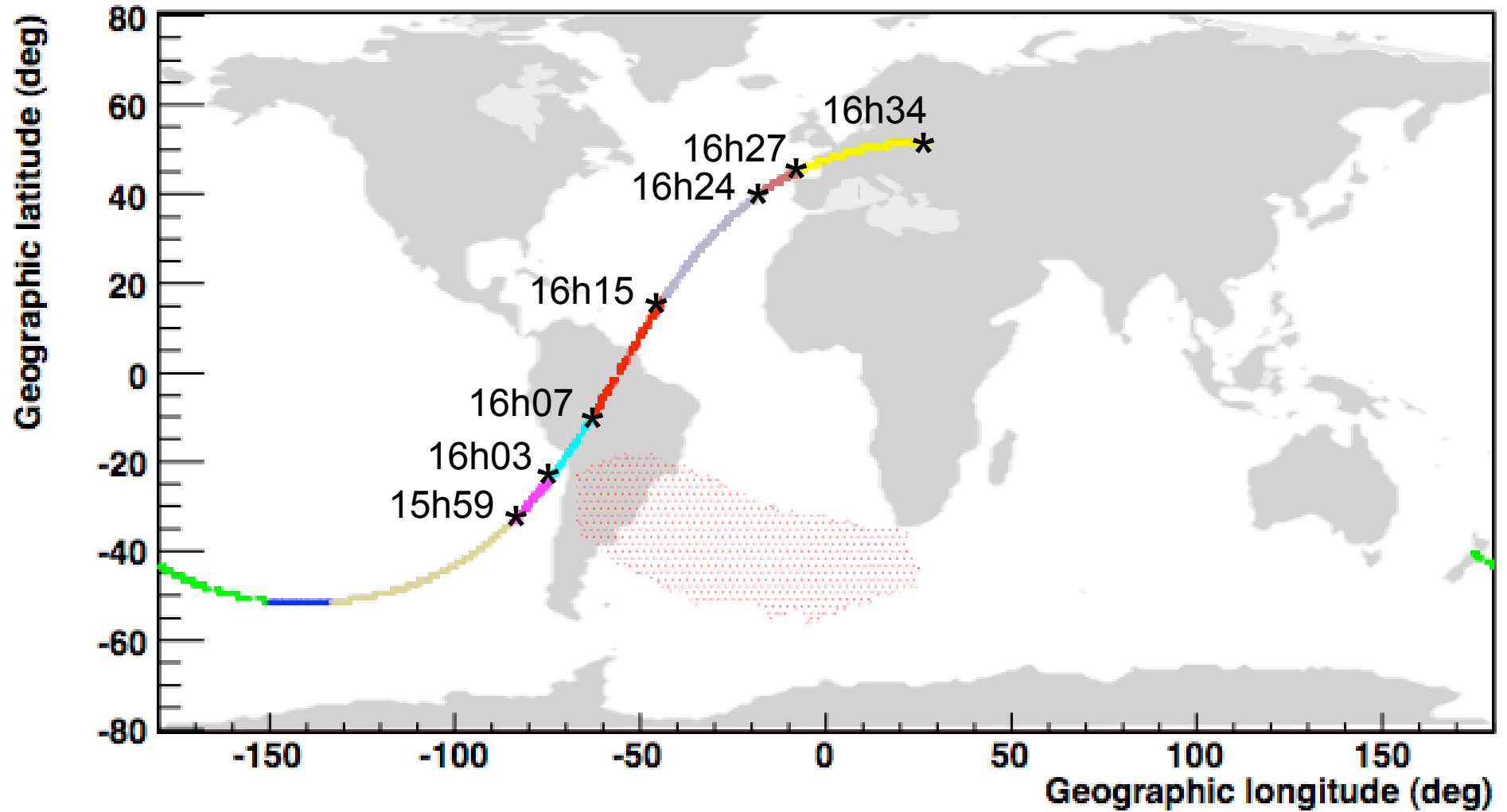


STS91 Orbit: 09/06/98 15h39 -> 16h34



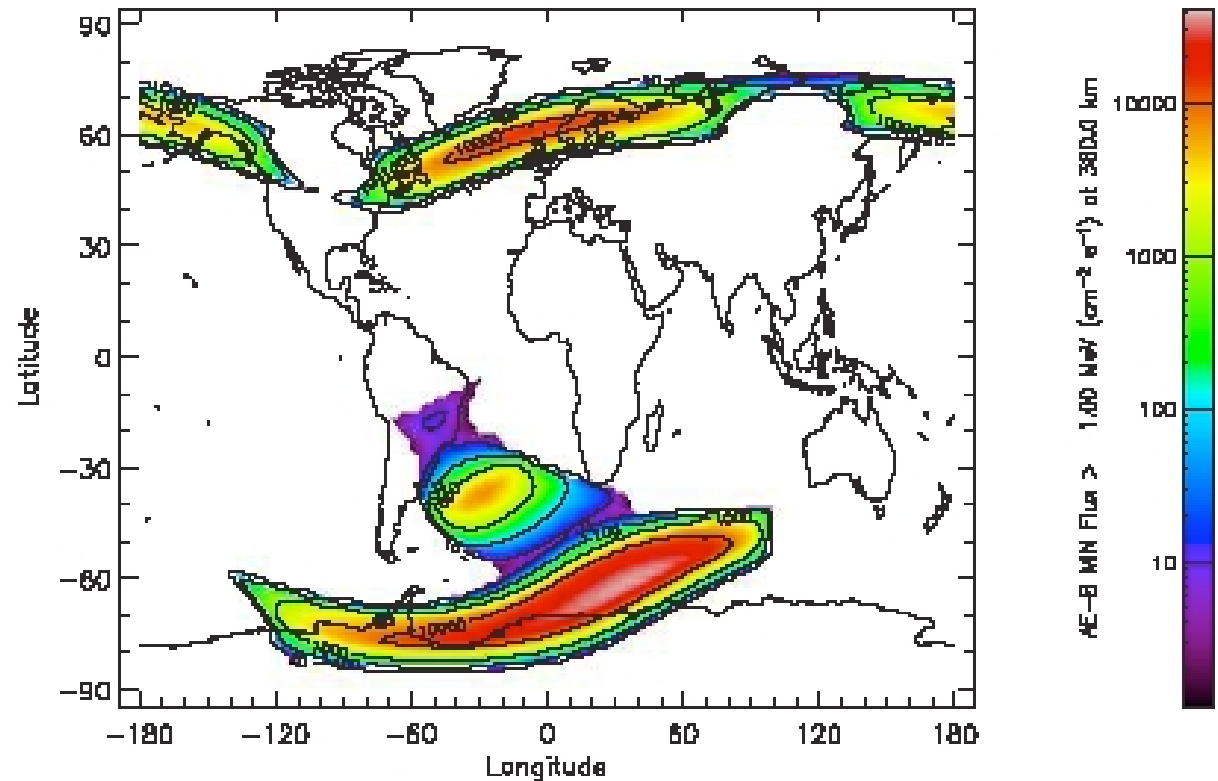
STS-91 Orbit 09/06/1998 15h39-> 16h34

SAA from STS-91 Shuttle Mission Plotting Chart (160 n.m. altitude no minimum flux)



SAA definition

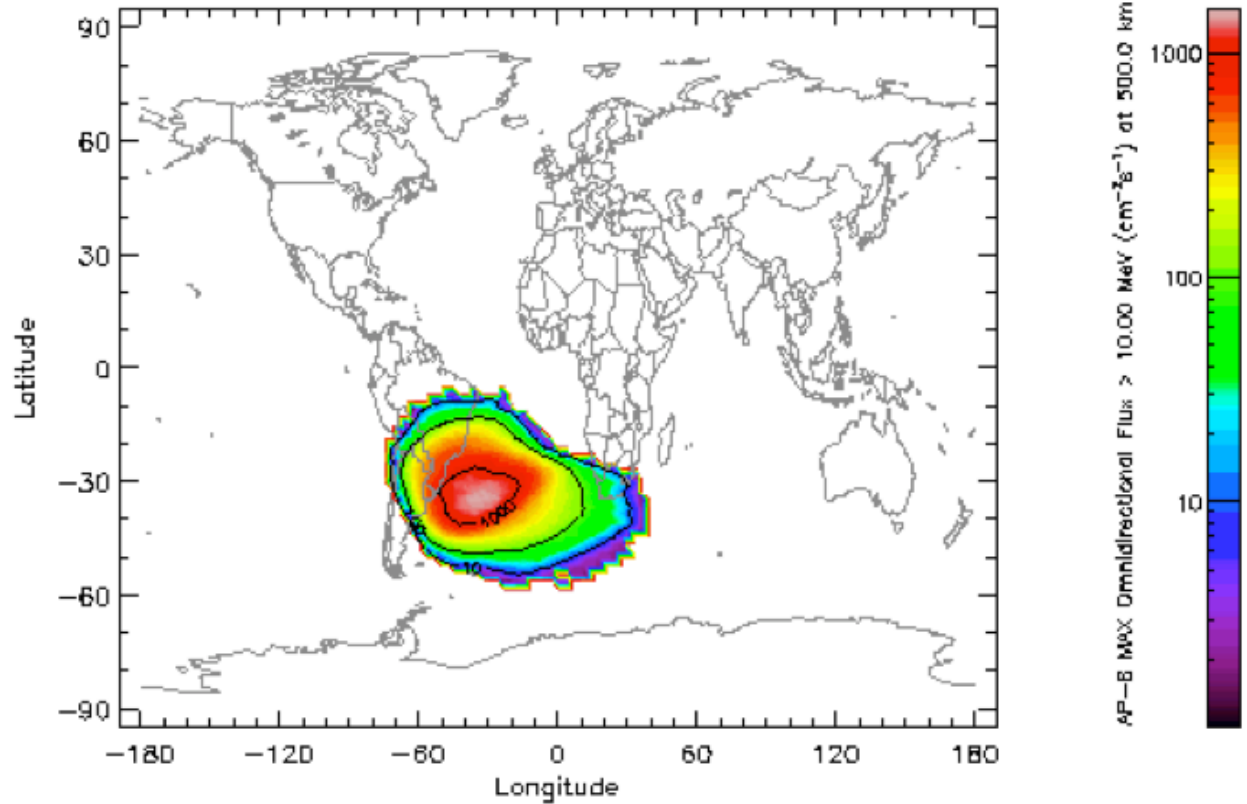
- Electrons minimum flux
- OR
- Protons minimum flux
- OR
- Local magnetic field value



SAA + Polar: Electrons > 1MeV at 380km altitude

SAA definition

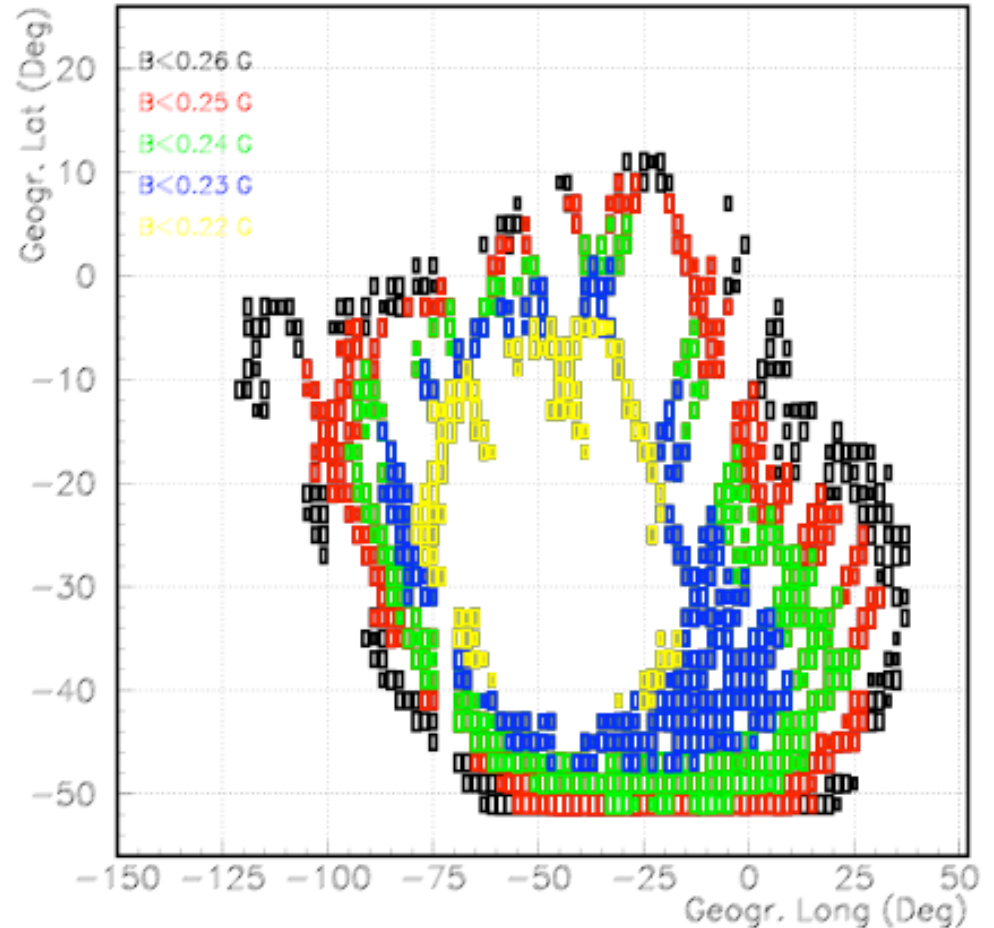
- Electrons minimum flux
- OR
- Protons minimum flux
- OR
- Local magnetic field value



Protons > 10 MeV at 500 km altitude

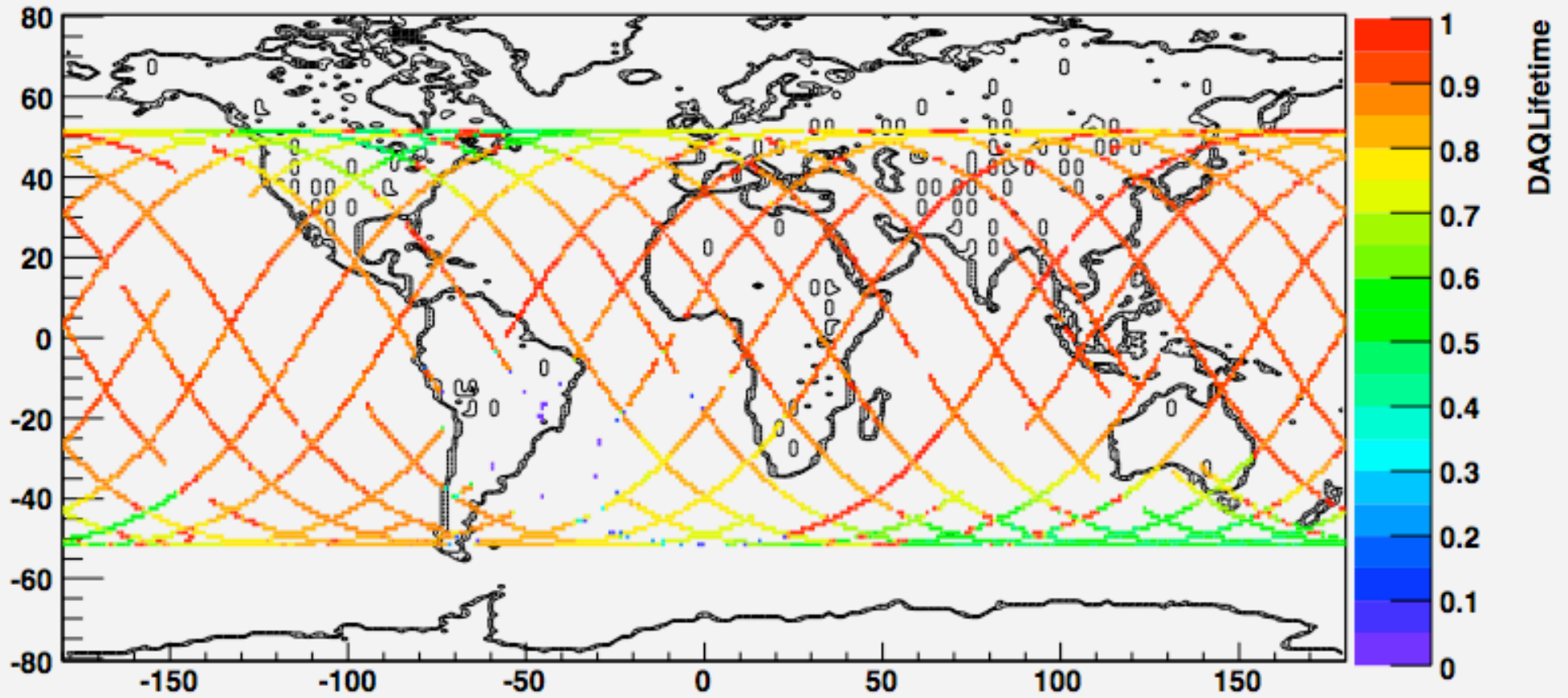
SAA definition

- Electrons minimum flux
- OR
- Protons minimum flux
- OR
- Local magnetic field value



