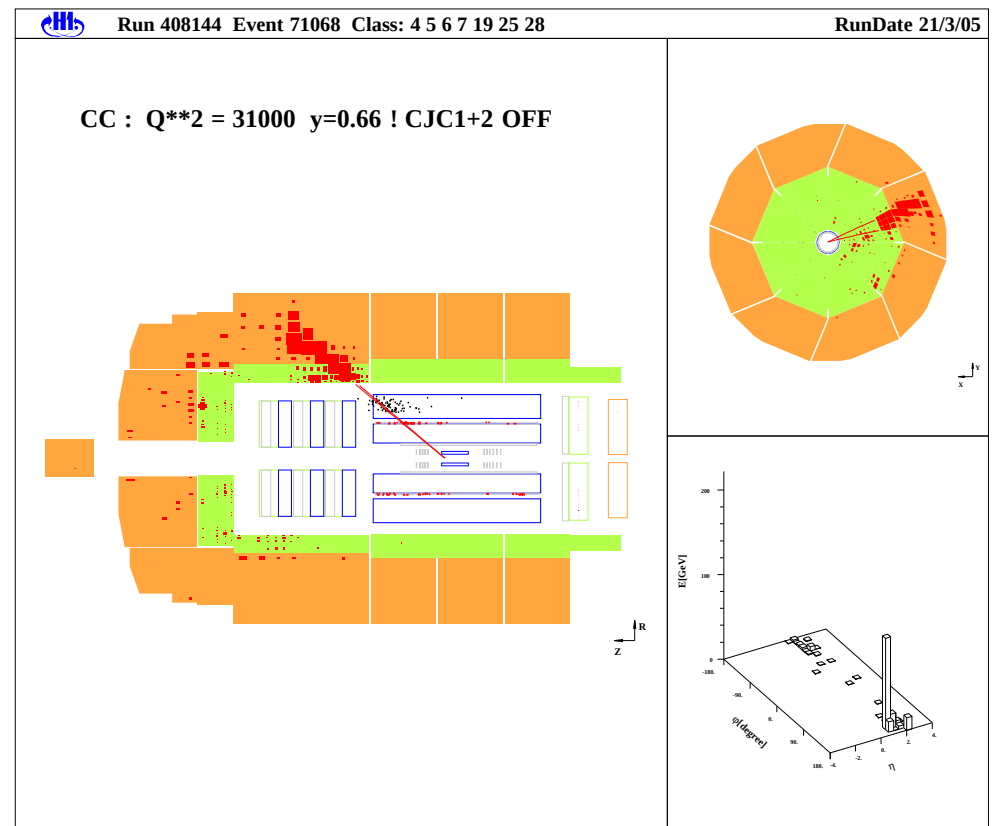
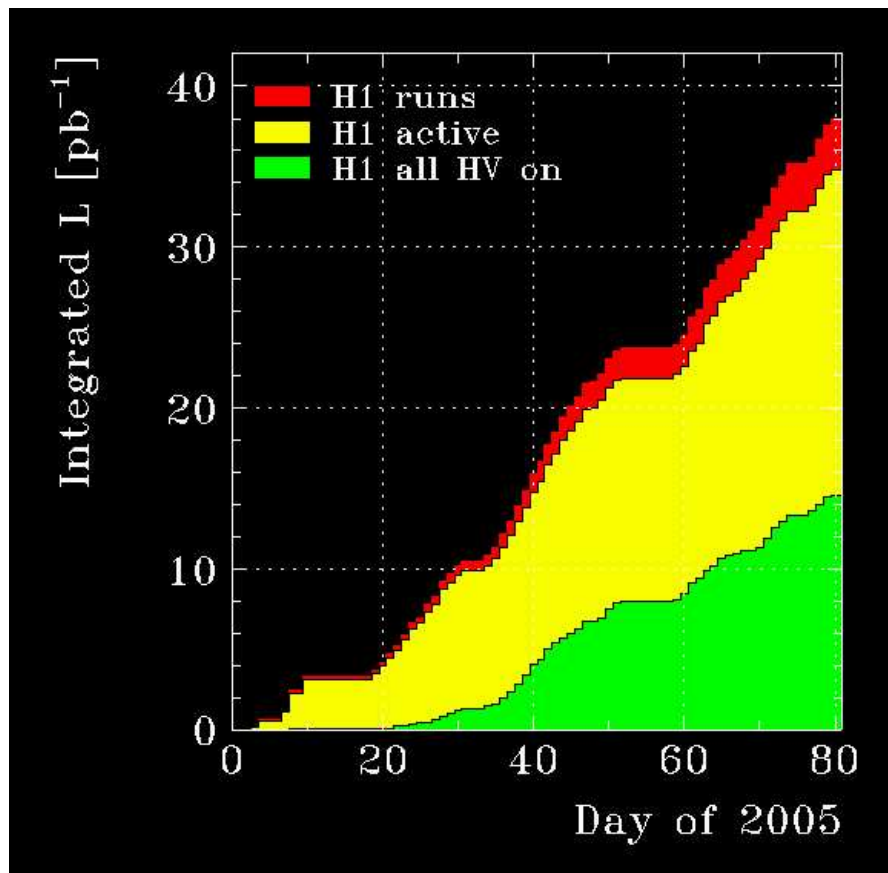


H1 running summary

S. Levonian



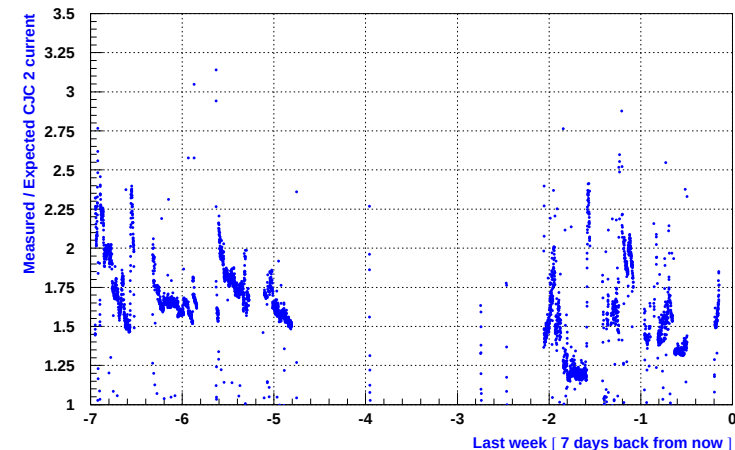
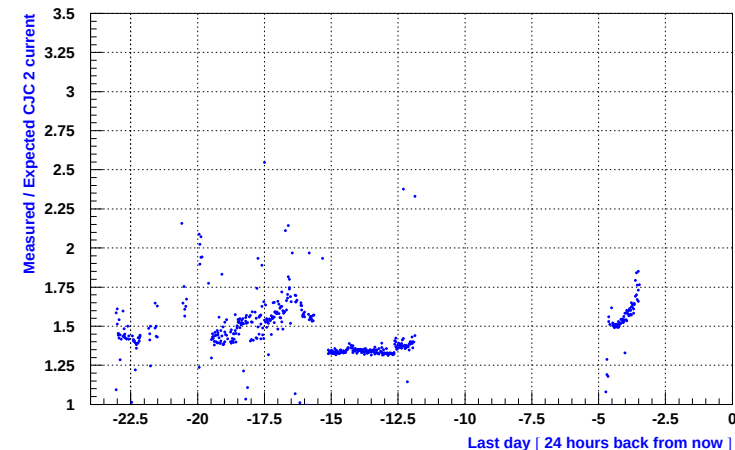
Running summary after maintenance day

2005/03/20 18.56

- Lumi running statistics:

