# Report from ZEUS

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HERA Coordination Meeting
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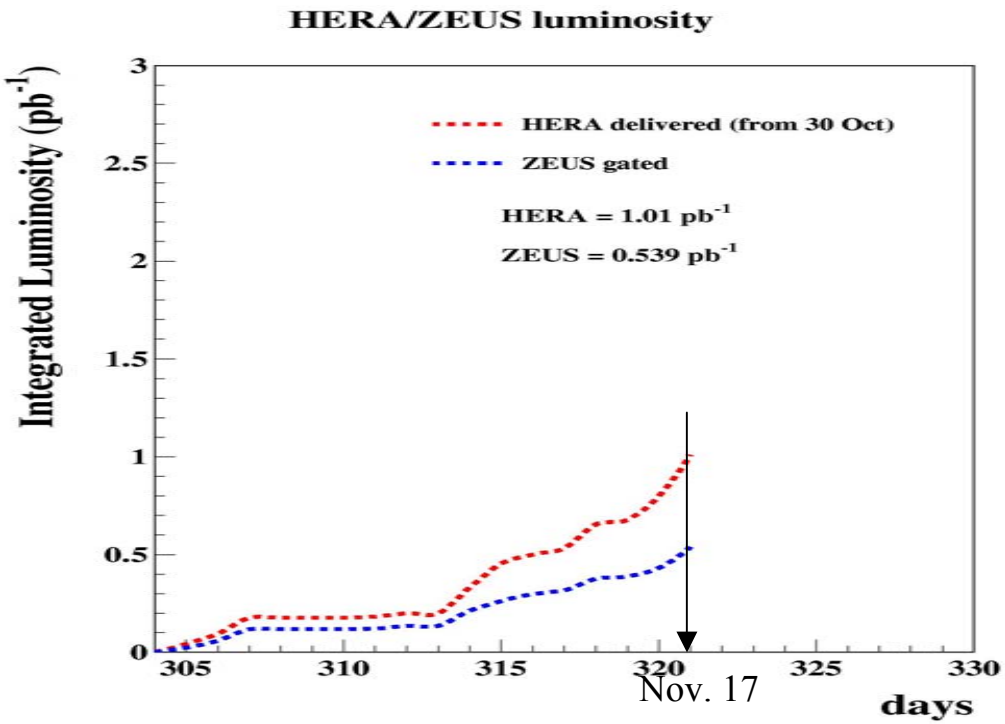