E.Fiandrini - Leptons with $E > 200$ MeV trapped
In the South Atlantic Anomaly

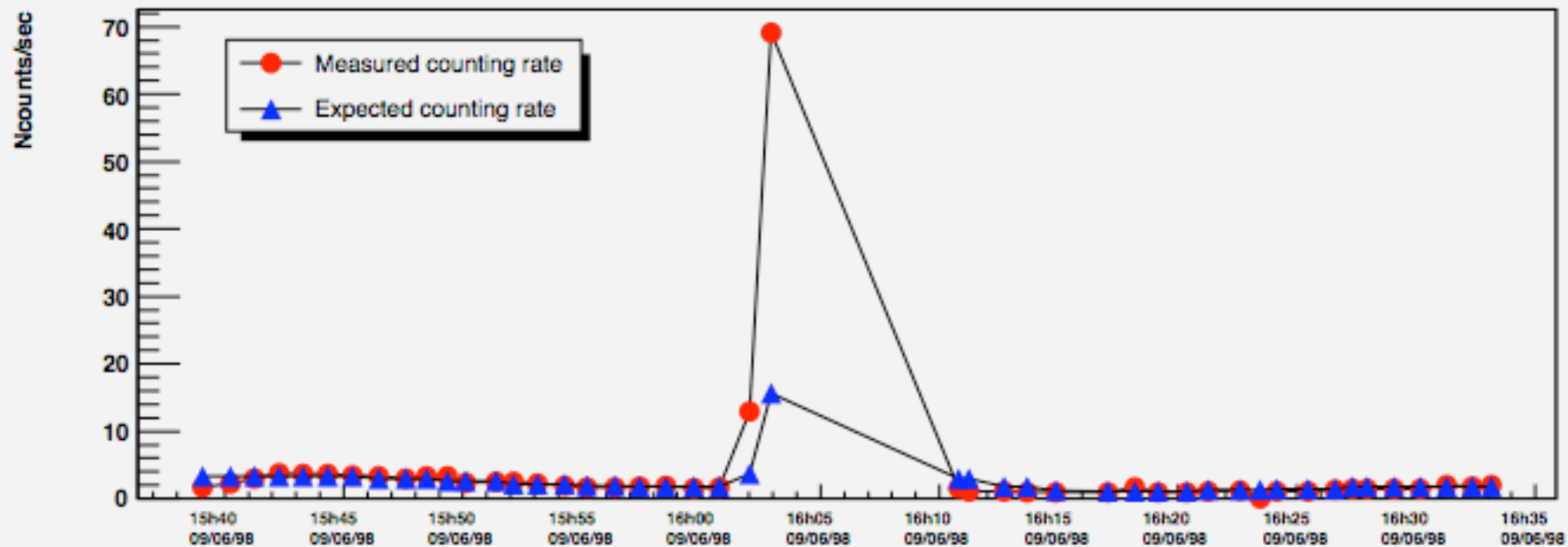
STS91 Orbit: 08/06/98 17h52 -> 09/06/98 17h30



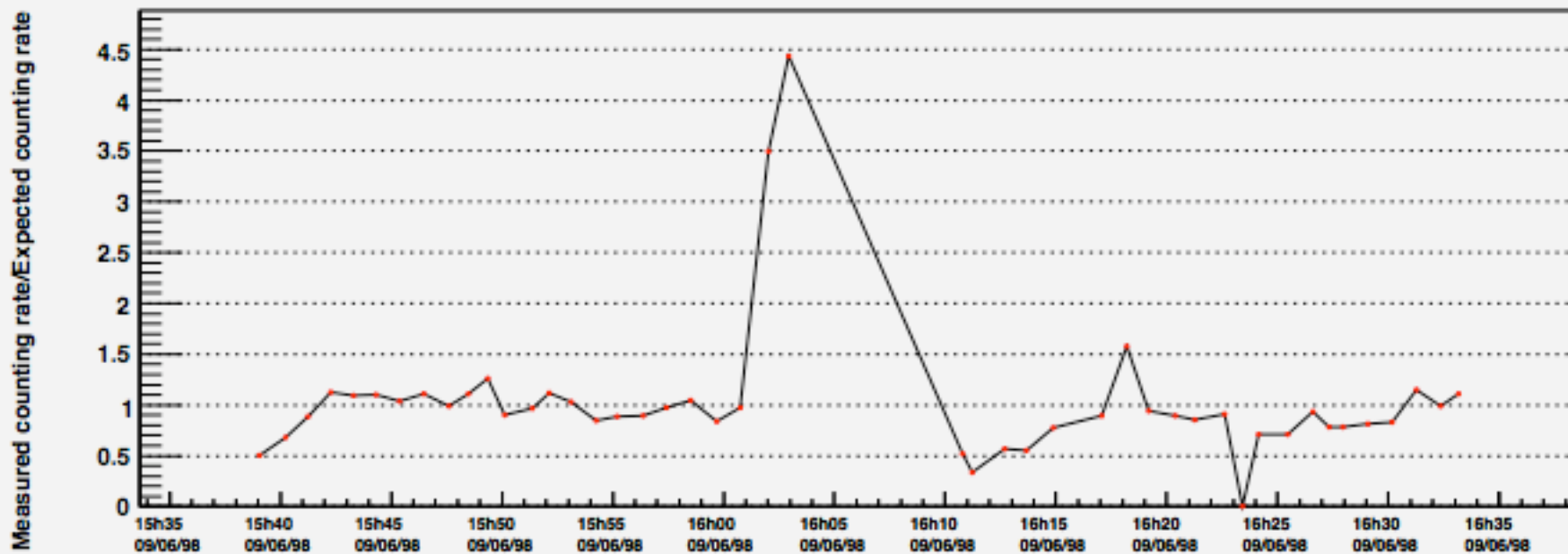
Meanflux reloaded

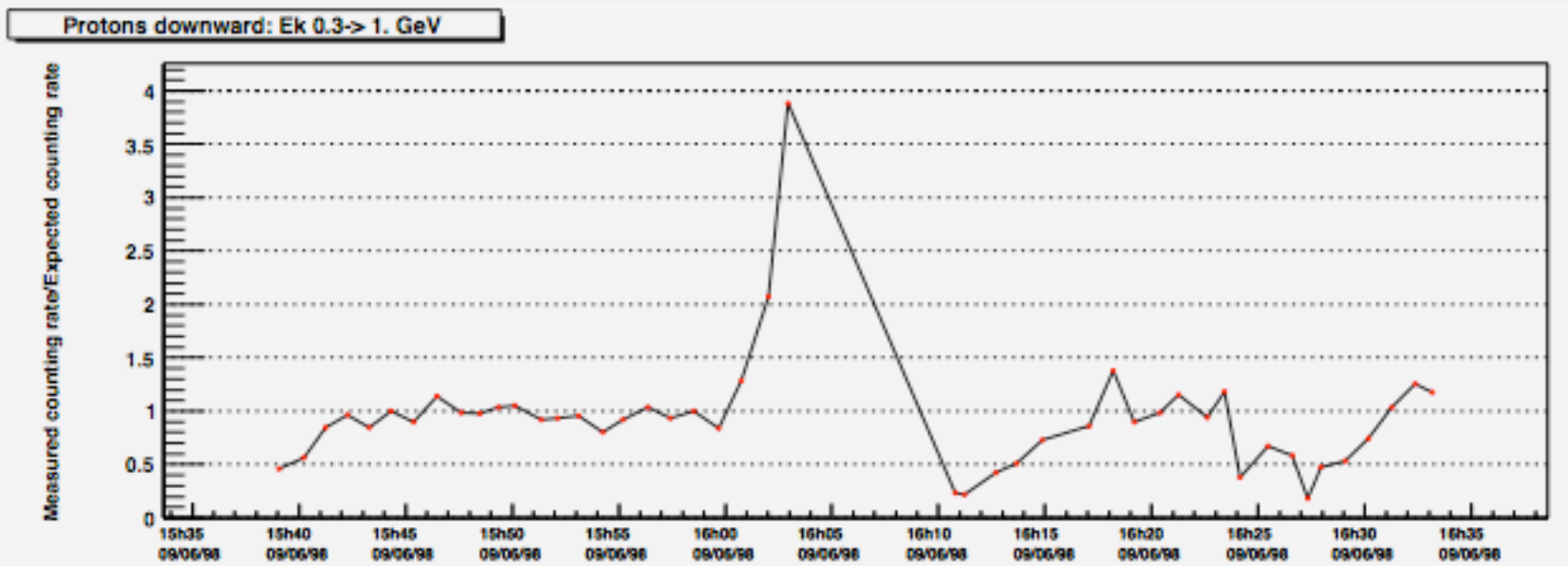
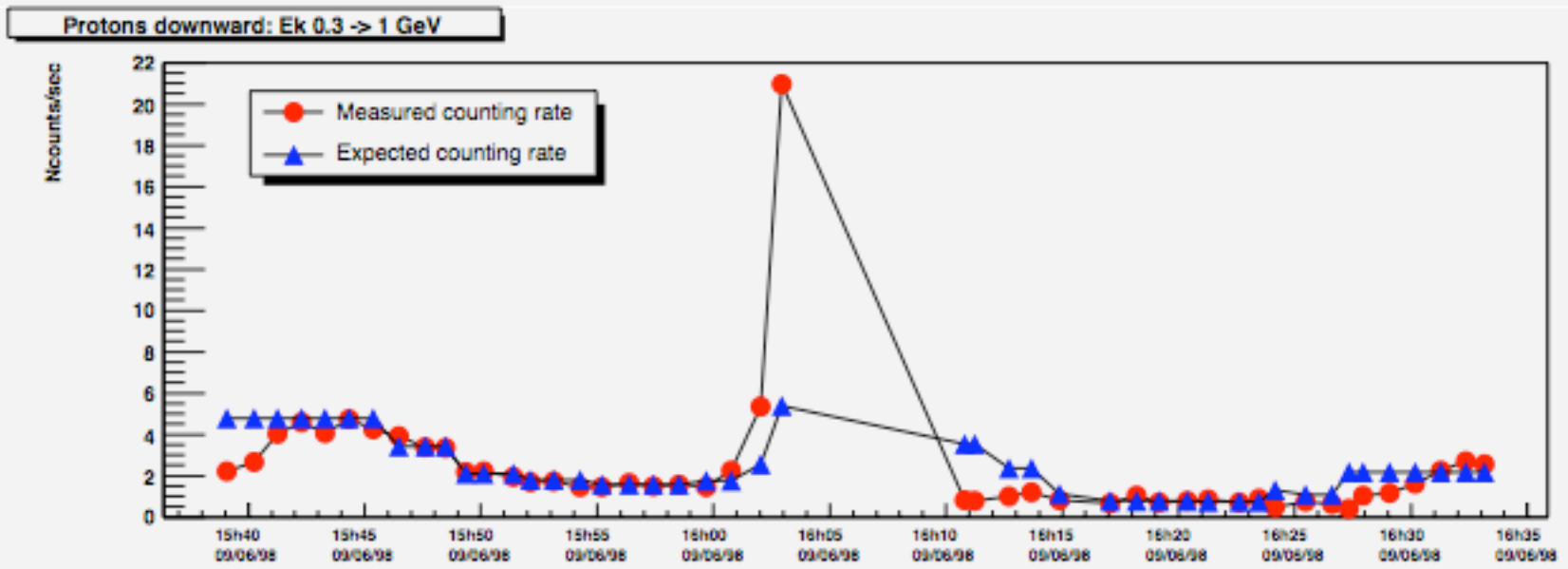
1. Looser pointing cut: Zenith $\pm 2^\circ$
2. New binning Θ_M :
step 0.1 (instead of 0.4)
3. SAA not excluded