- ▷ 7 fills (58 hours of lumi production)
 $I_p \times I_e = (80 \div 86) \times (31 \div 37) \text{ mA}^2$
- ▷ One e-beam loss (27 → 7 mA),
3 fills with low e^- life time (7-8 hours)
- ▷ Vacuum in H1 IP improved (base line on 25–30% lower), however general bgr conditions were even worse than last week.
Typically:
 - * first 2 hours – p-bgr is OK, but e-bgr (SR) is large (40-50 kHz)
 - * then e-bgr improves, but p-background develops 2-min spike structure
 - * in addition, γ –spot at lumi PD shifted by 1.6cm horizontally – strange orbit

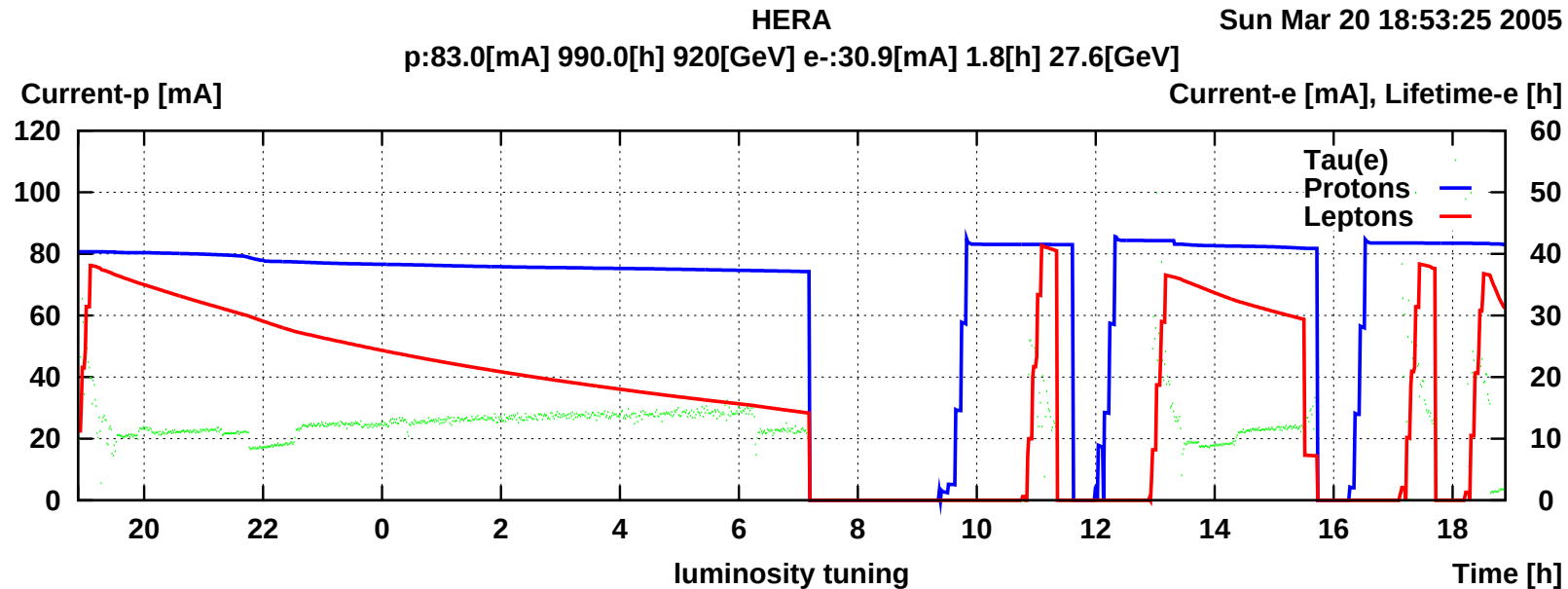
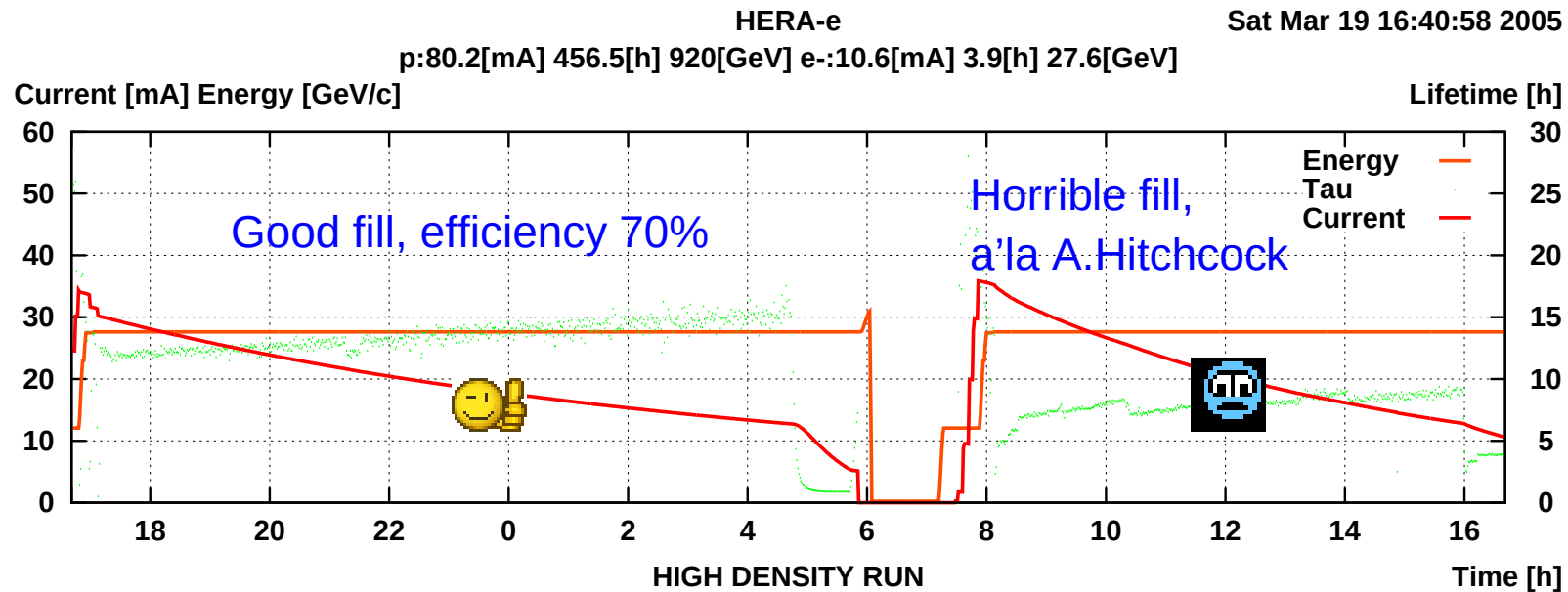
Normalized CJC 2 current



