



# ZEUS Status

---

Uwe Schneekloth  
DESY

HERA Coordination Meeting  
28.03.2006

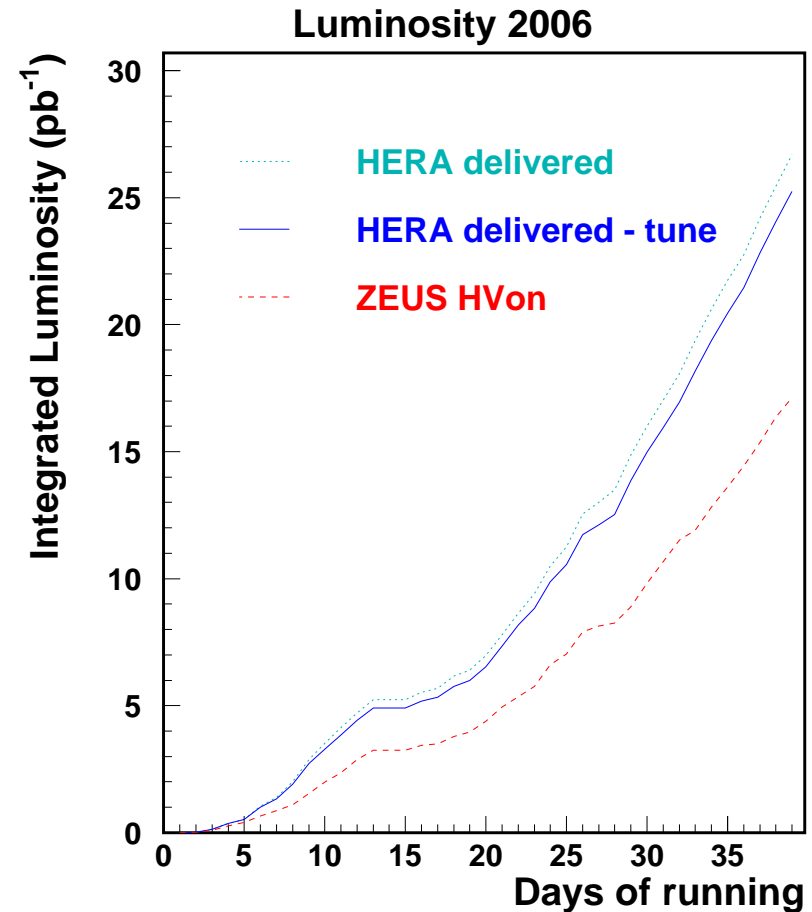
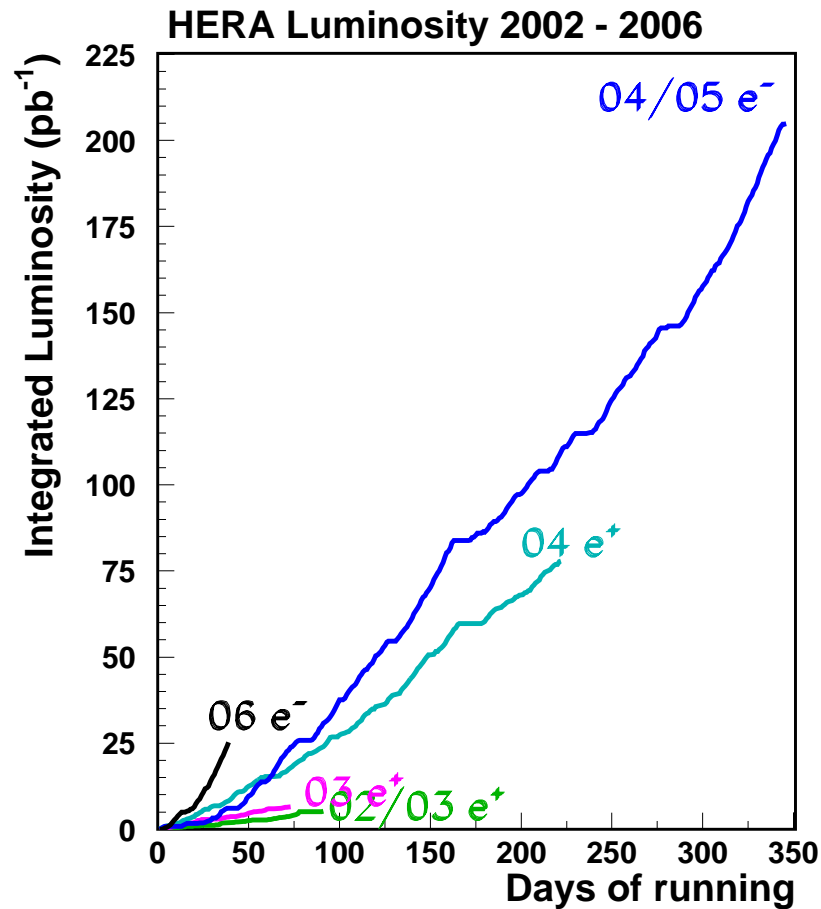