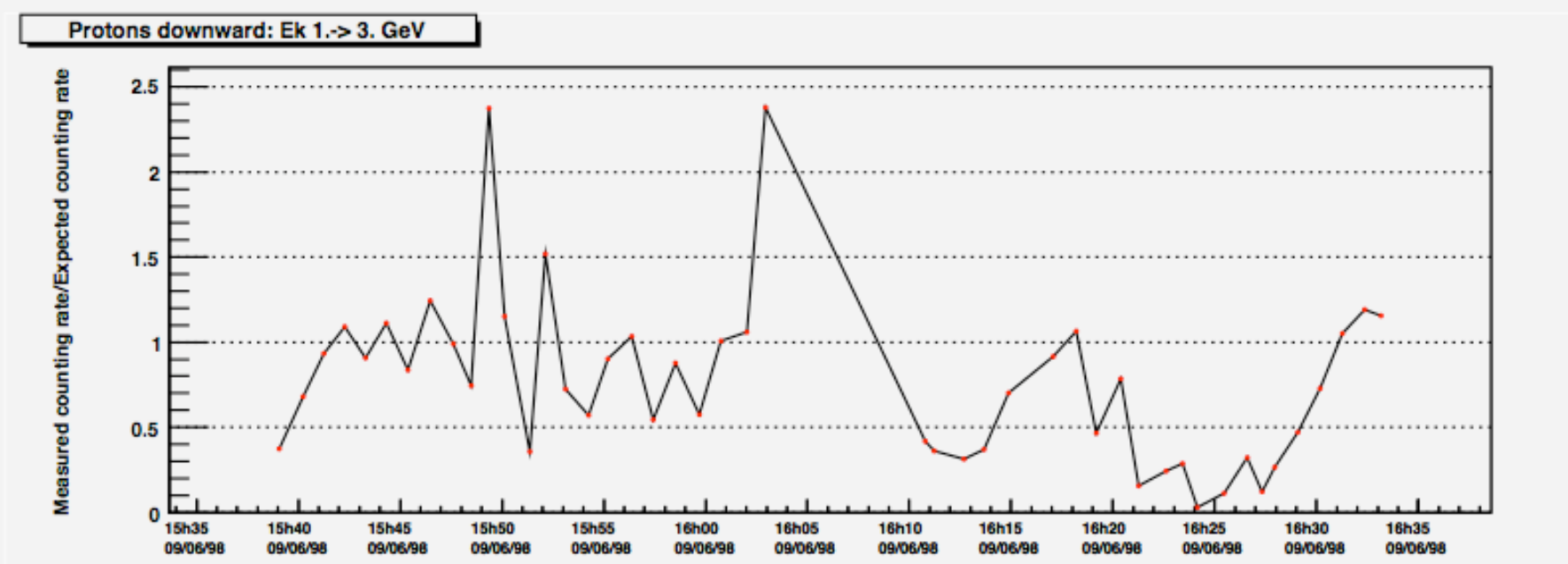
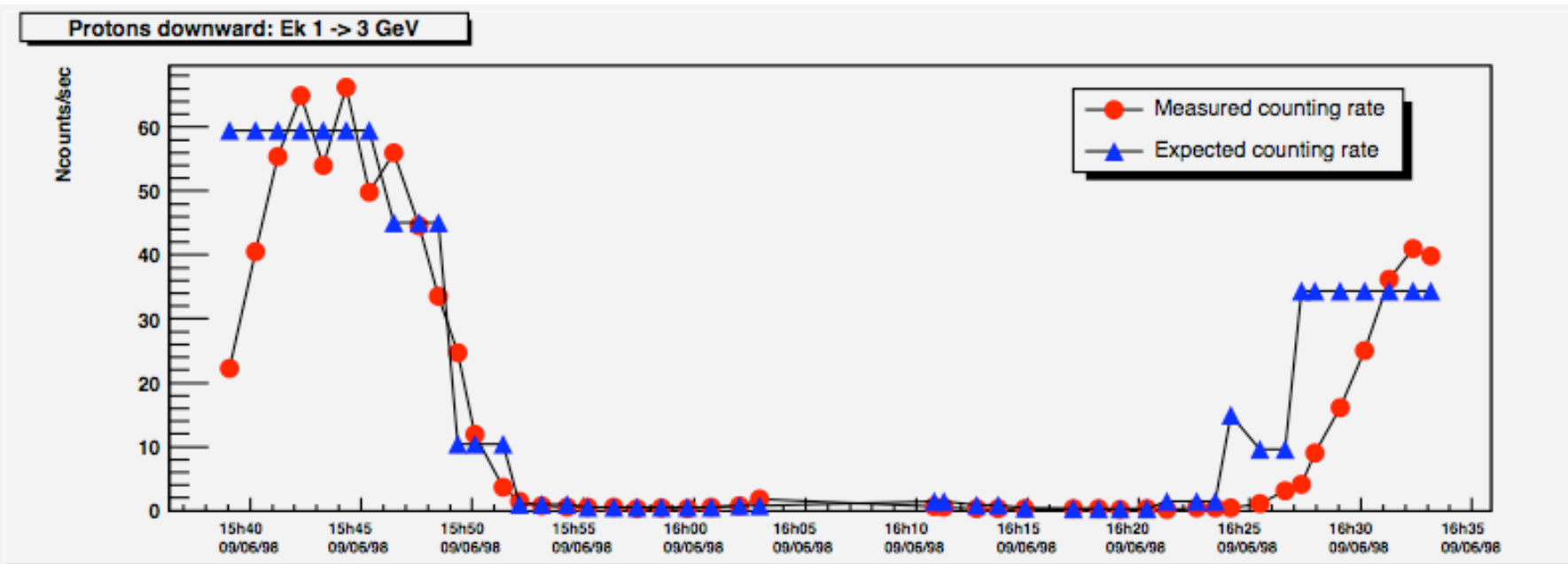
Protons downward: Ek 0.1 -> 0.3 GeV

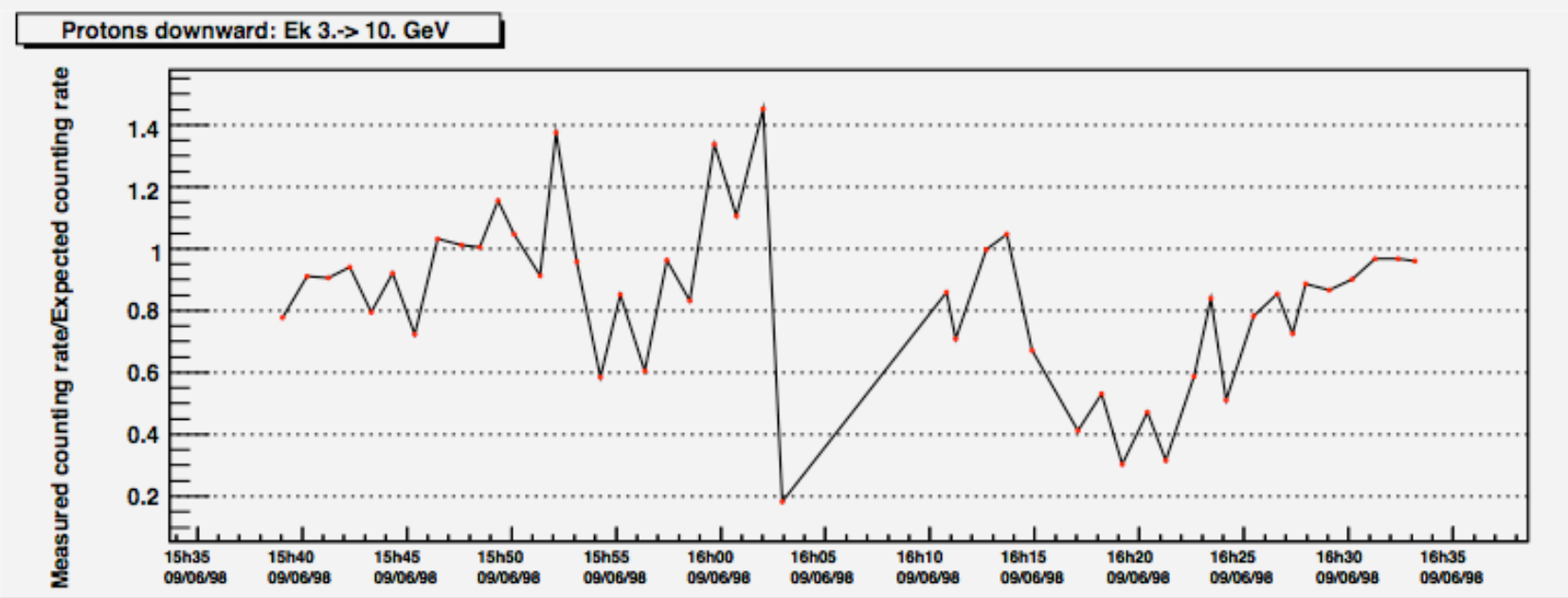
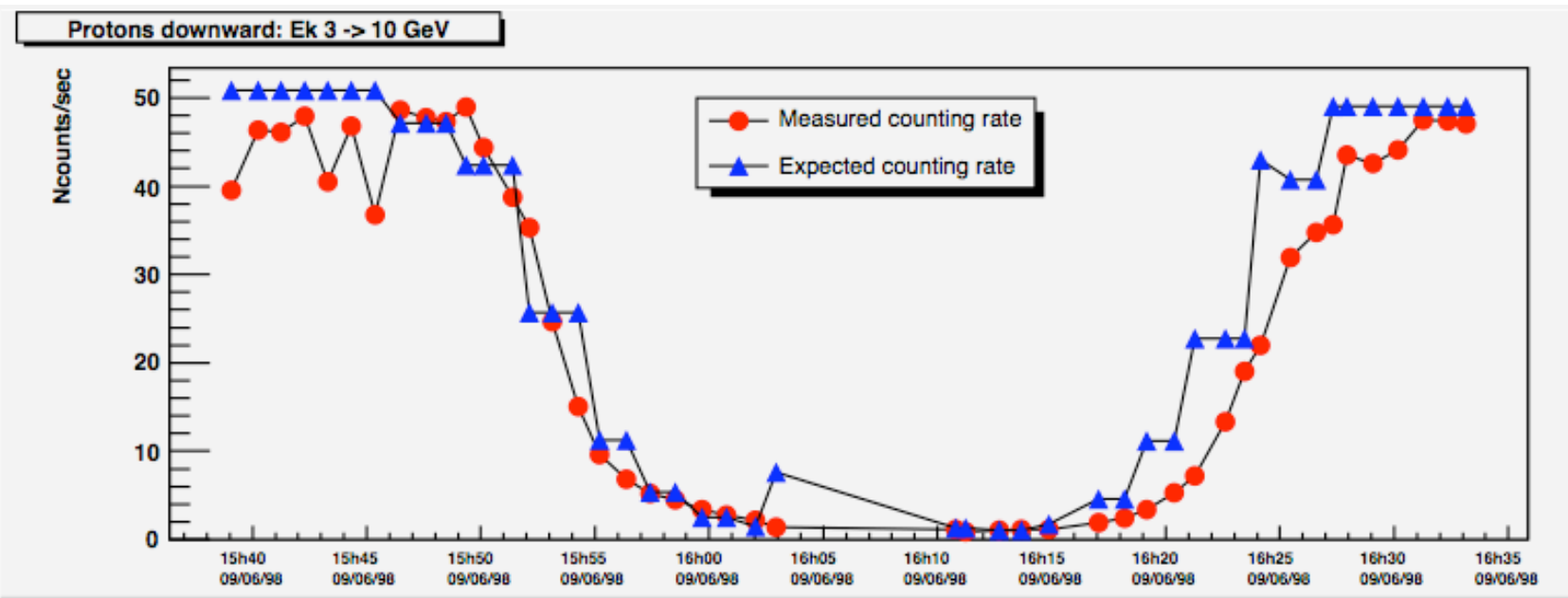