- H1 data collection

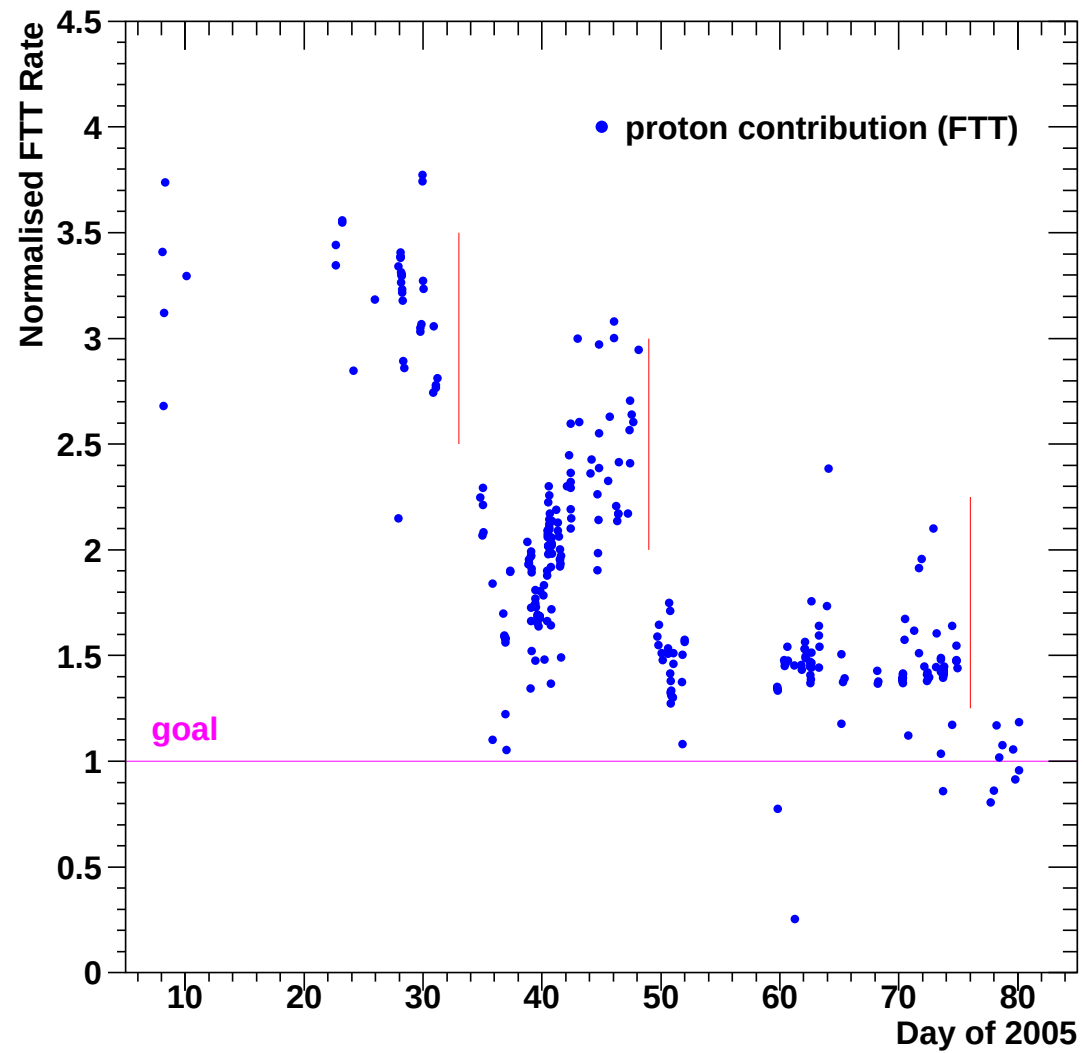
- ▷ 1.7 pb^{-1} with all HV on out of 3.5 pb^{-1} delivered by HERA
- ▷ overall efficiency only 50% (30-75%) due to frequent trips of tracking chambers

Lumi History: Friday-Sunday



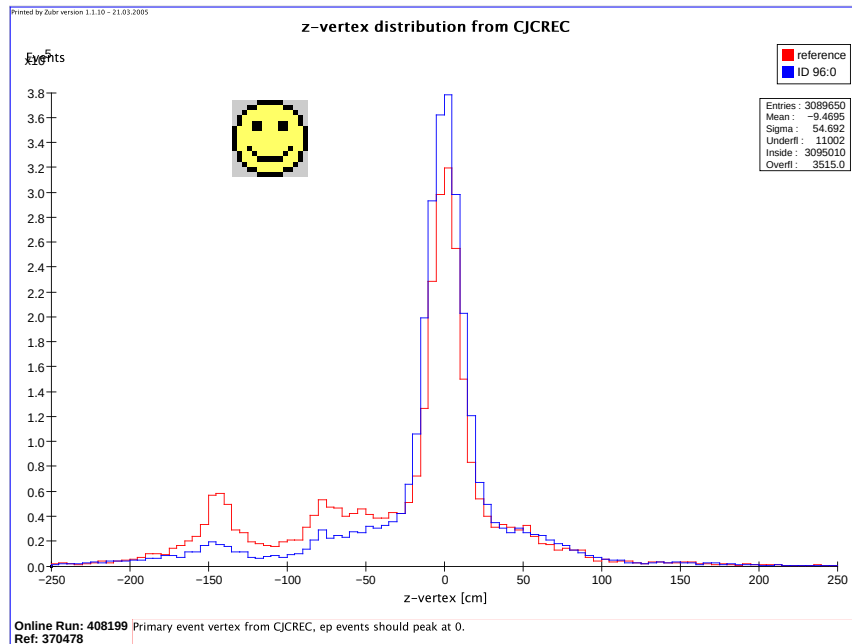
Vacuum improvement in North IP

Time Dependence of Proton Background in 2005

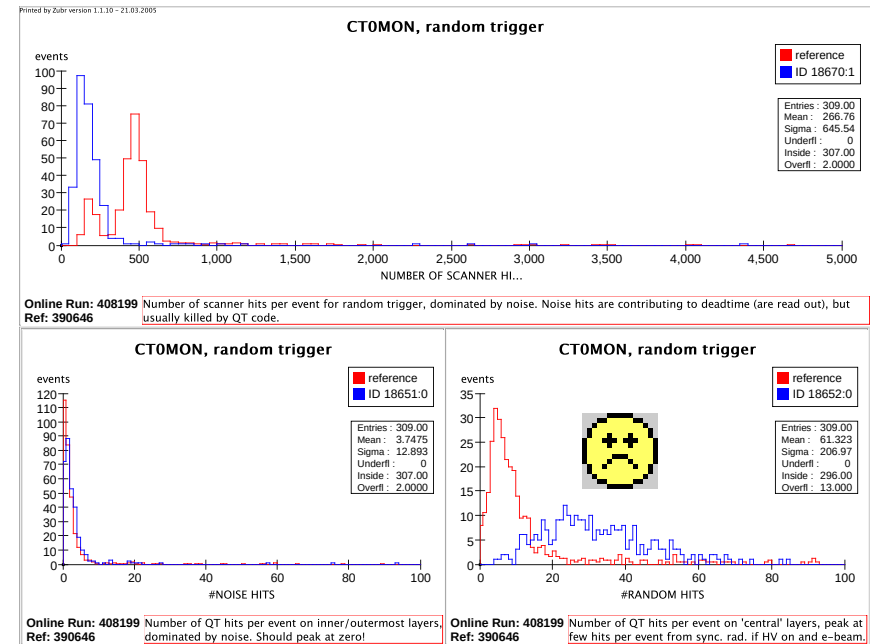


Vacuum improvement in North IP

(blue histograms – current run, red histograms – older run)