# Shutdown

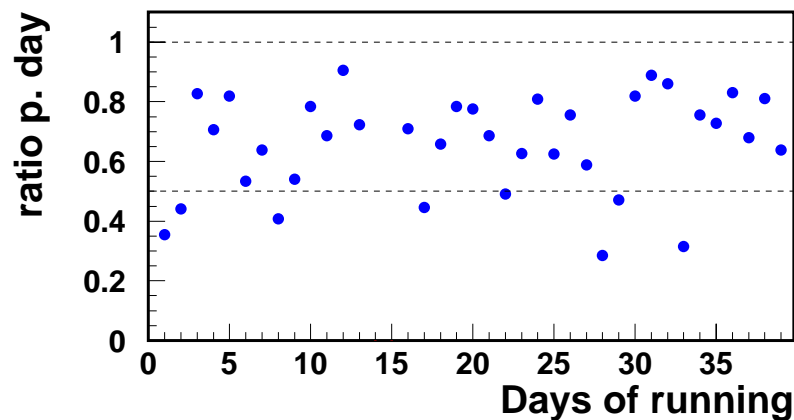
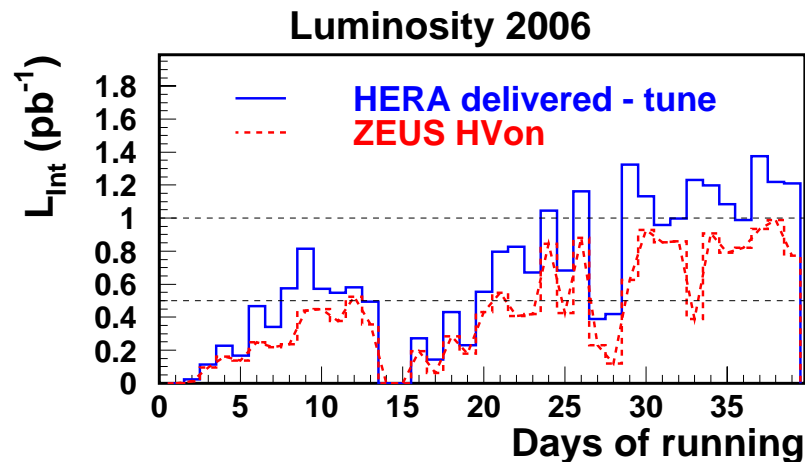
---

- Main effort
  - Installation of cooling in forward region to avoid stress on flange of solenoid
    - Major effort to pull FDET with GO in place.
  - Replaced screws on flange. Old ones had been overstressed.
    - Insulation vacuum pressure improved significantly.
- Temperatures now  $<30^{\circ}\text{C}$  as expected.
- No leaks in insulation vacuum anymore
- STT now on. Solenoid has been running without any problems.