Protons downward: Ek 0.1 -> 0.3 GeV

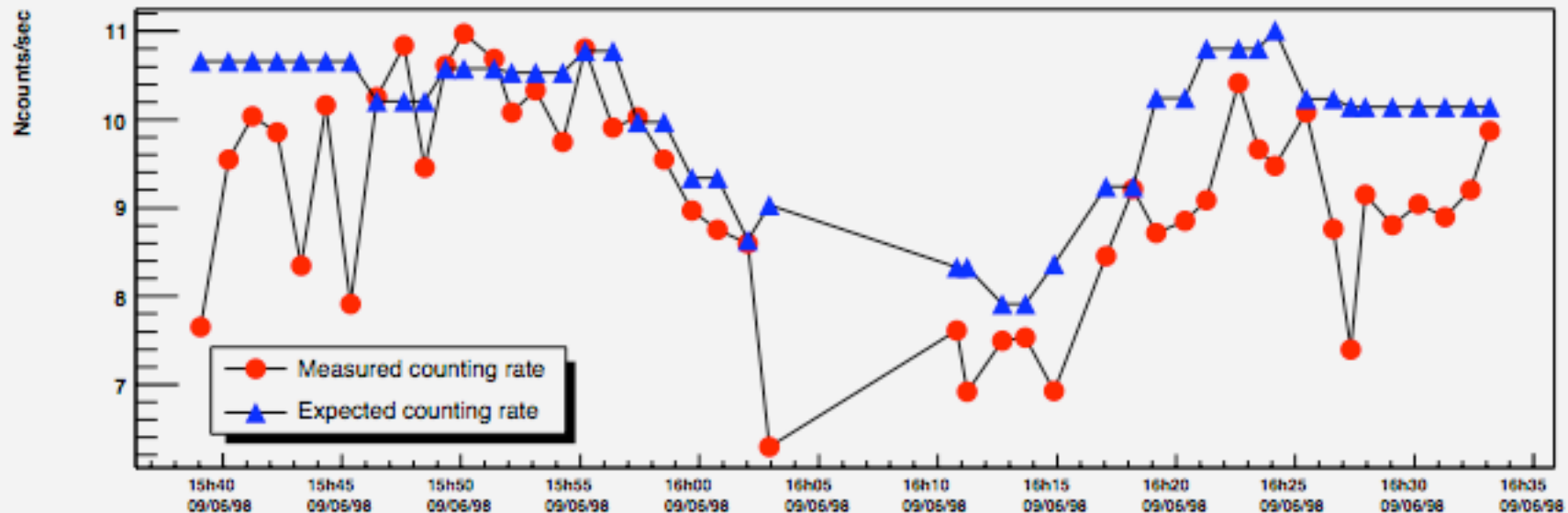




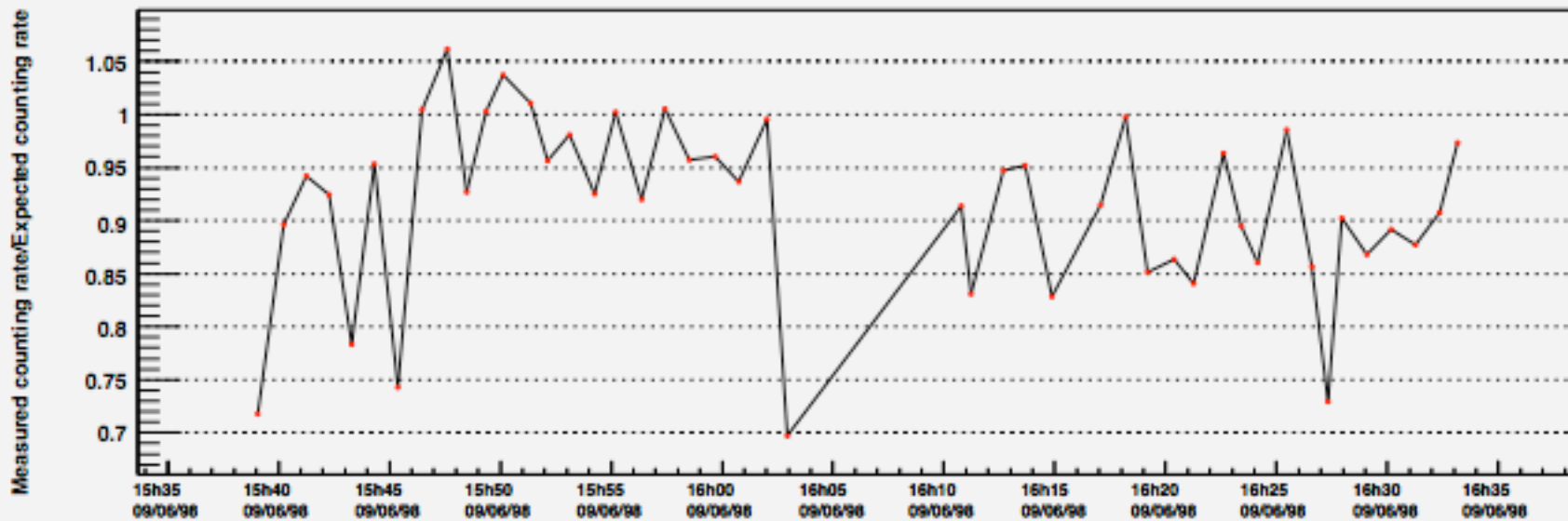


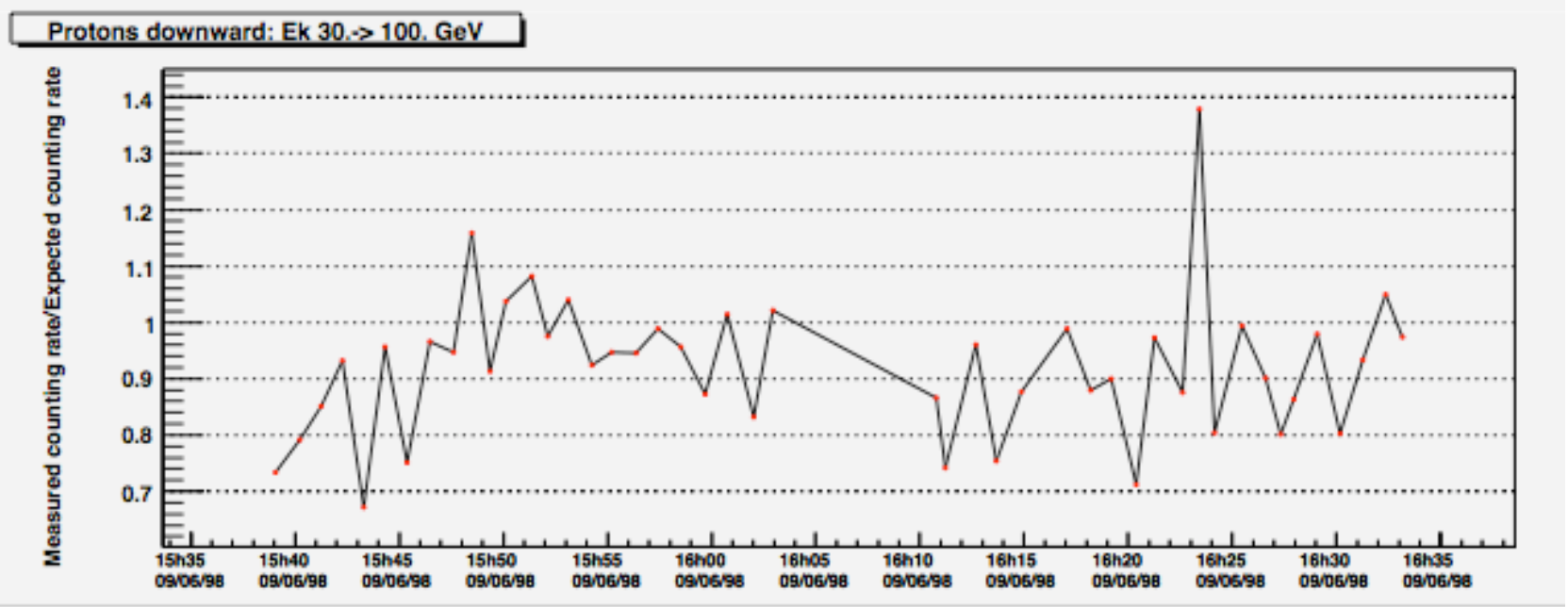
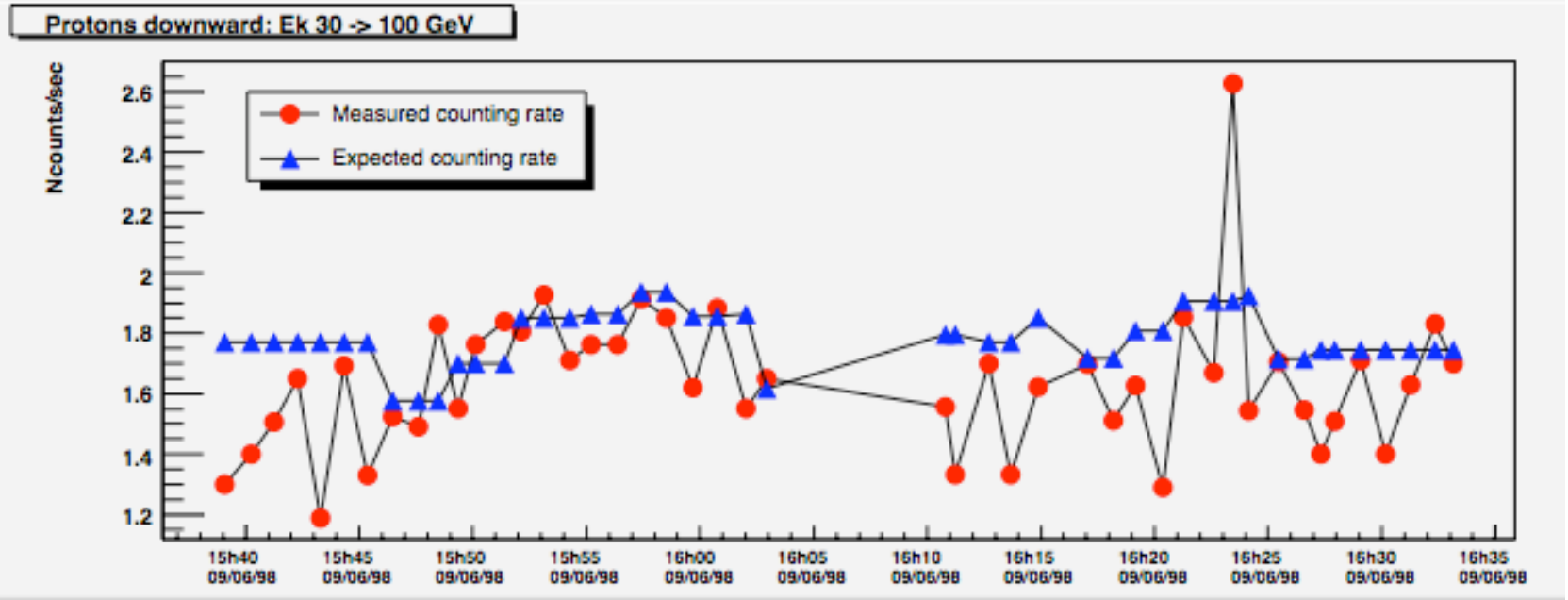


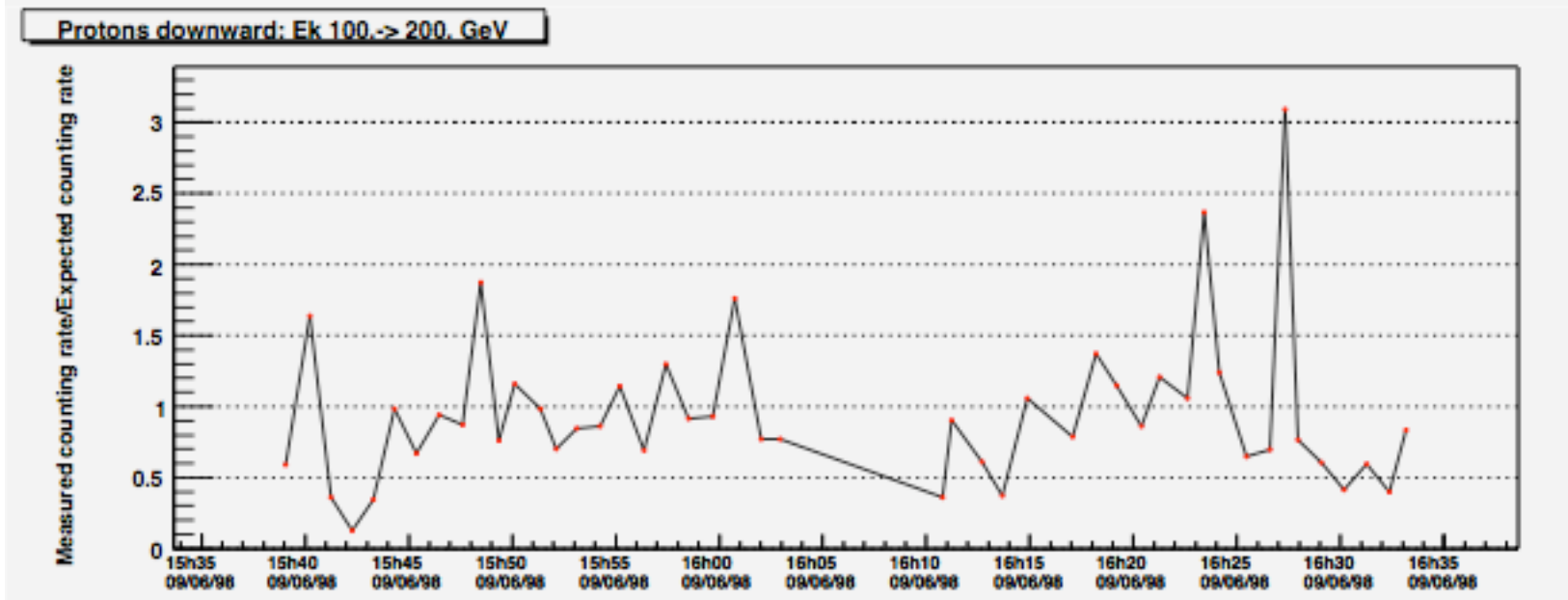
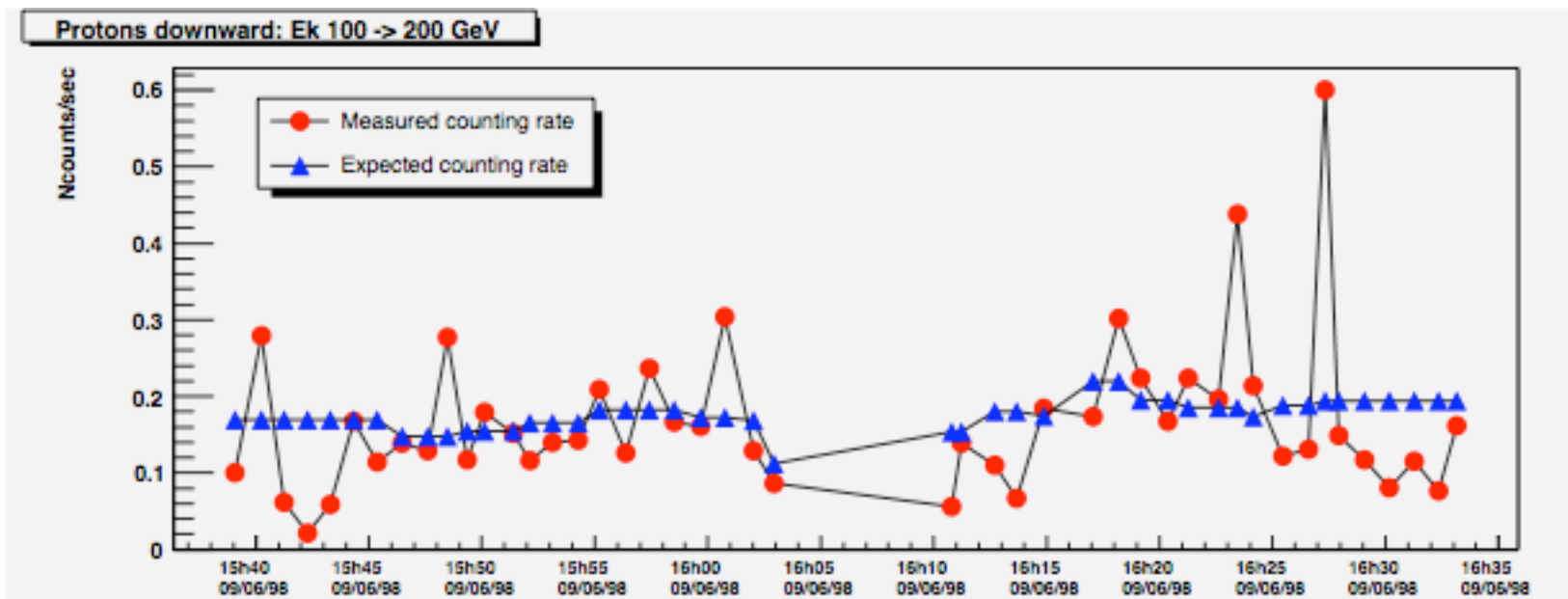
Protons downward: Ek 10 -> 30 GeV