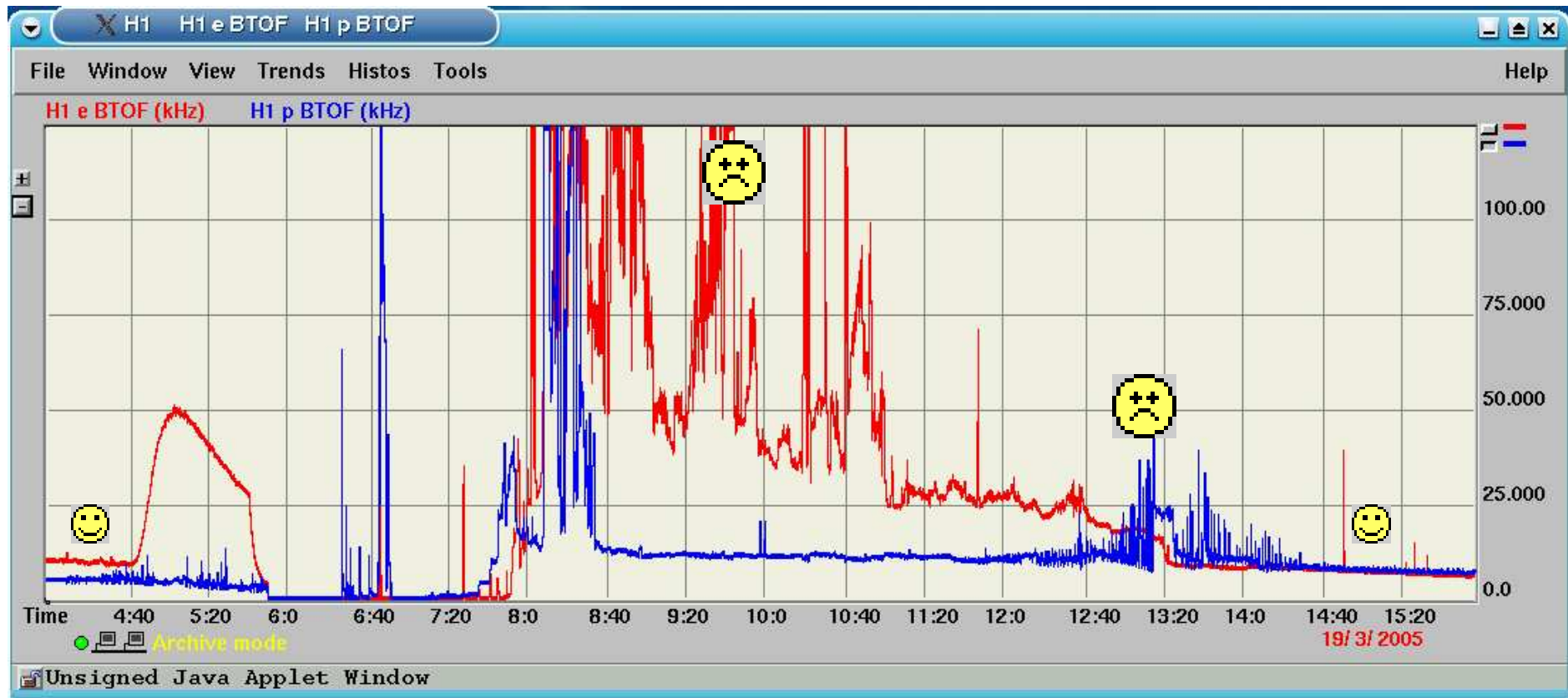
Z vertex [cm]



CJC hit multiplicity

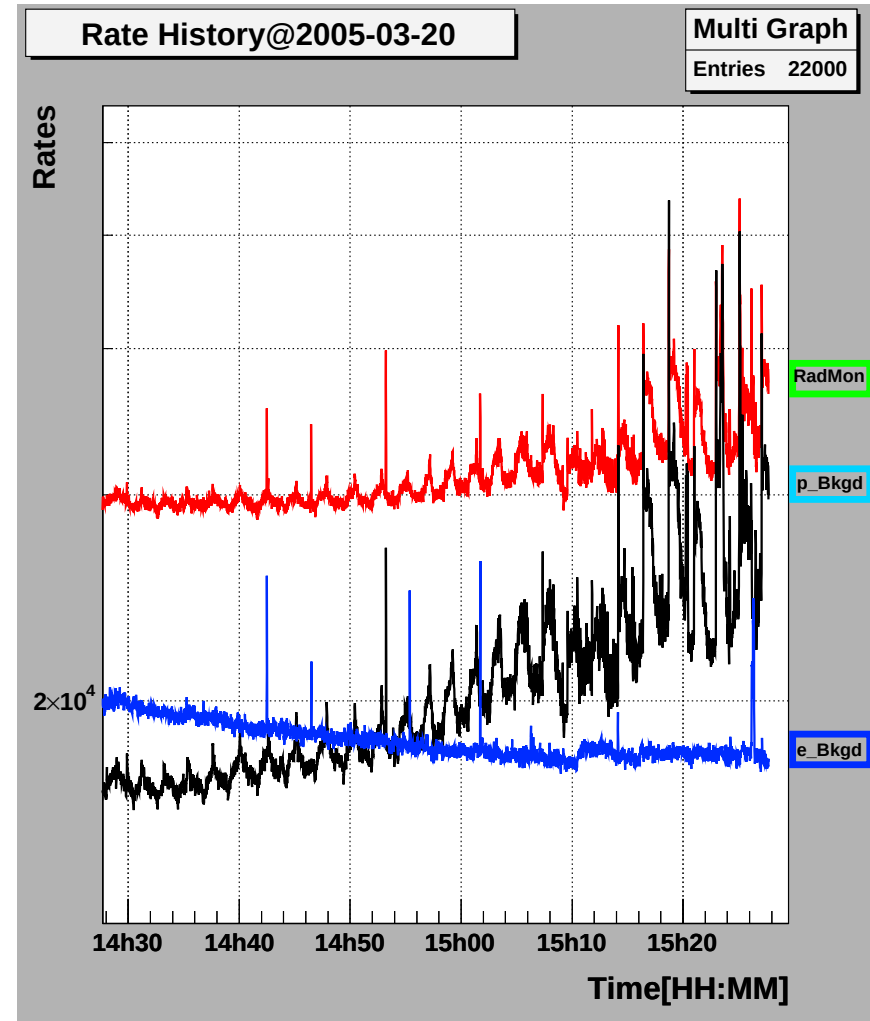
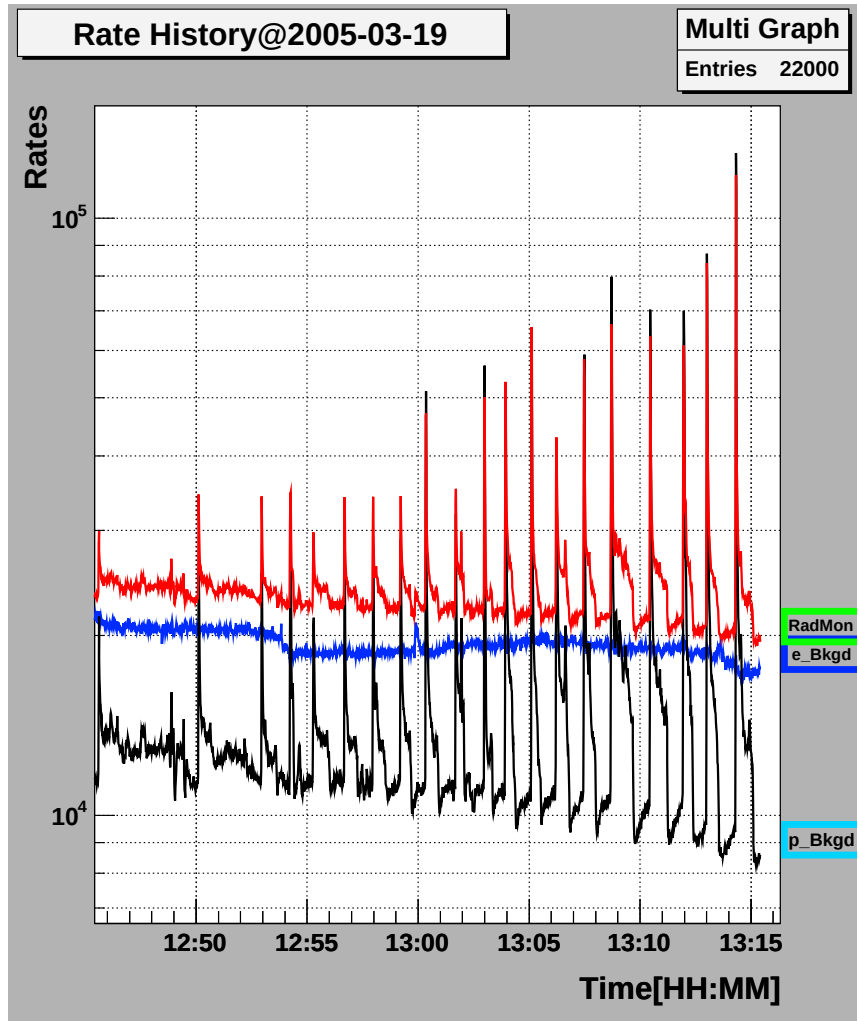
Less particle background, but more SR hits