# Integrated Luminosity

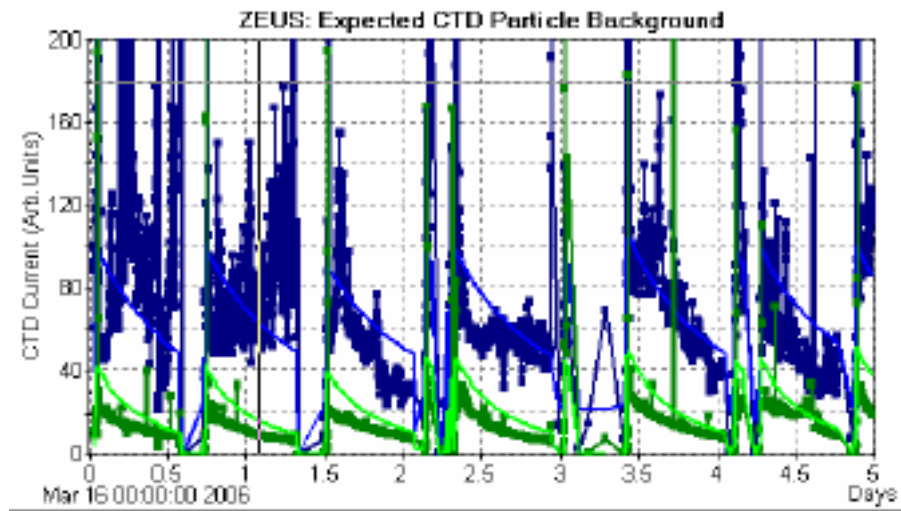


# Daily Luminosity and Efficiency

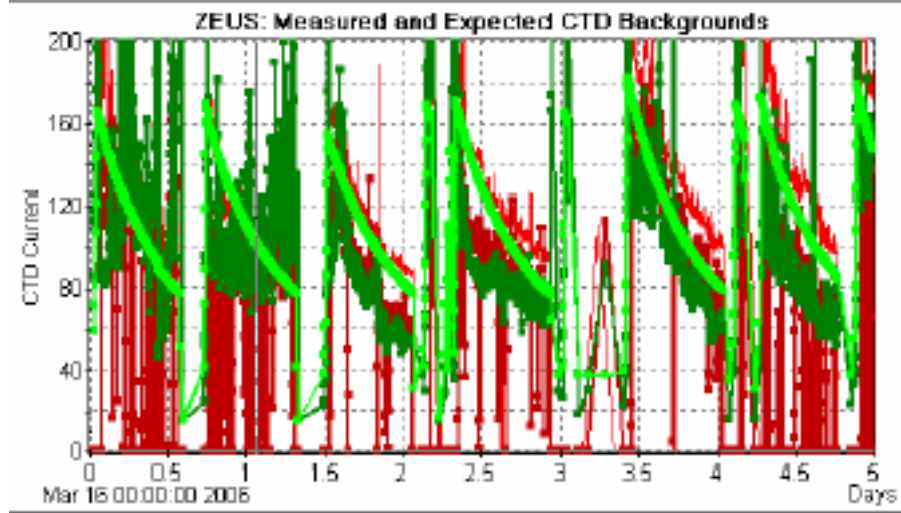


- Recently, delivered luminosity  $>1\text{pb}^{-1}/\text{day}$
- Efficiency varying; good fills 80-90%, bad fills  $<50\%$ .
- Average efficiency so far 68%
- Main reason for low efficiency is poor background conditions, small (10-15%) inefficiency due to DAQ or detector problems.

# Background Conditions

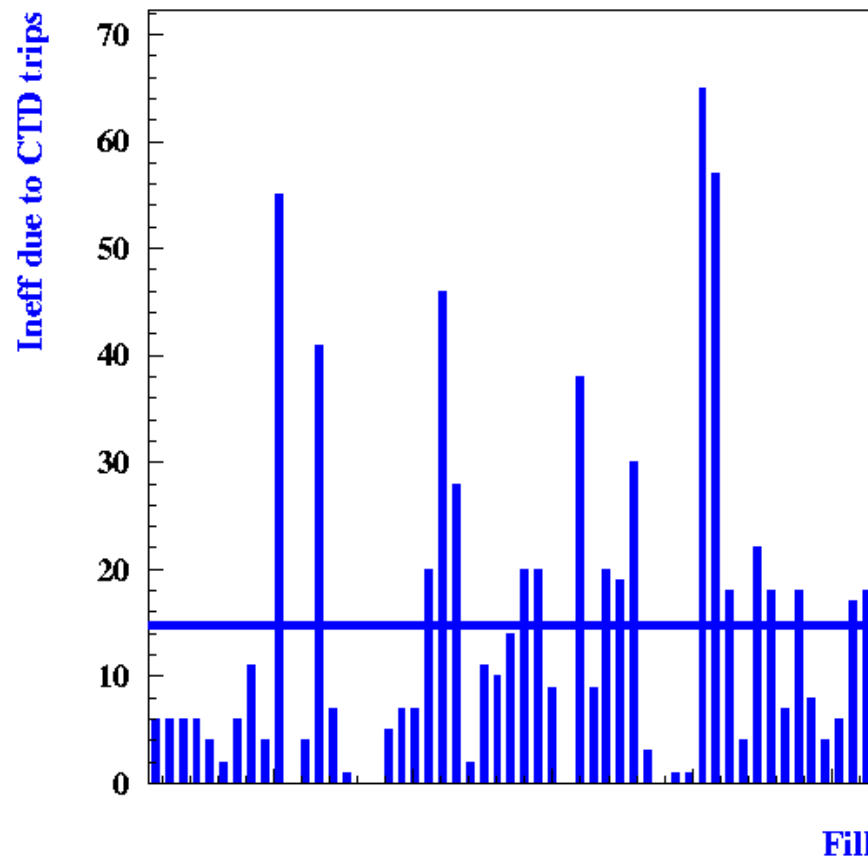


16.-20.03.