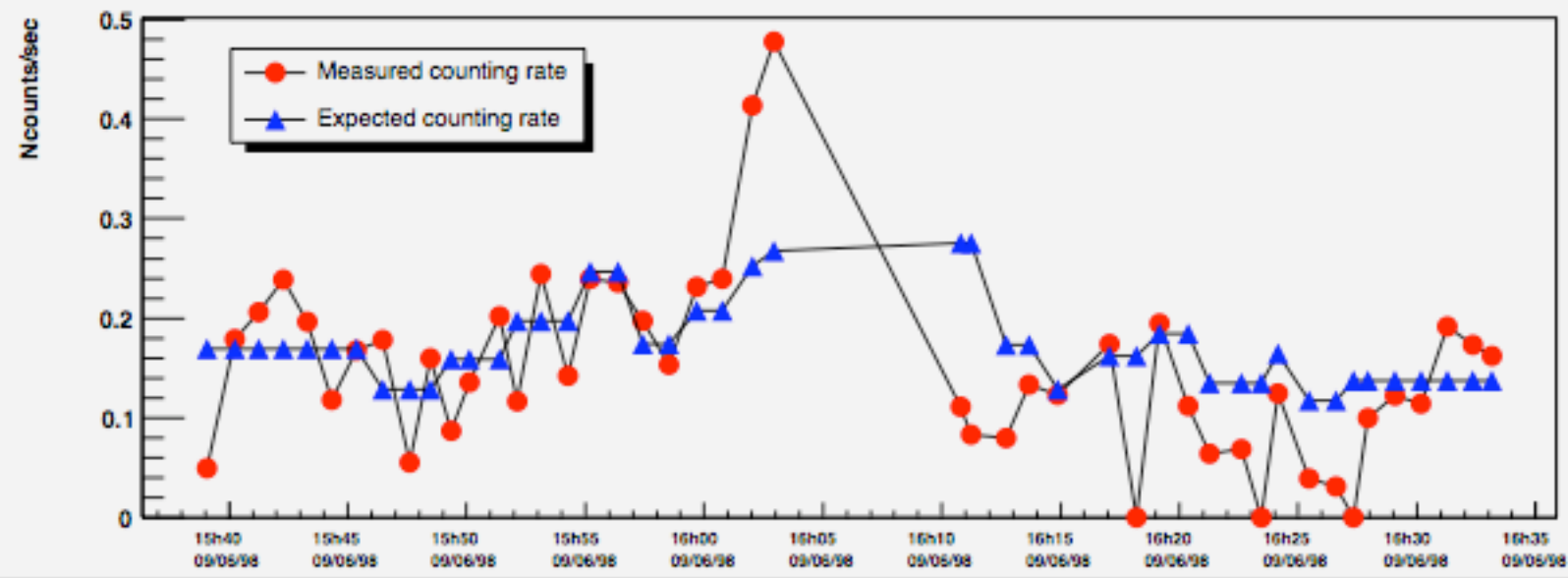
Protons downward: Ek 10-> 30. GeV



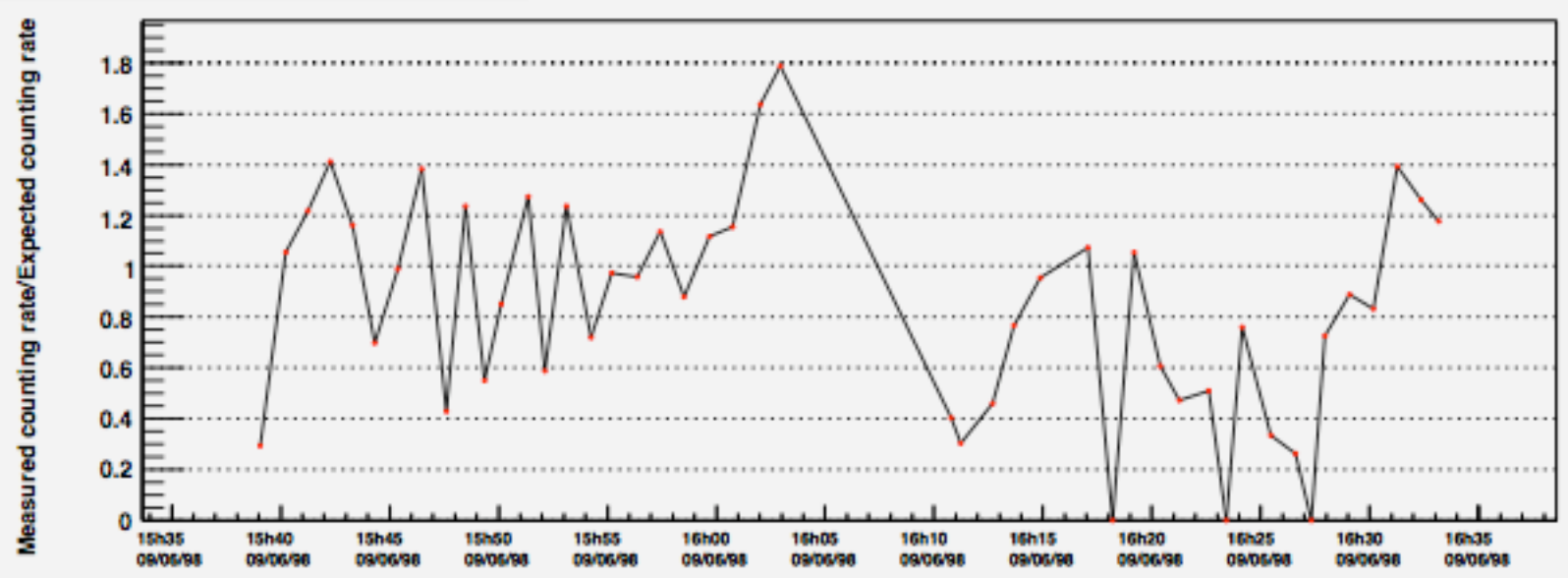


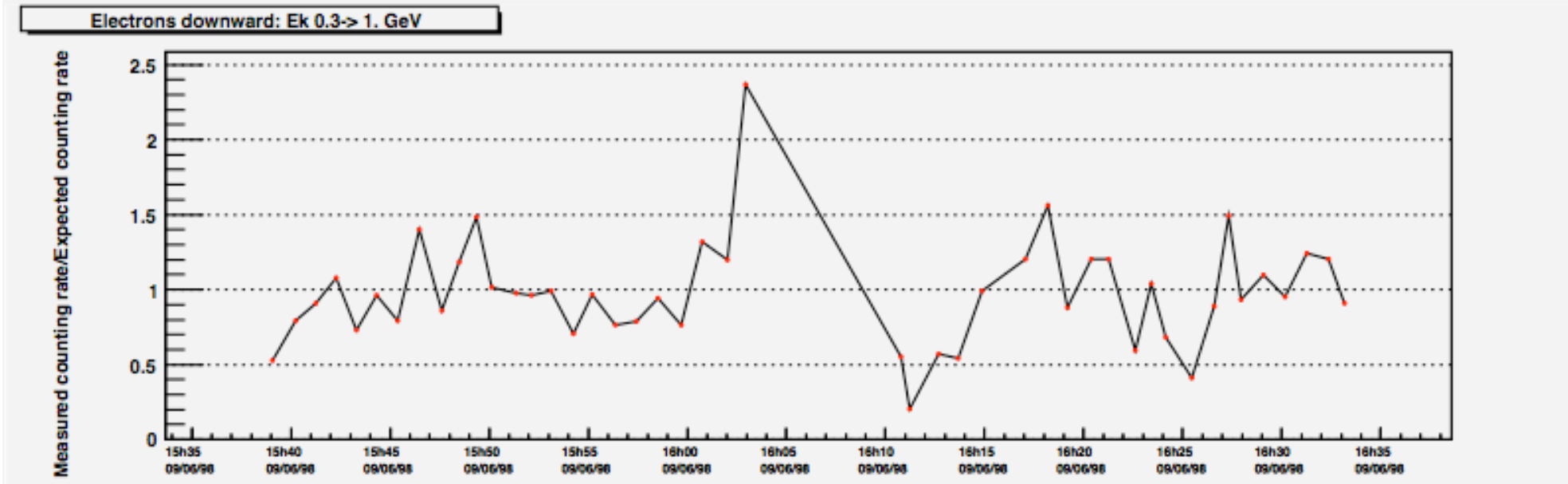
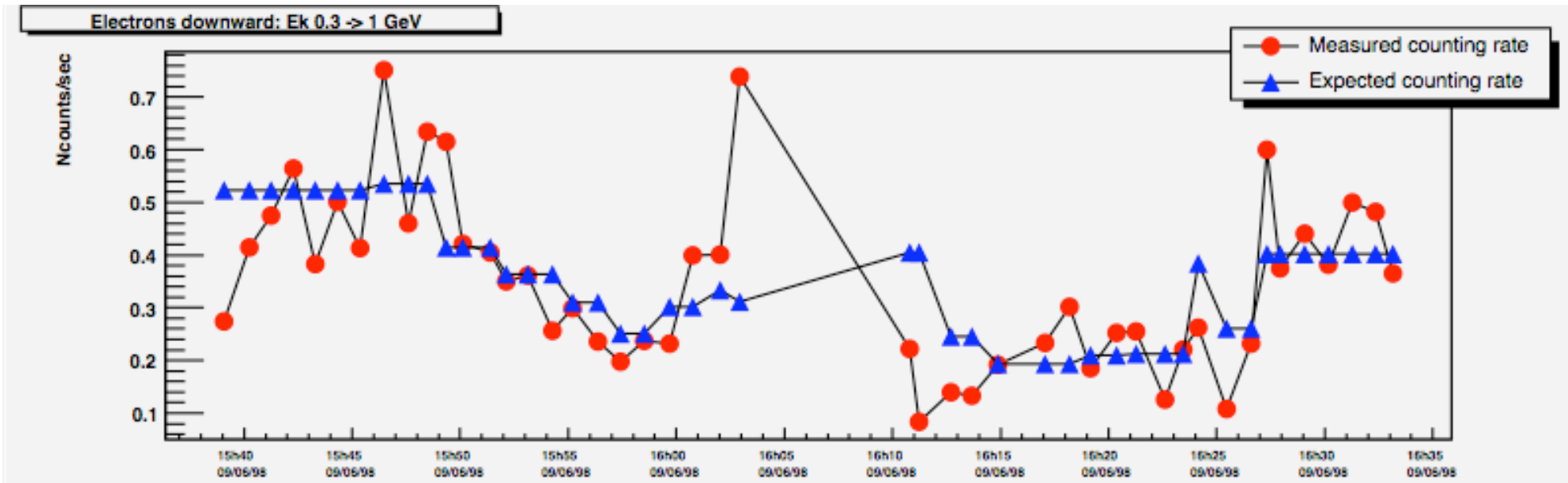


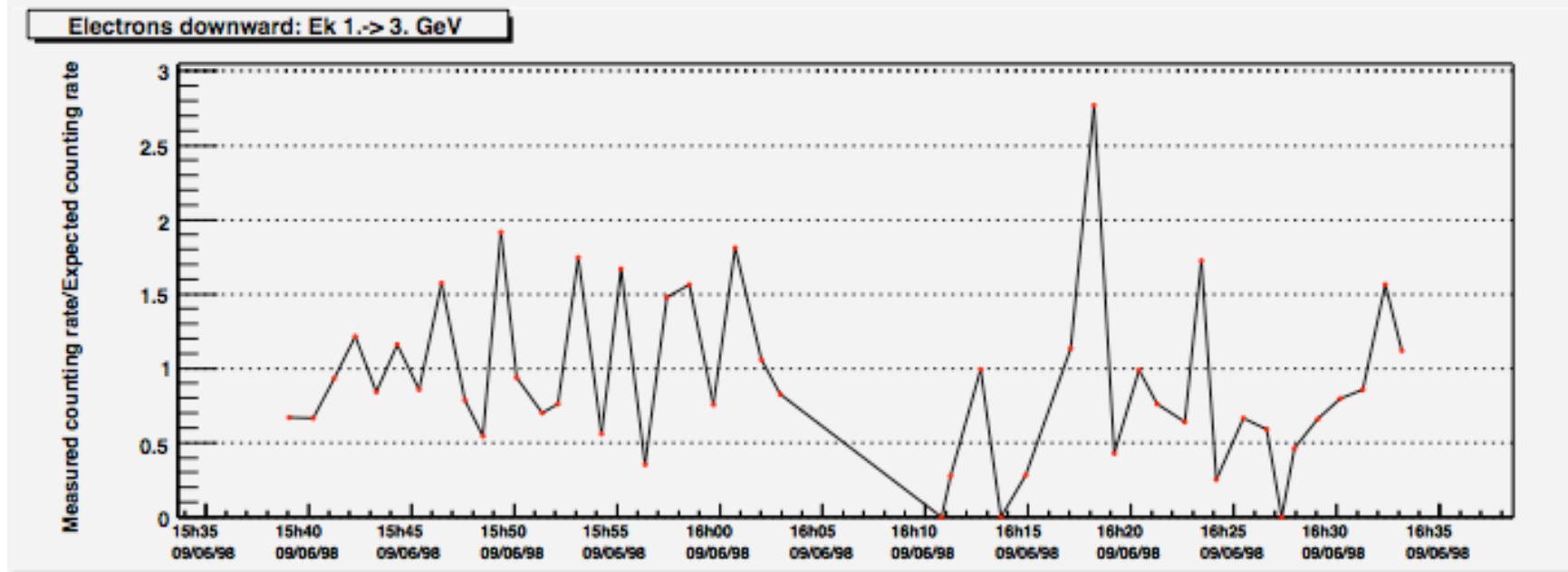
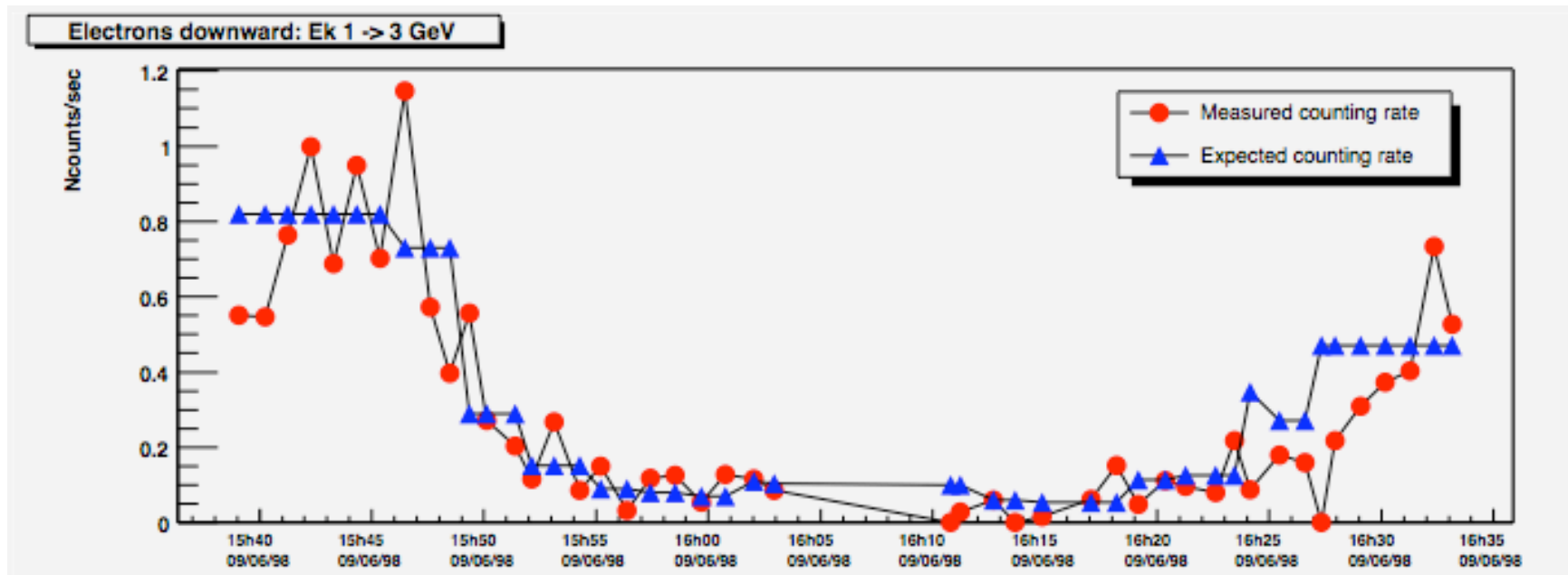
Electrons downward: Ek 0.1 -> 0.3 GeV