Background Rates: Saturday-Sunday

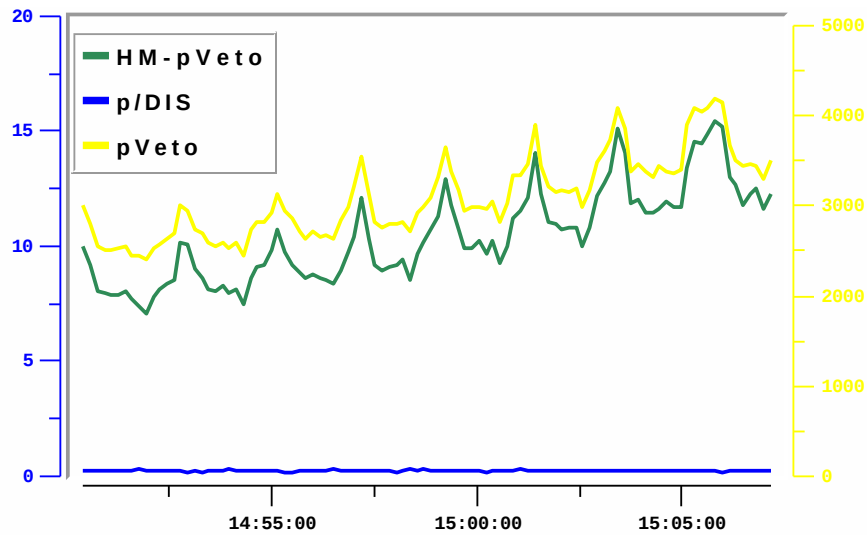


For this kind of fills data taking efficiency is only 30%

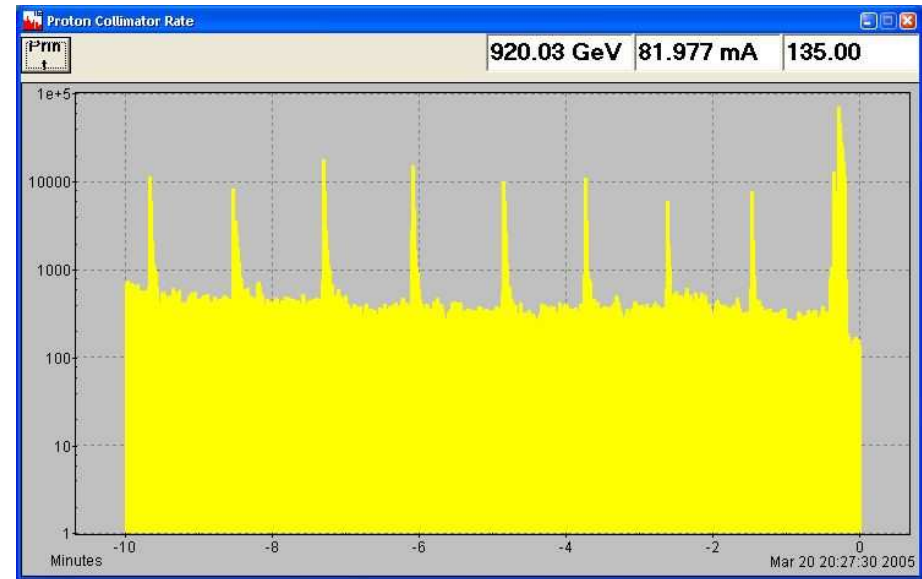
p-beam instabilities



p-beam instabilities



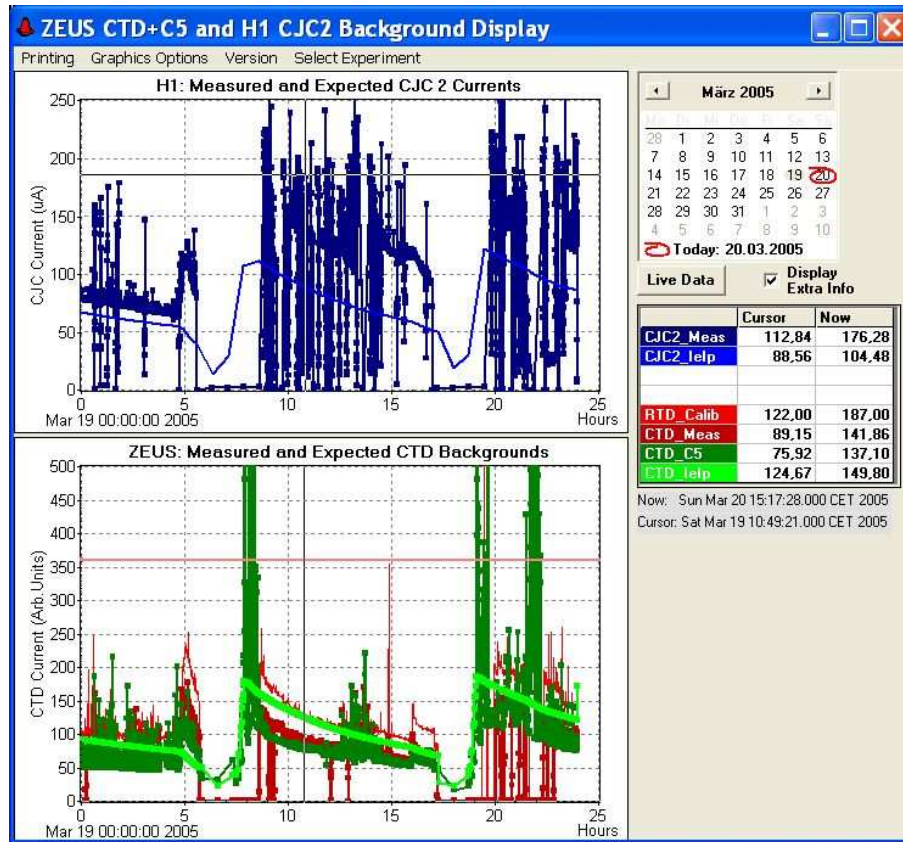
HERMES monitor



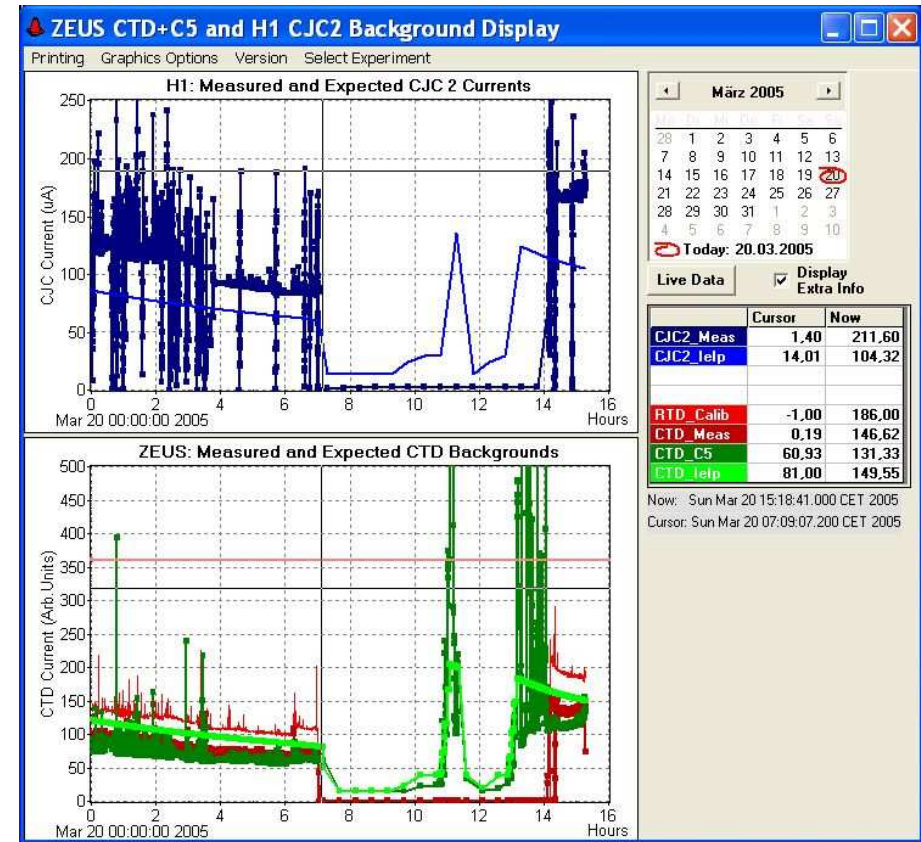