# Background Conditions

Inefficiency due to CTD trips



Not included are periods of high background when the DAQ is not running.



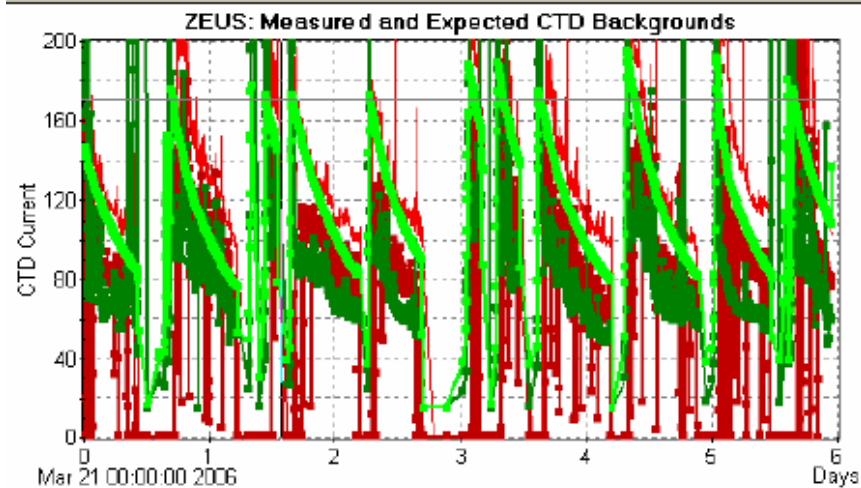
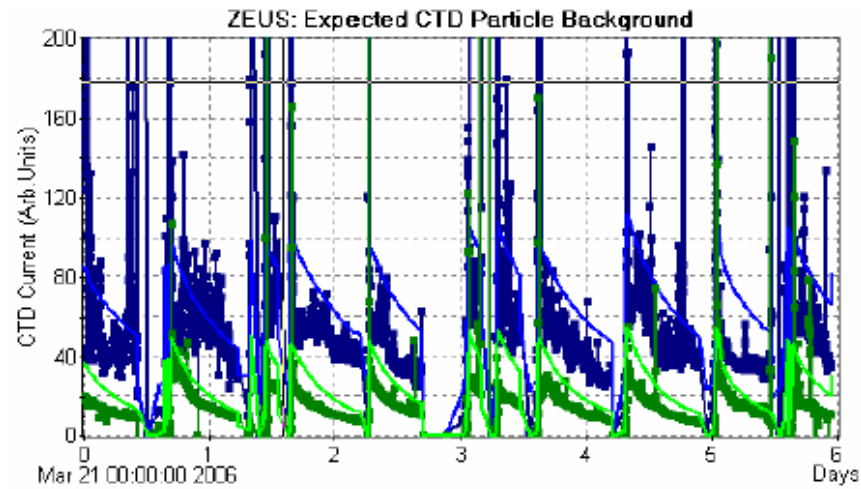
# Background Conditions

---

- Initially, somewhat high electron background
  - Upstream electron orbit
  - e collimator positions adjusted
  - One fill problem with setup of orbit stabilizer
  - Usually, no problem anymore
- Proton background varying
  - General background level acceptable, problem is short spikes.
    - One source of noise was filter of quad magnet power supply
  - Setup of proton collimators is very critical
  - Situation improved considerably since complementary jaws are being used (21.03. afternoon)

# Background Conditions

21.-26.03.



Considerable improvement since complementary jaws are being used.

efficiency 74%

losses due

- CTD trips 13%
  - DAQ/detector 13%
- (Includes some periods when DAQ was not running because background too high)





# Plans

---

- Would like to change helicity soon: 5.04. (preferred) or 3.05.2006
- Ask HERA to increase electron current and proton bunch current.
  - In principle, should stay with 150 bunches as long as electron current is limited to  $<45\text{mA}$  unless there are other constraints.