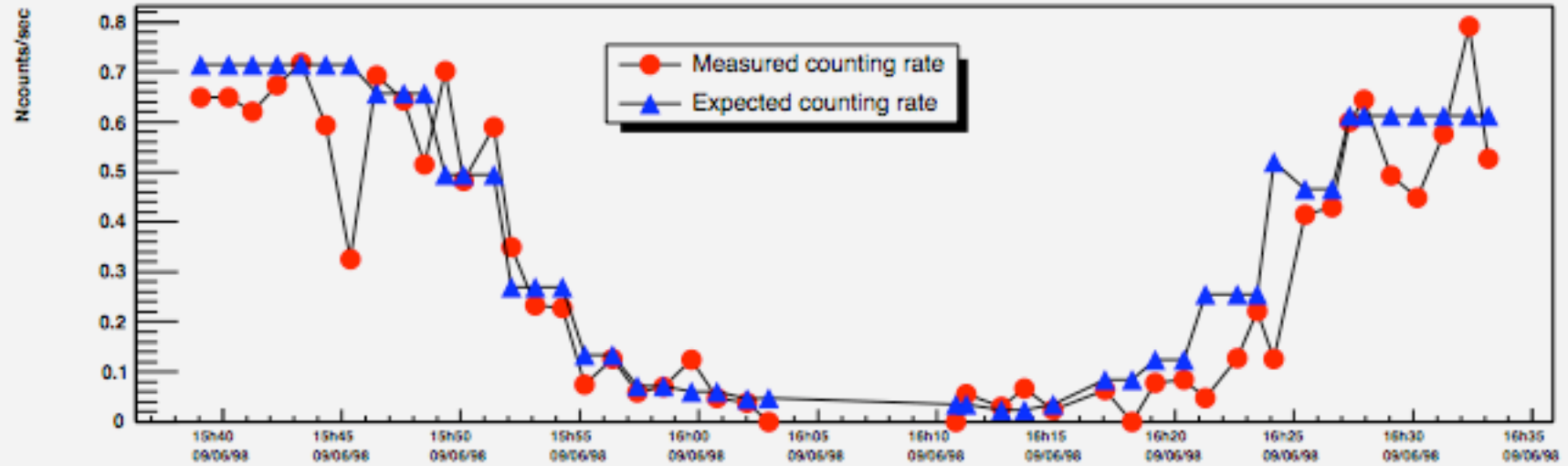
Electrons downward: Ek 0.1-> 0.3 GeV



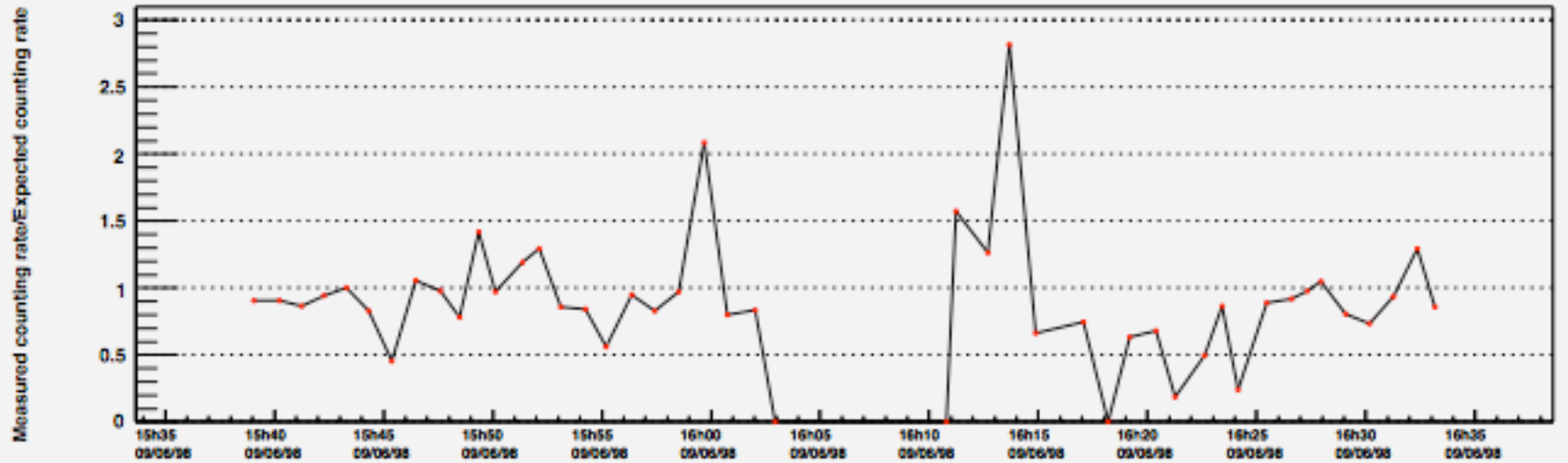




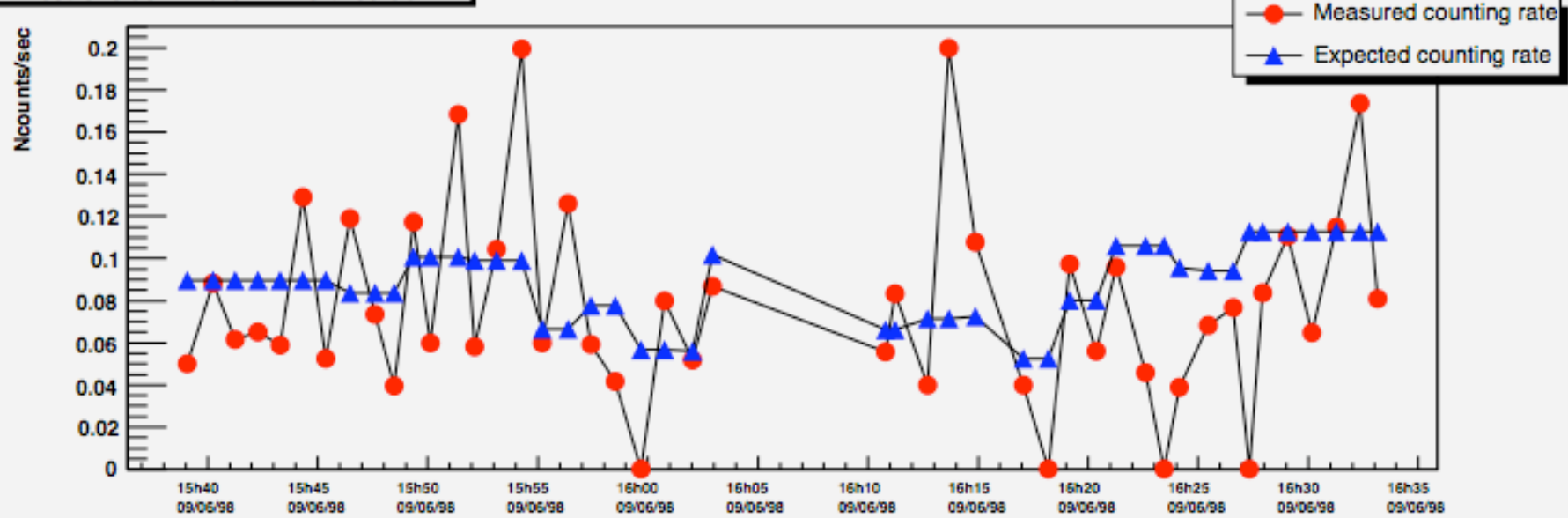
Electrons downward: Ek 3 -> 10 GeV



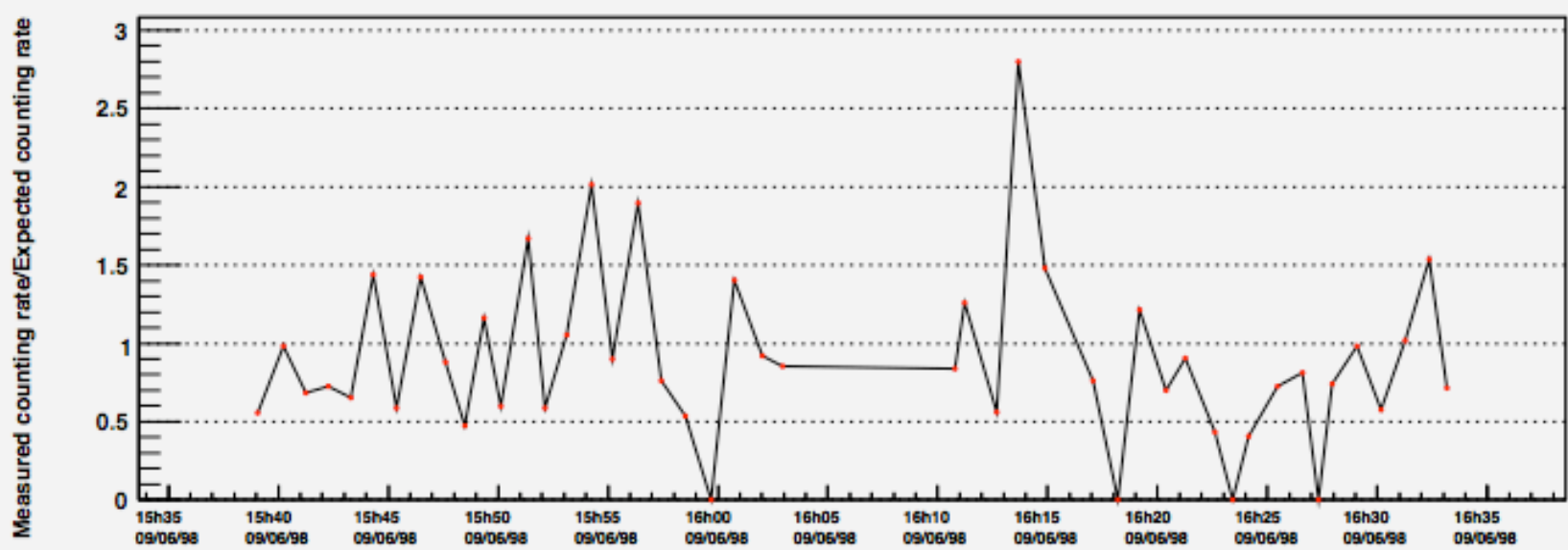
Electrons downward: Ek 3 -> 10 GeV

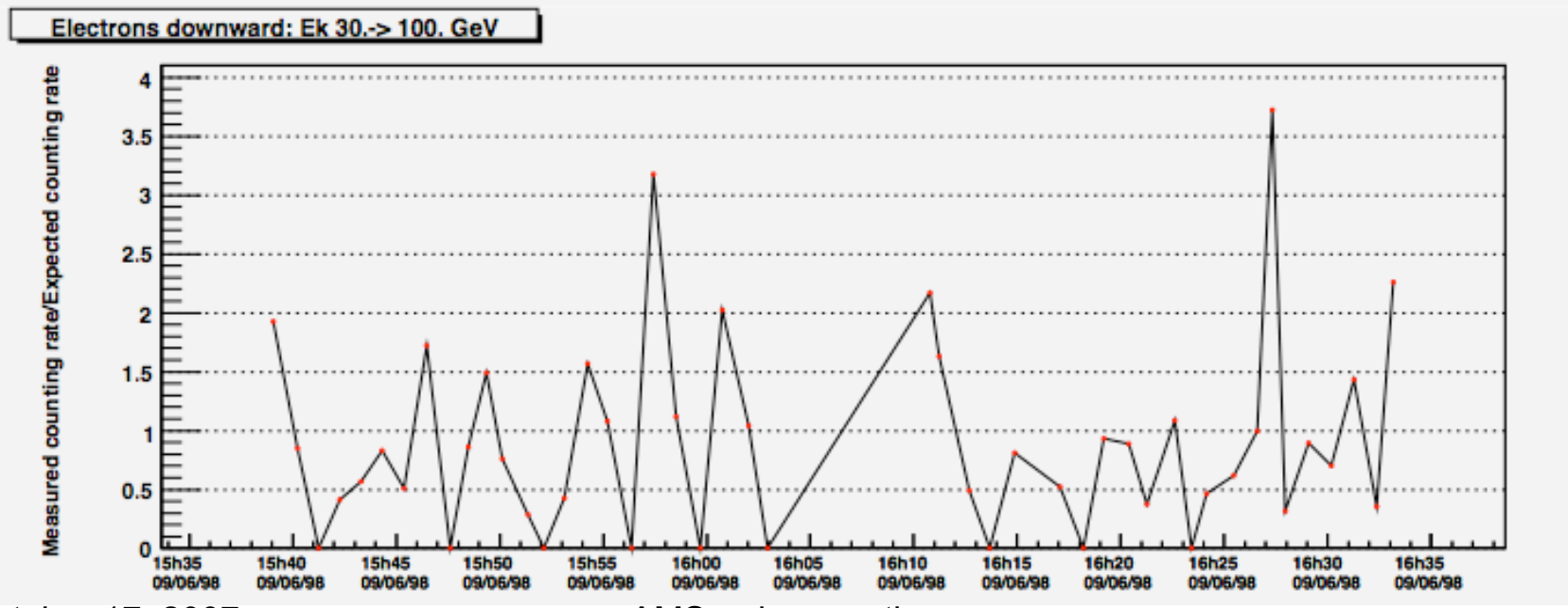
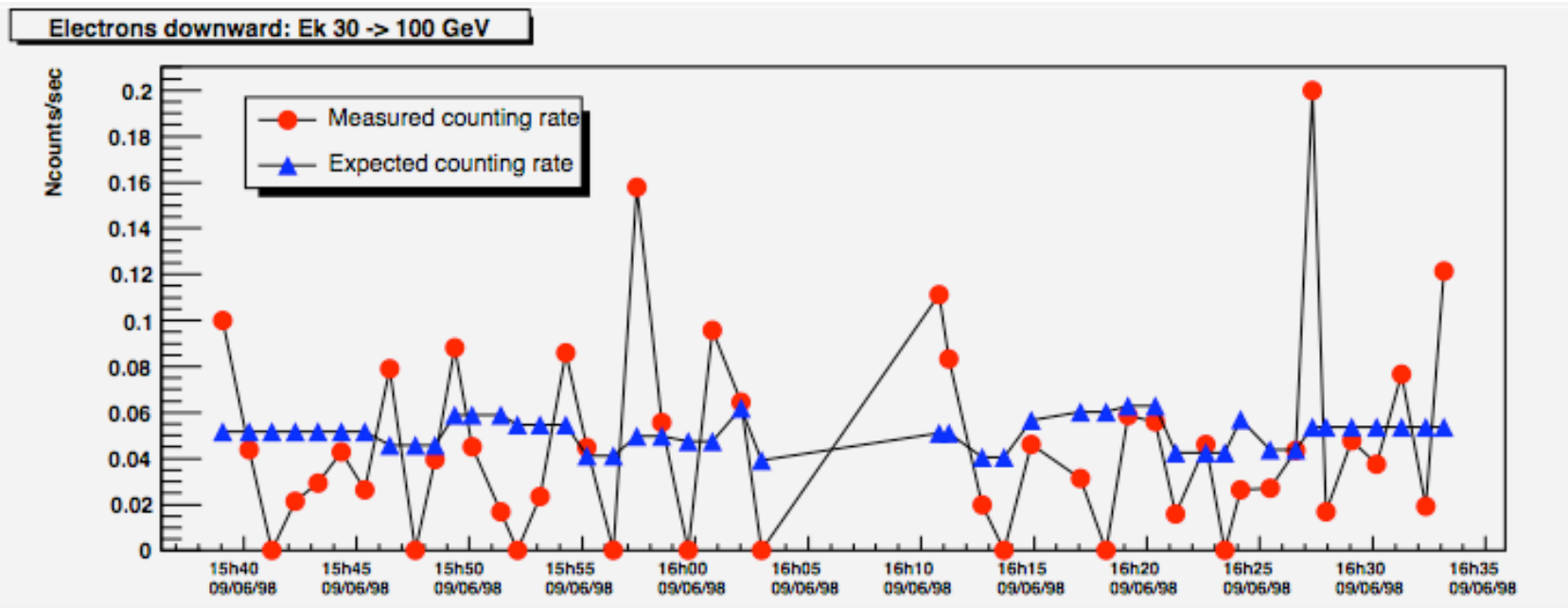