HERA collimator rates

Hidden positive feedback ??

H1 vs ZEUS Central Tracker conditions



Saturday, 19-Mar

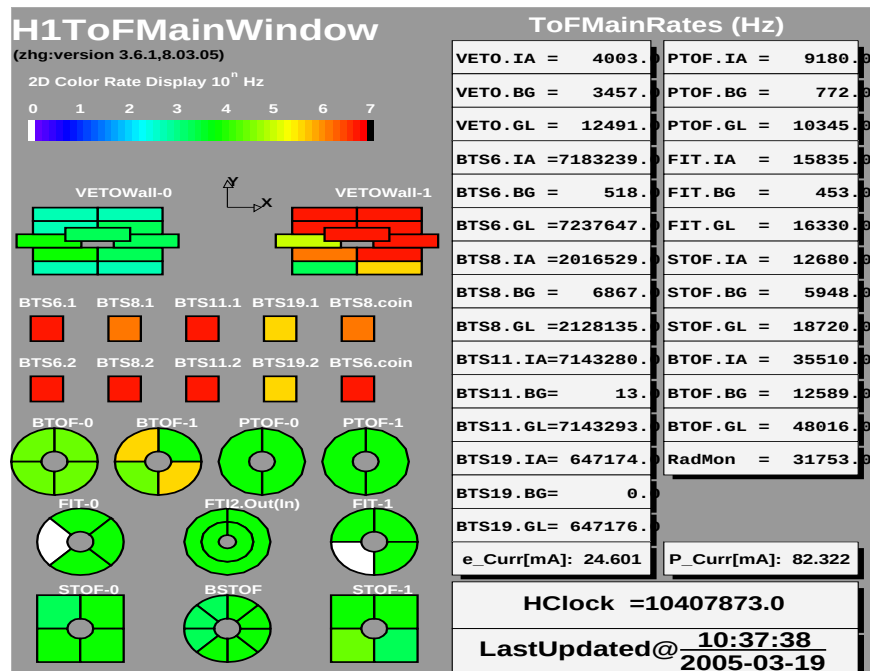
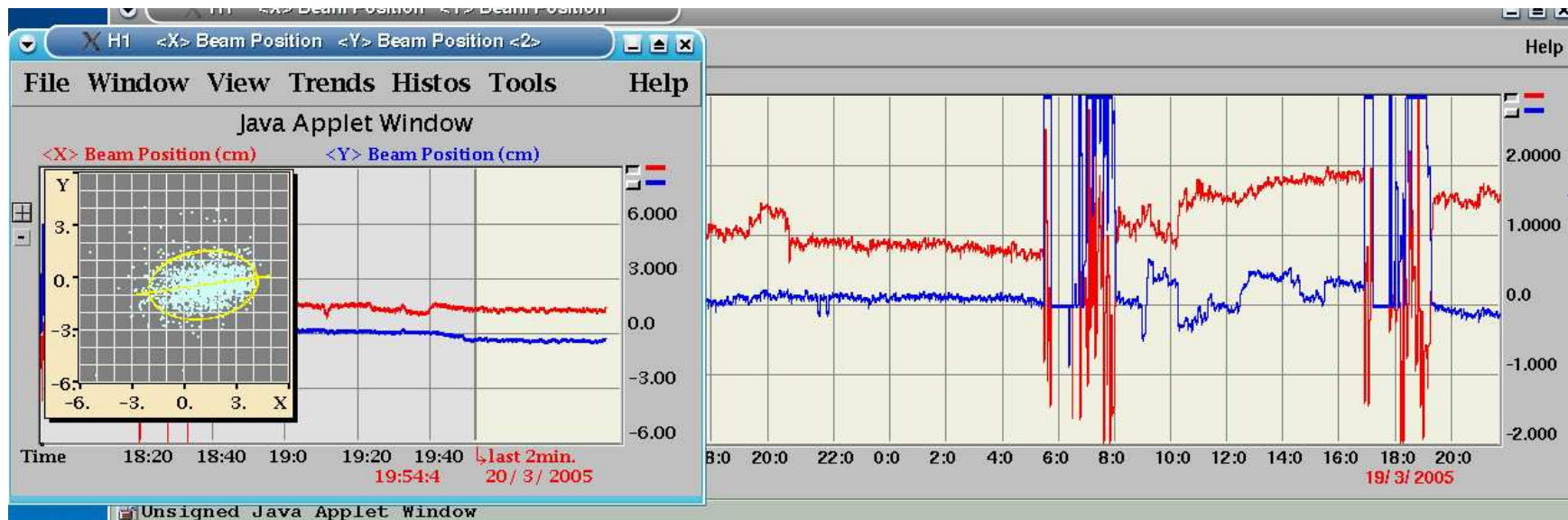


Sunday, 20-Mar

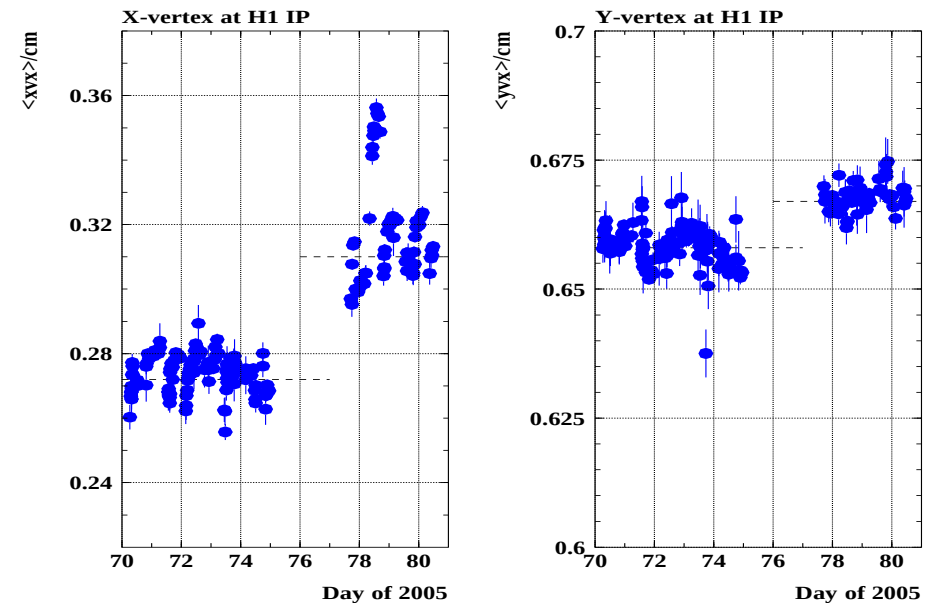
Trip statistics for 17h of lumi:

CJC1(49),CJC2(42),CIP(22),COP(8),CMD(7),FTD(4),COZ(2)

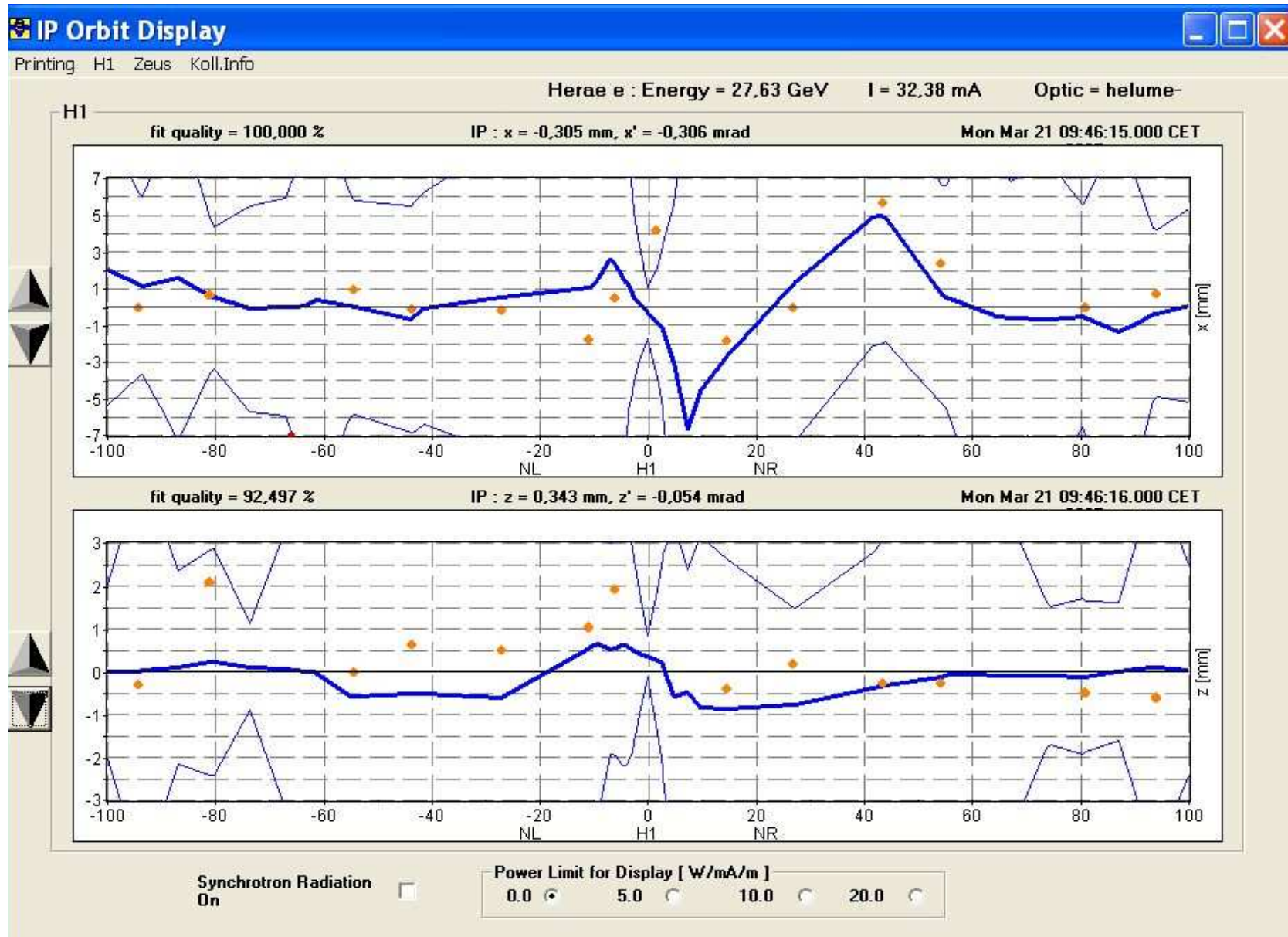
Large orbit corrections around H1 IP ?



vertex moved by $\Delta x = 400 \mu\text{m}$, $\Delta y = 100 \mu\text{m}$



Distorted orbit around H1 IP ?