Electrons downward: Ek 10 -> 30 GeV

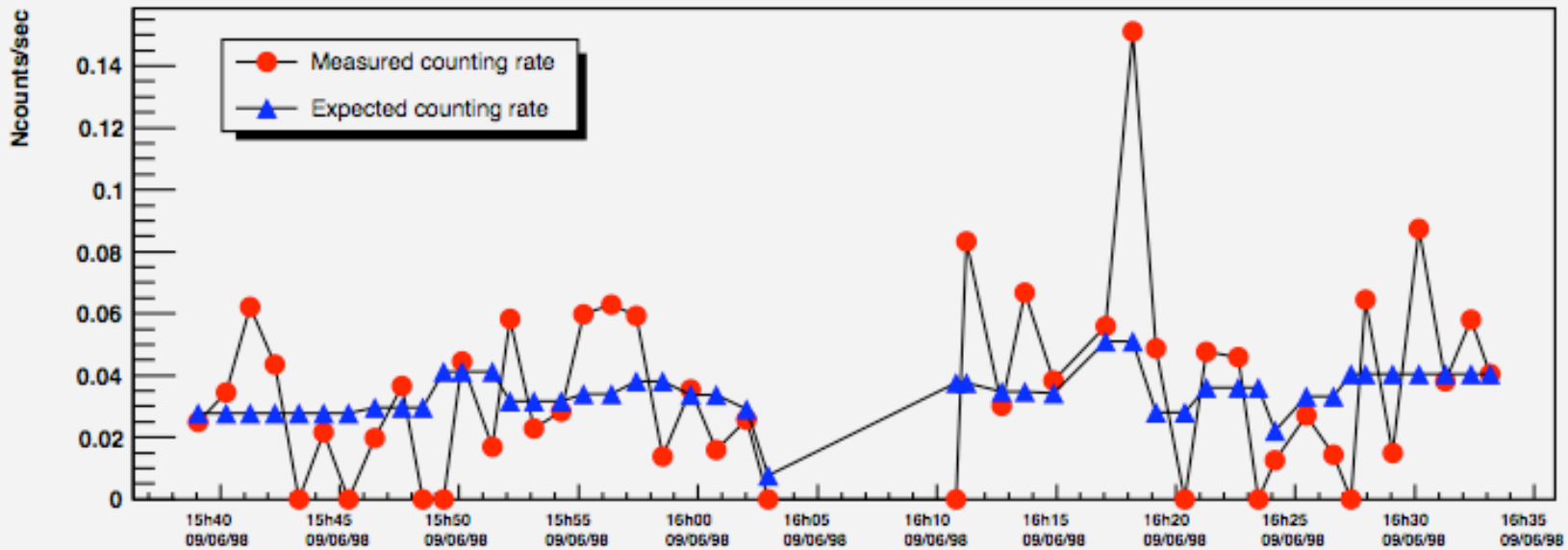


Electrons downward: Ek 10 -> 30. GeV

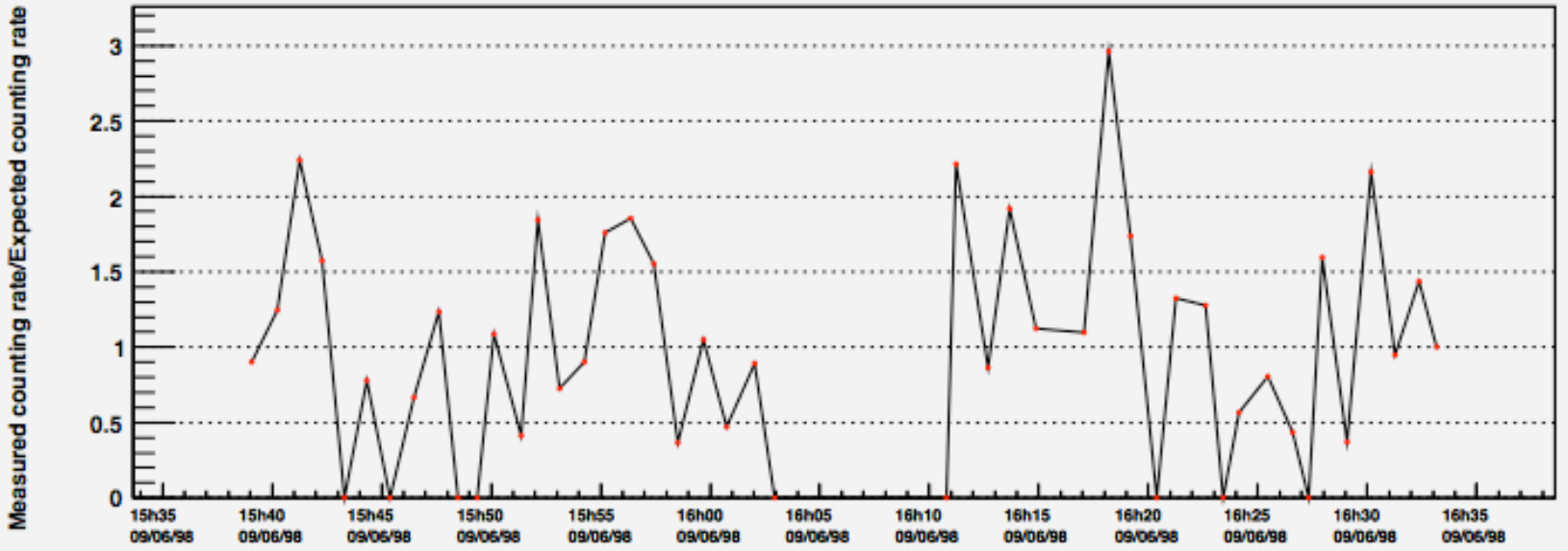




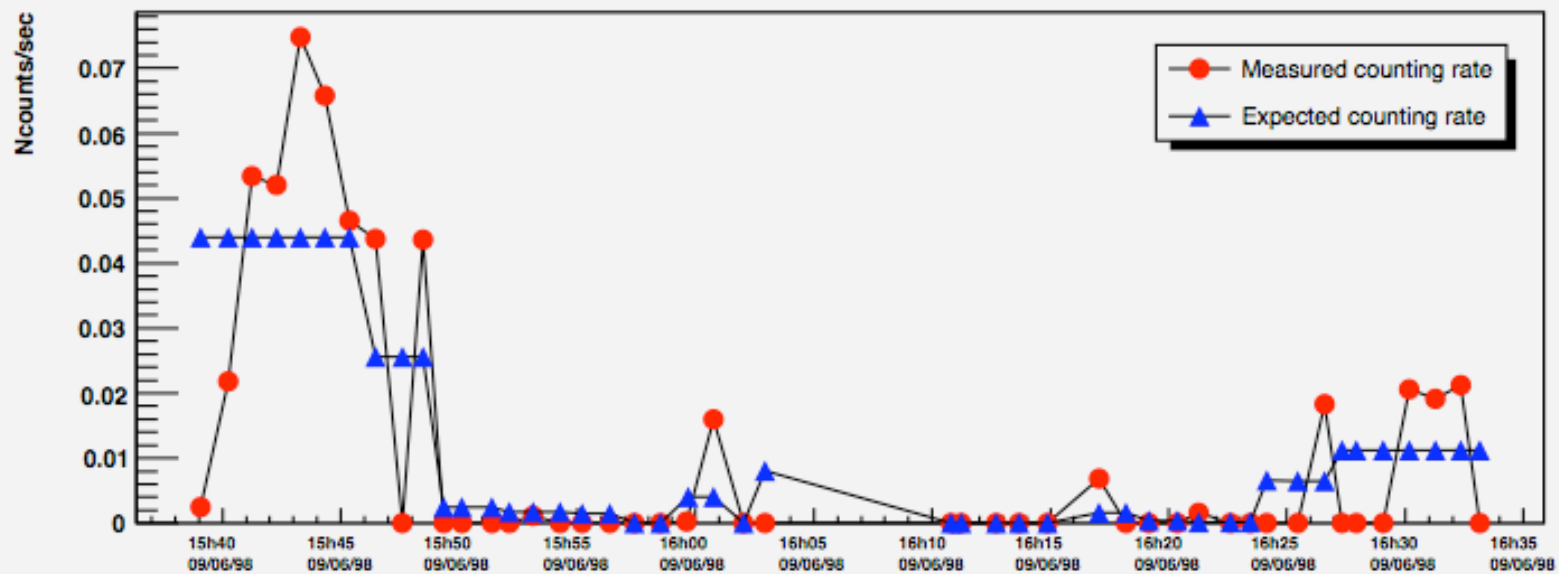
Electrons downward: Ek 100 -> 200 GeV



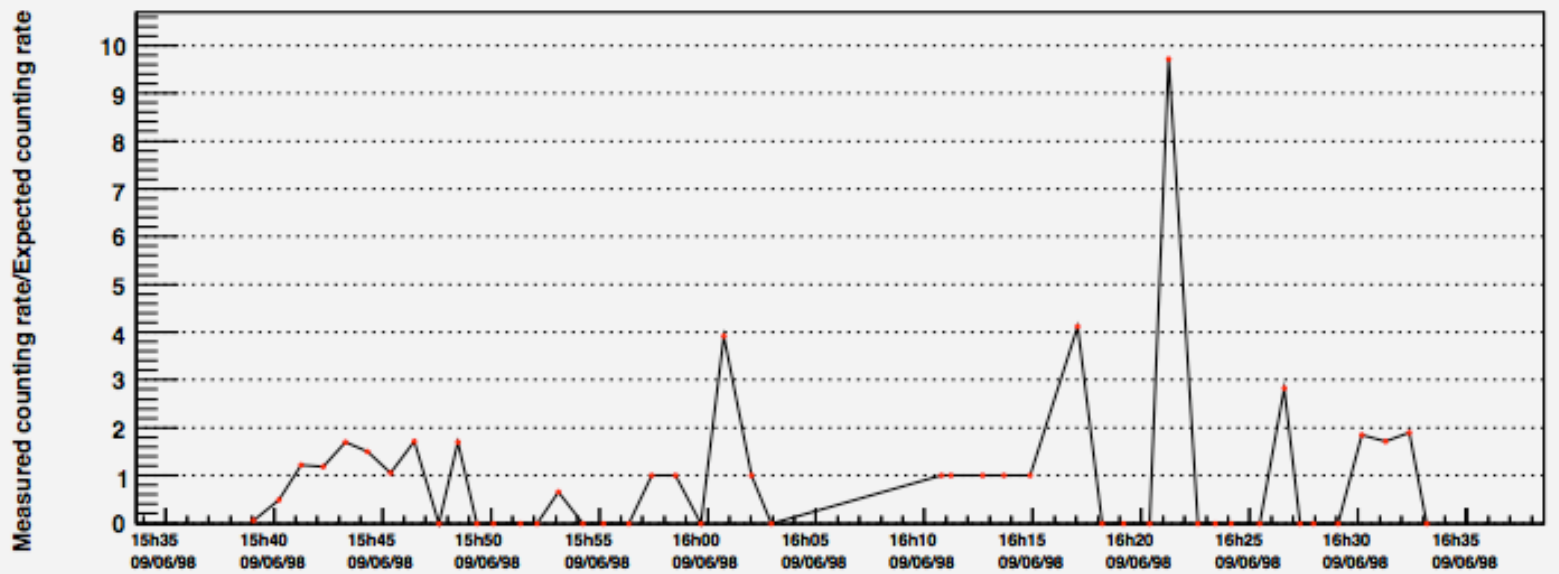
Electrons downward: Ek 100.-> 200. GeV

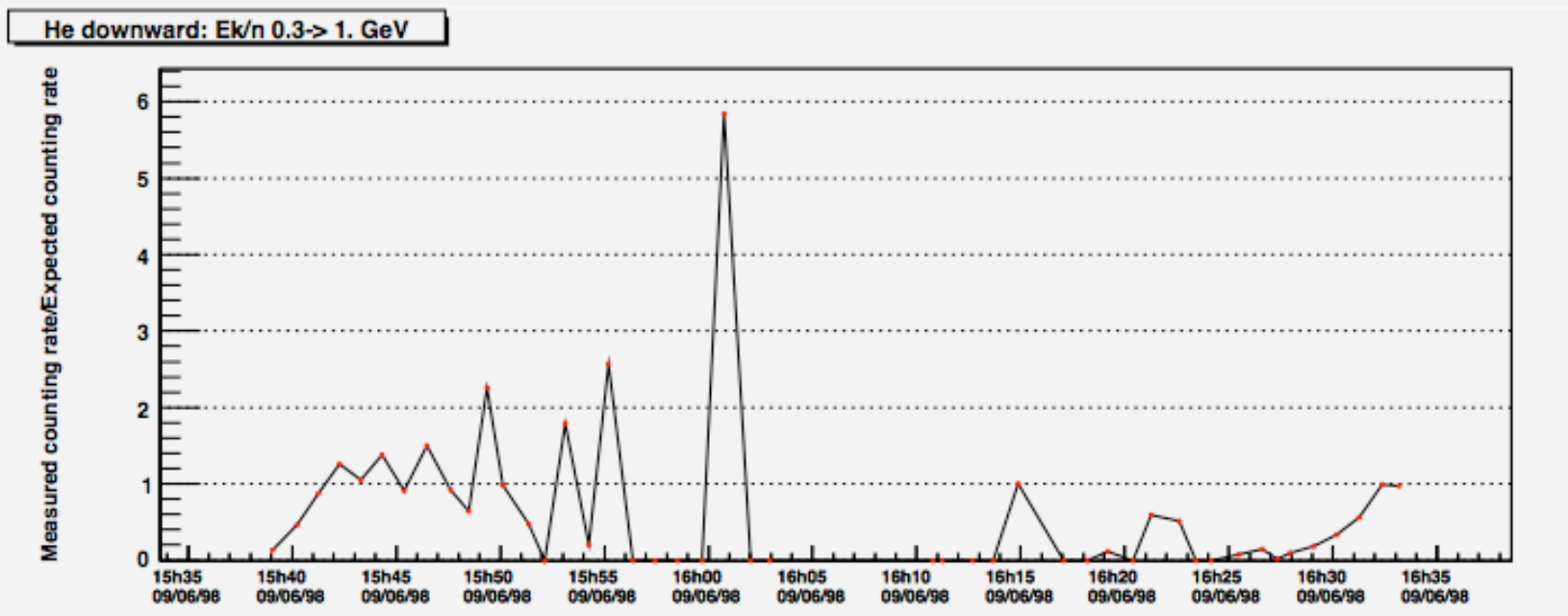
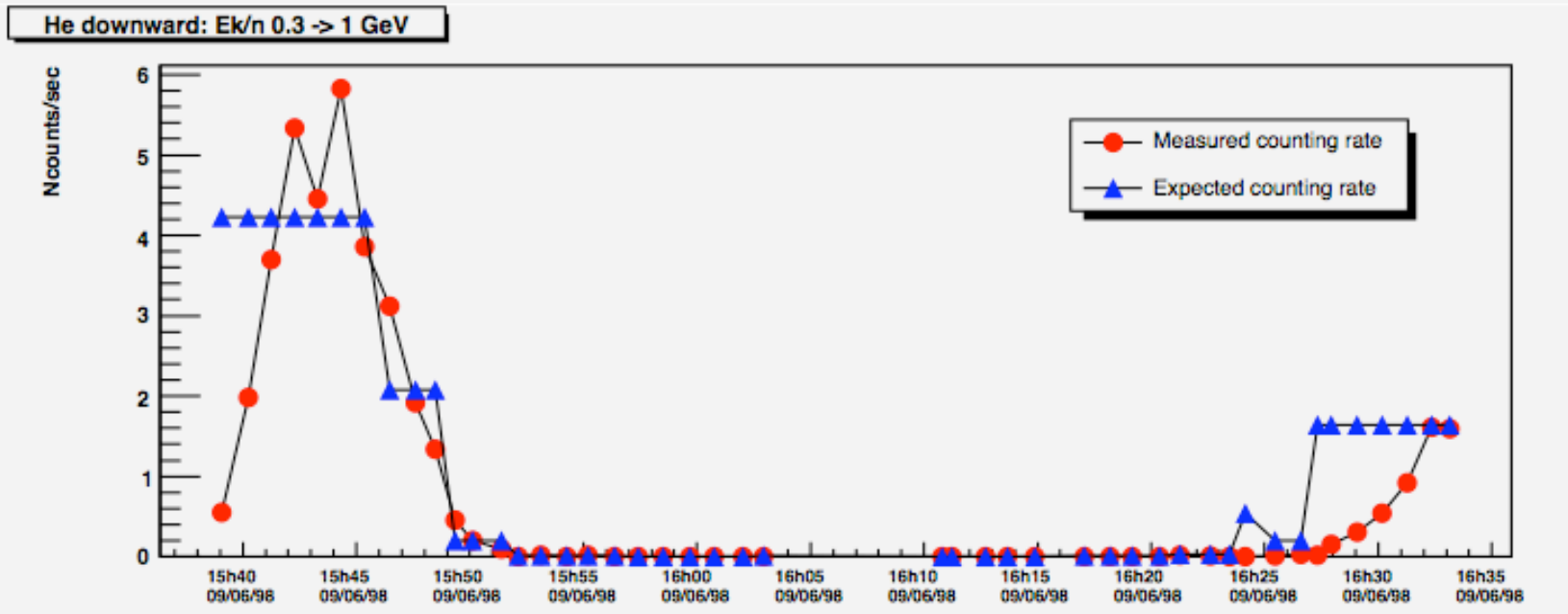