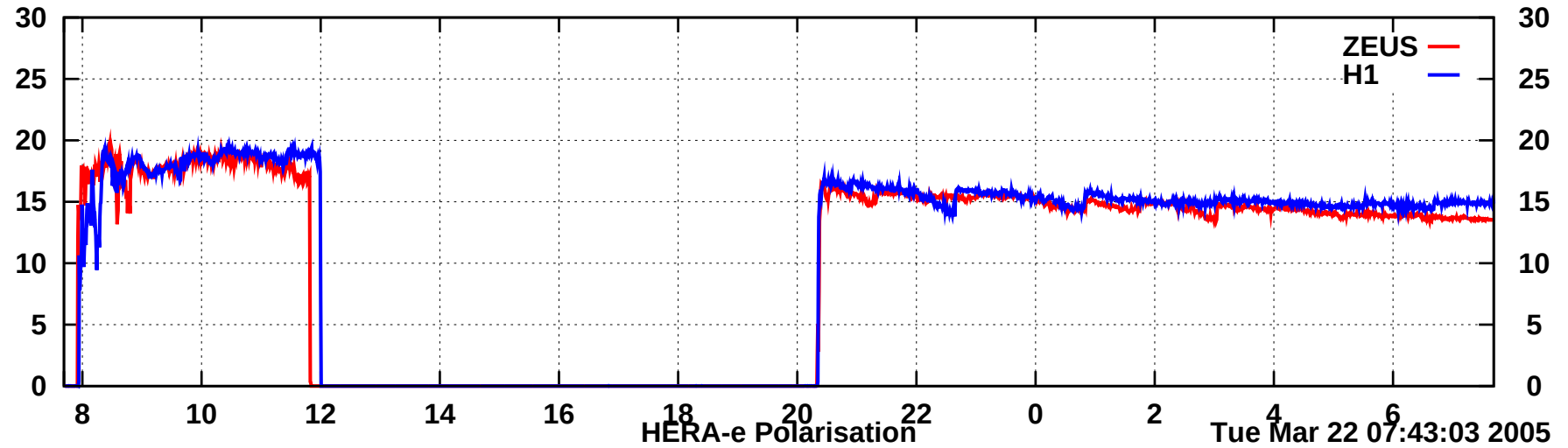


Excellent last lumi fill

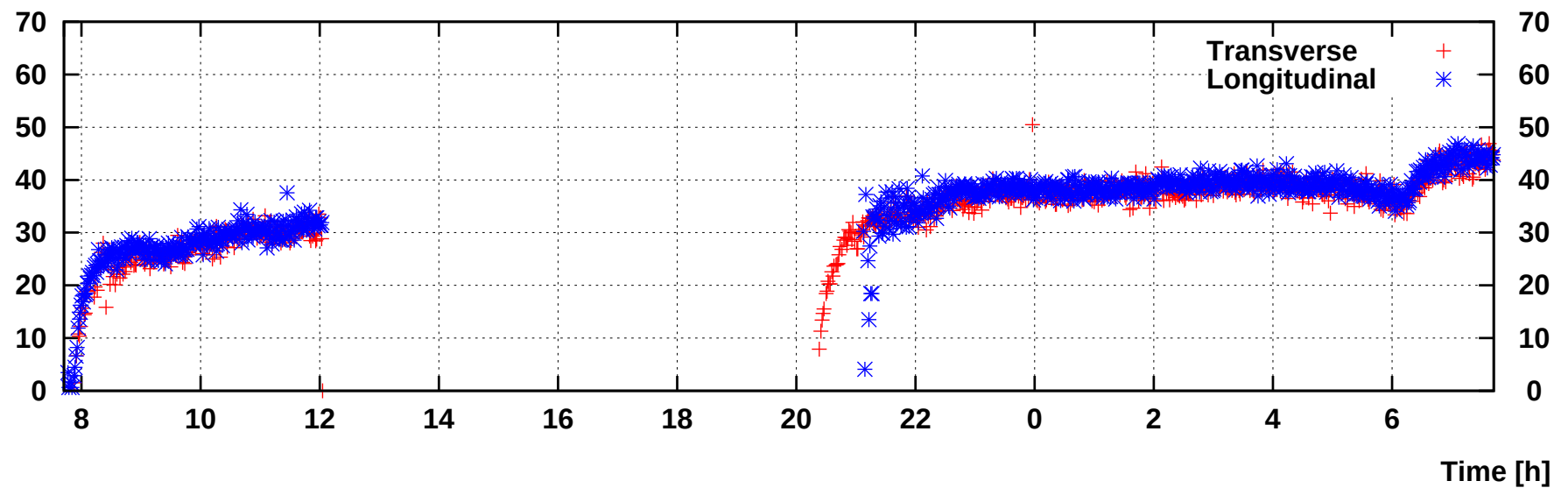
H1 and ZEUS

Tue Mar 22 07:41:23 2005

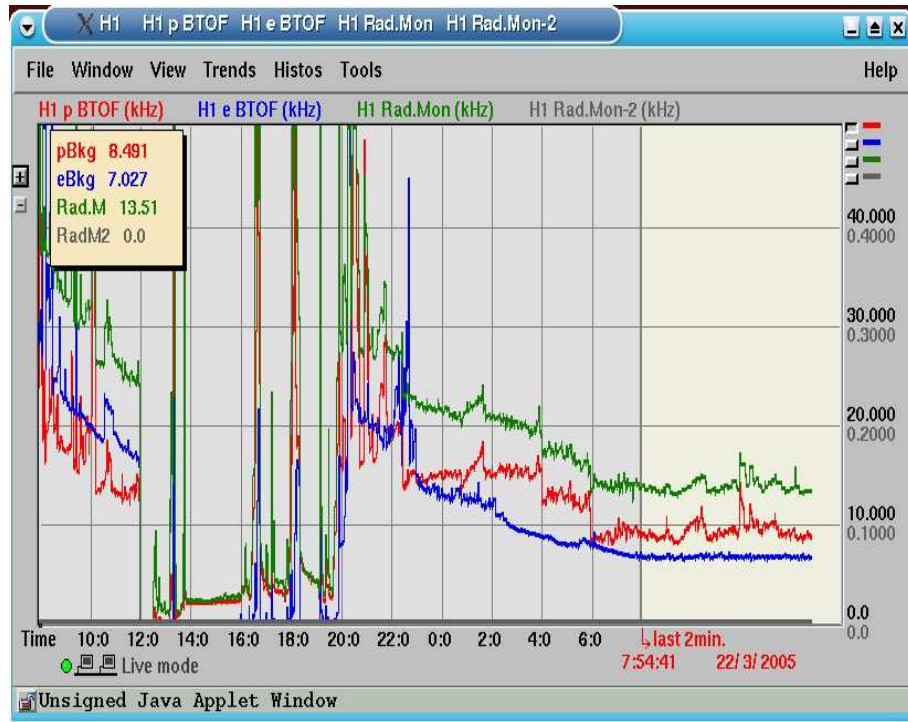
Specific Luminosity [$10^{29} \text{cm}^{-2} \text{s}^{-1} \text{mA}^{-2}$]



Polarisation [%]

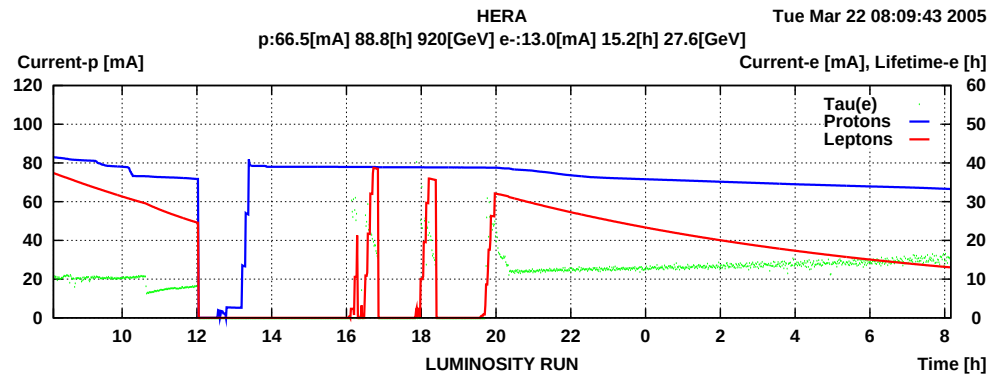
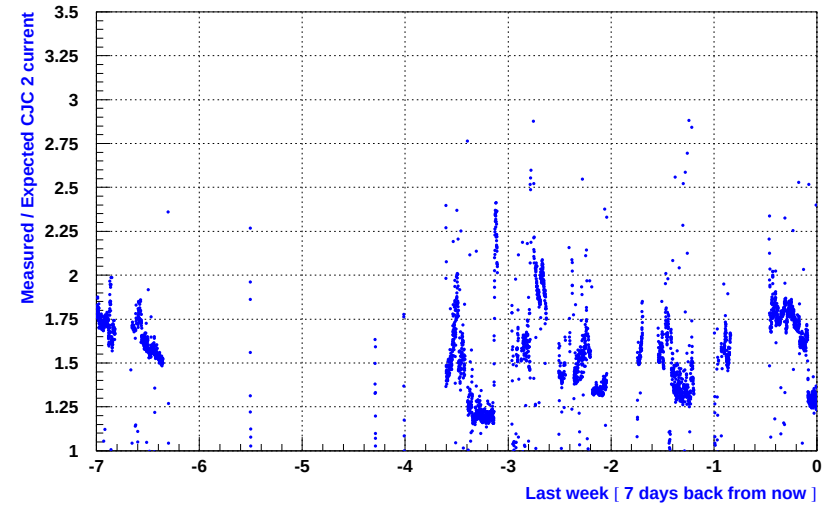
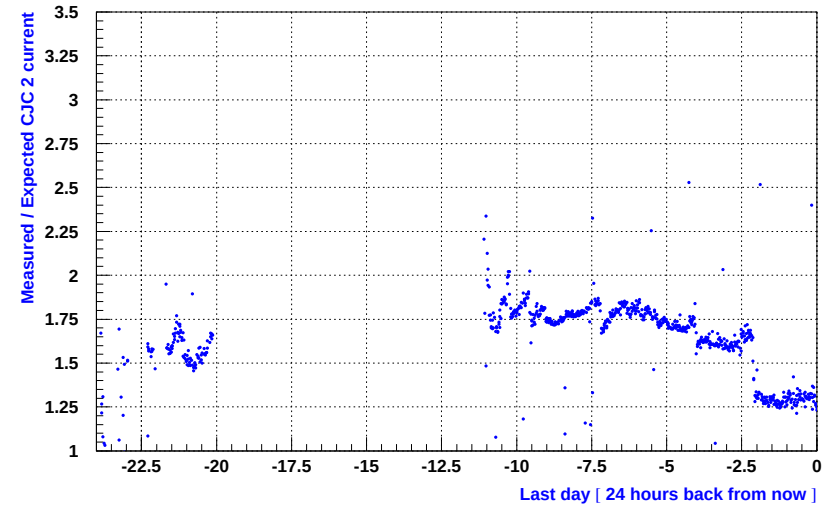


Last lumi fill (H1 HV eff = 85%)



2005/03/22 08.05

Normalized CJC 2 current



H1 annual luminosity