He downward: Ek/n 0.1 -> 0.3 GeV

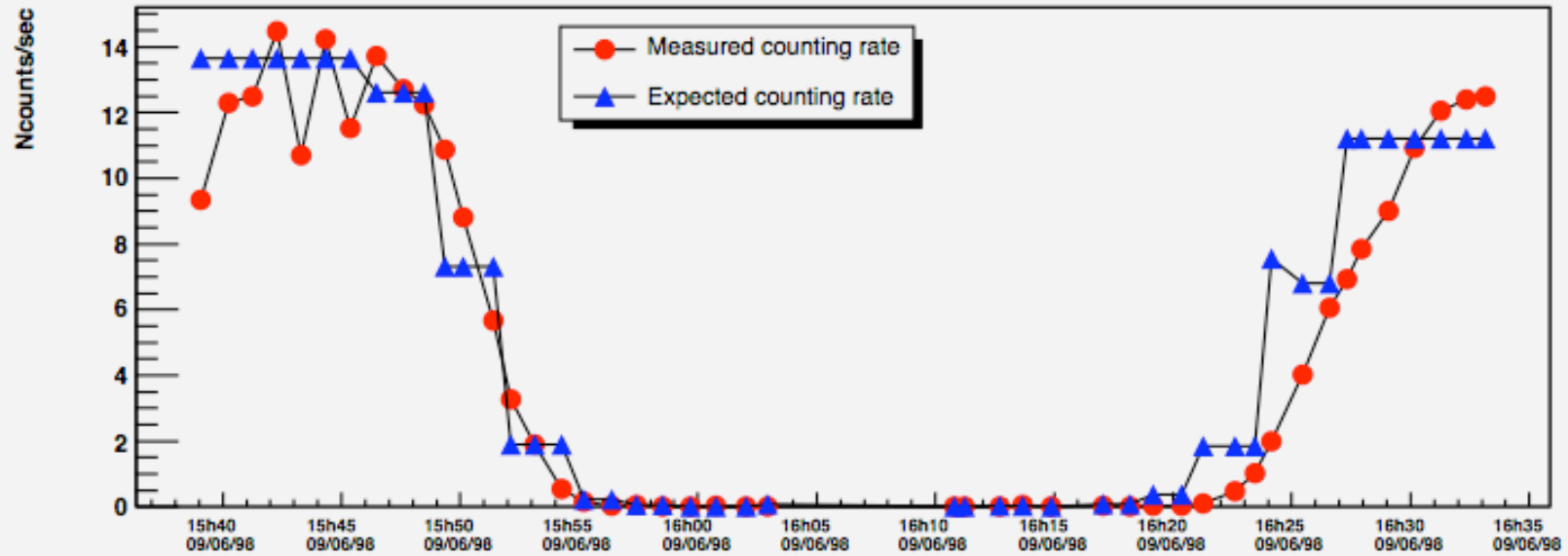


He downward: Ek/n 0.1-> 0.3 GeV

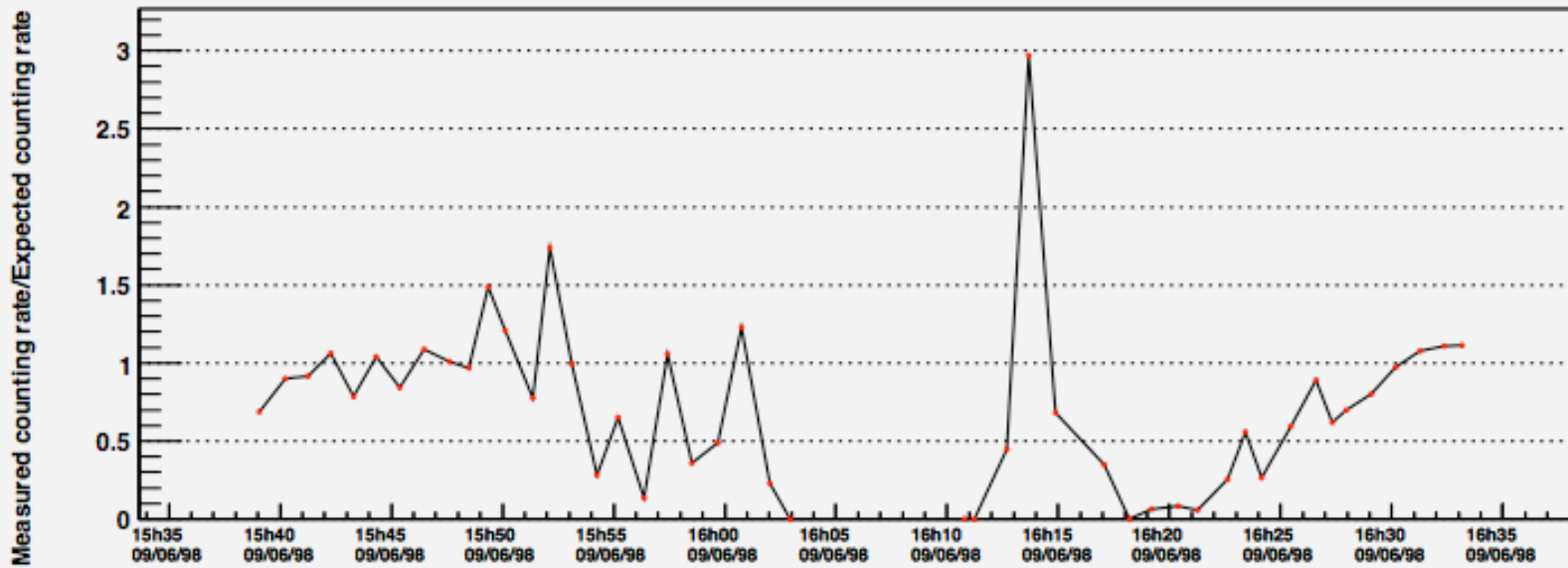




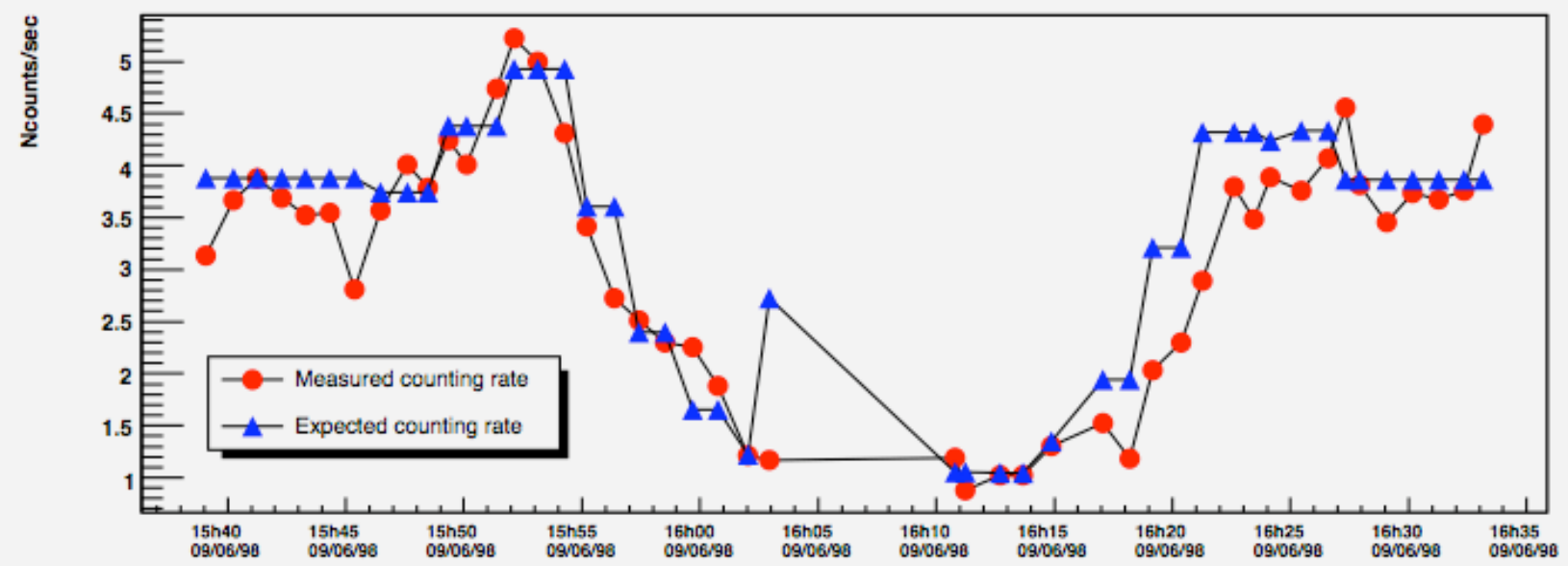
He downward: Ek/n 1 -> 3 GeV



He downward: Ek/n 1.-> 3. GeV

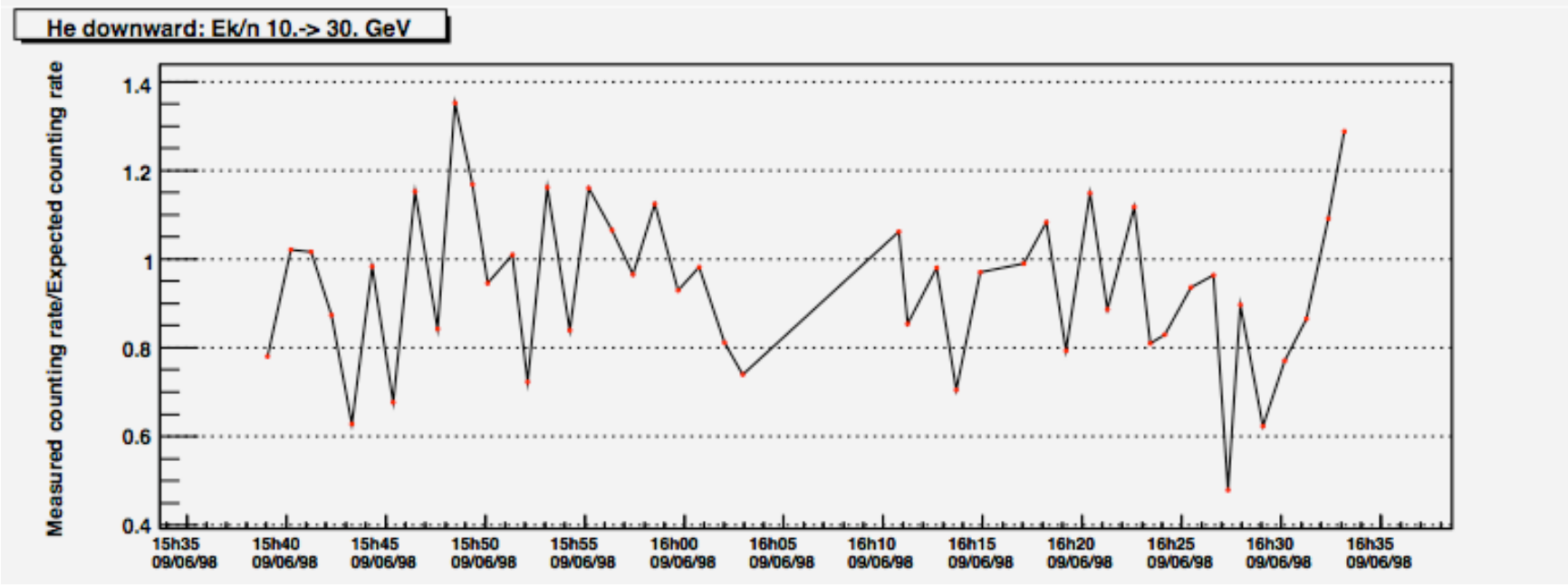
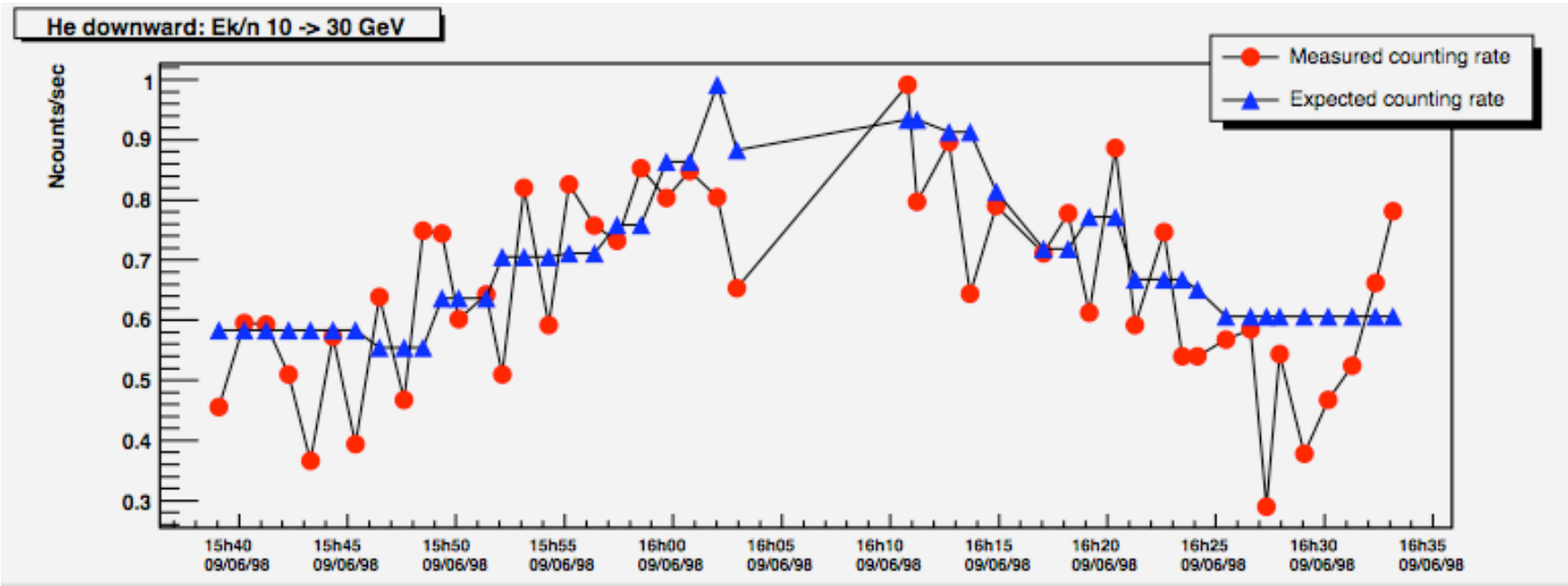


He downward: Ek/n 3 -> 10 GeV

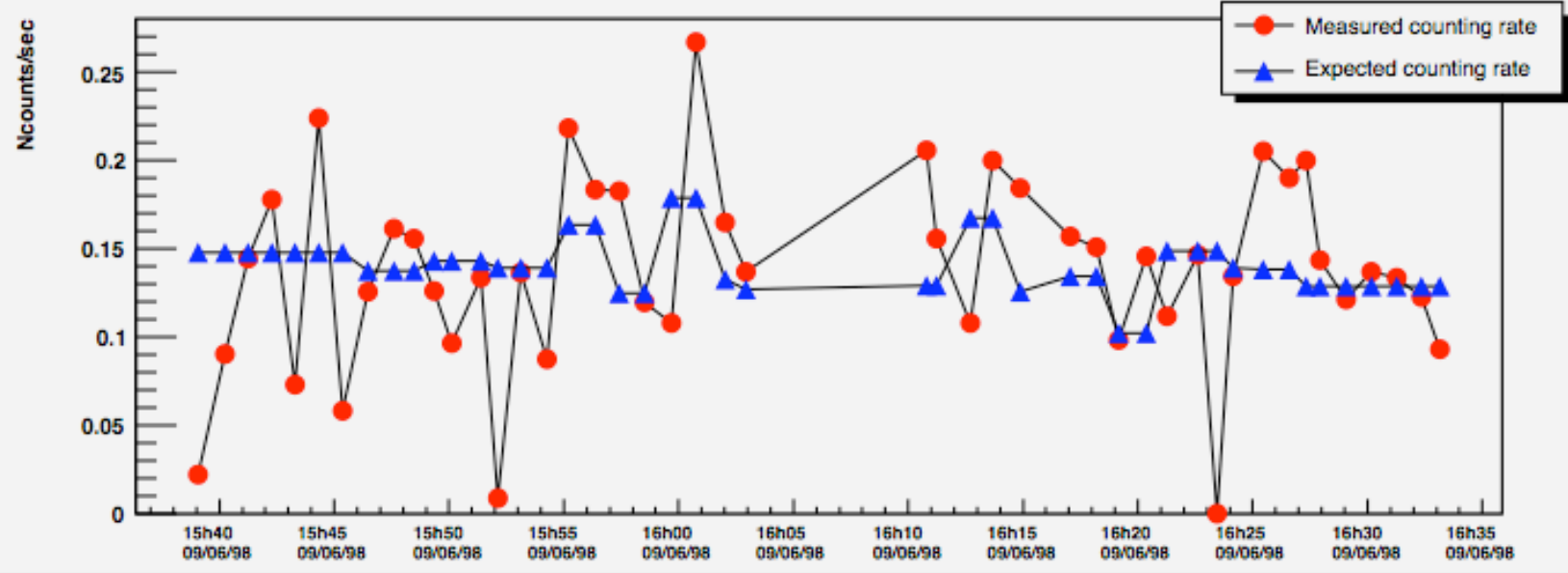


He downward: Ek/n 3.-> 10. GeV





He downward: Ek/n 30 -> 100 GeV



He downward: Ek/n 30.-> 100. GeV