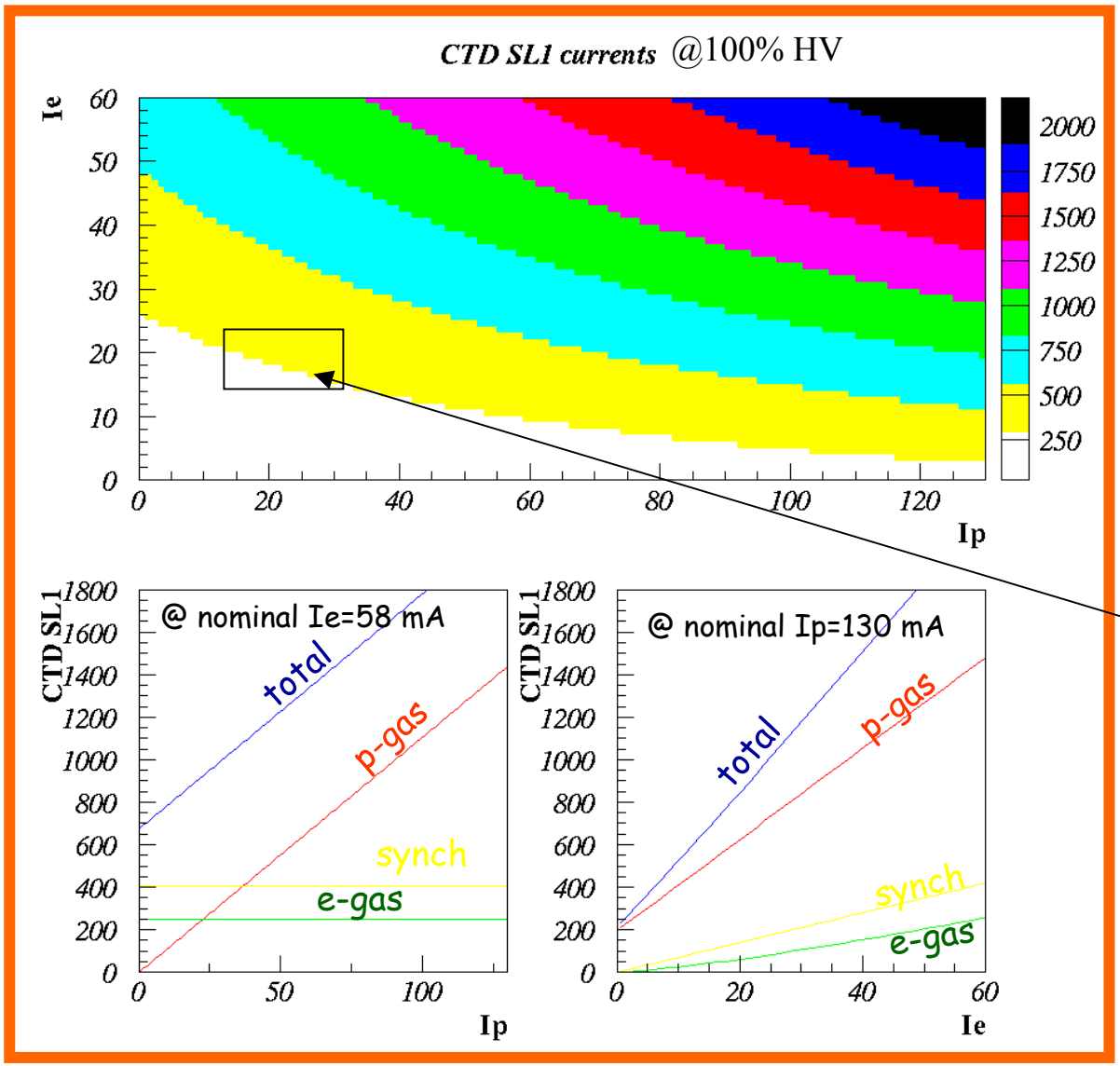

Efficiency has to be improved

Absolute luminosity measurement is under investigation

Main concern – CTD current

# Prediction for CTD Current from beam currents

$$I_{CTD} = 20 + 1.5 * (1 + 0.11 * I_e) * I_p + 7 * I_e + 1.33 * I_e + 0.093 * I_e^2$$ Calc. for good vacuum cond.

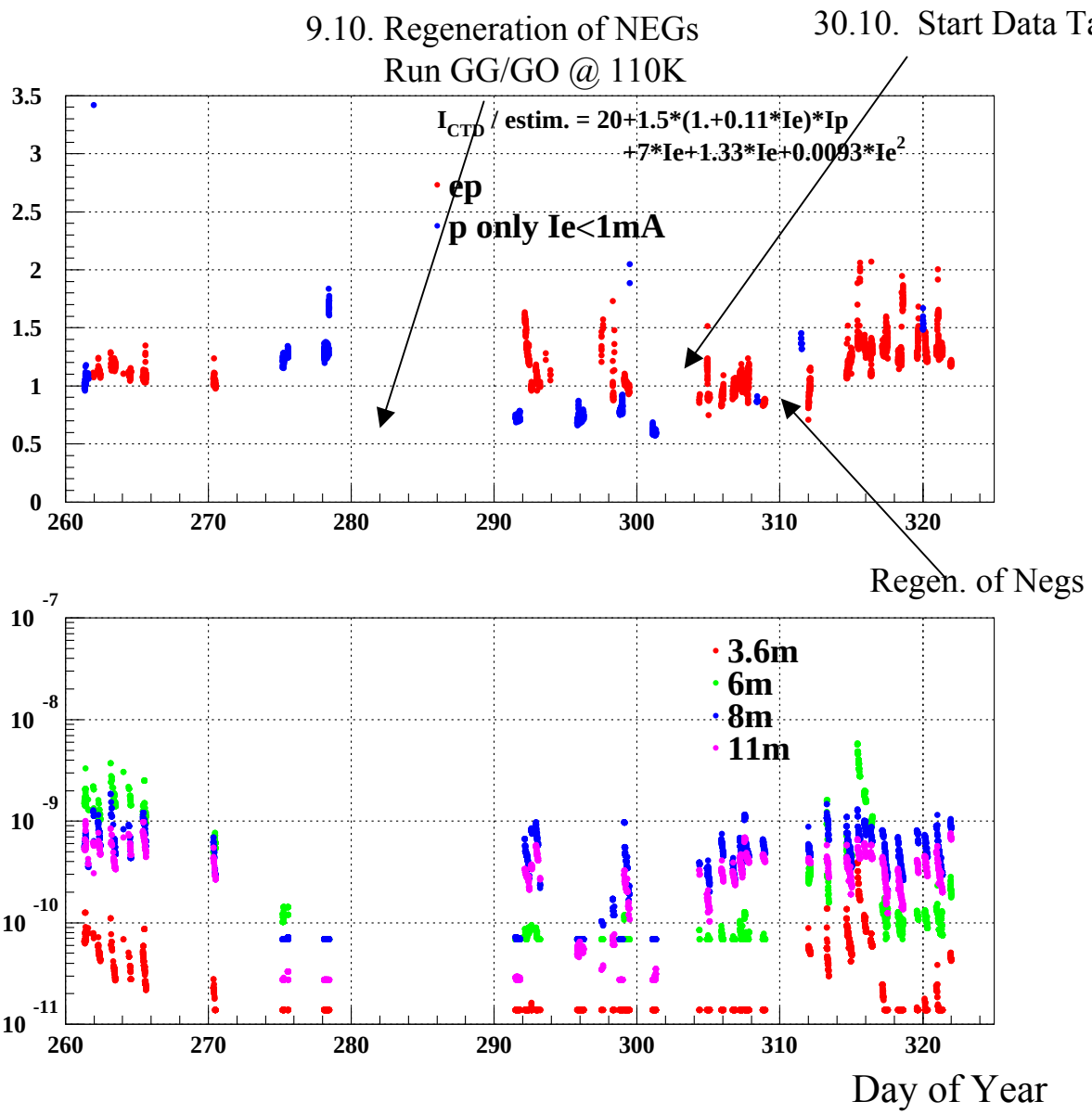



Operate CTD at **95%**
Gain factor ~2 in current

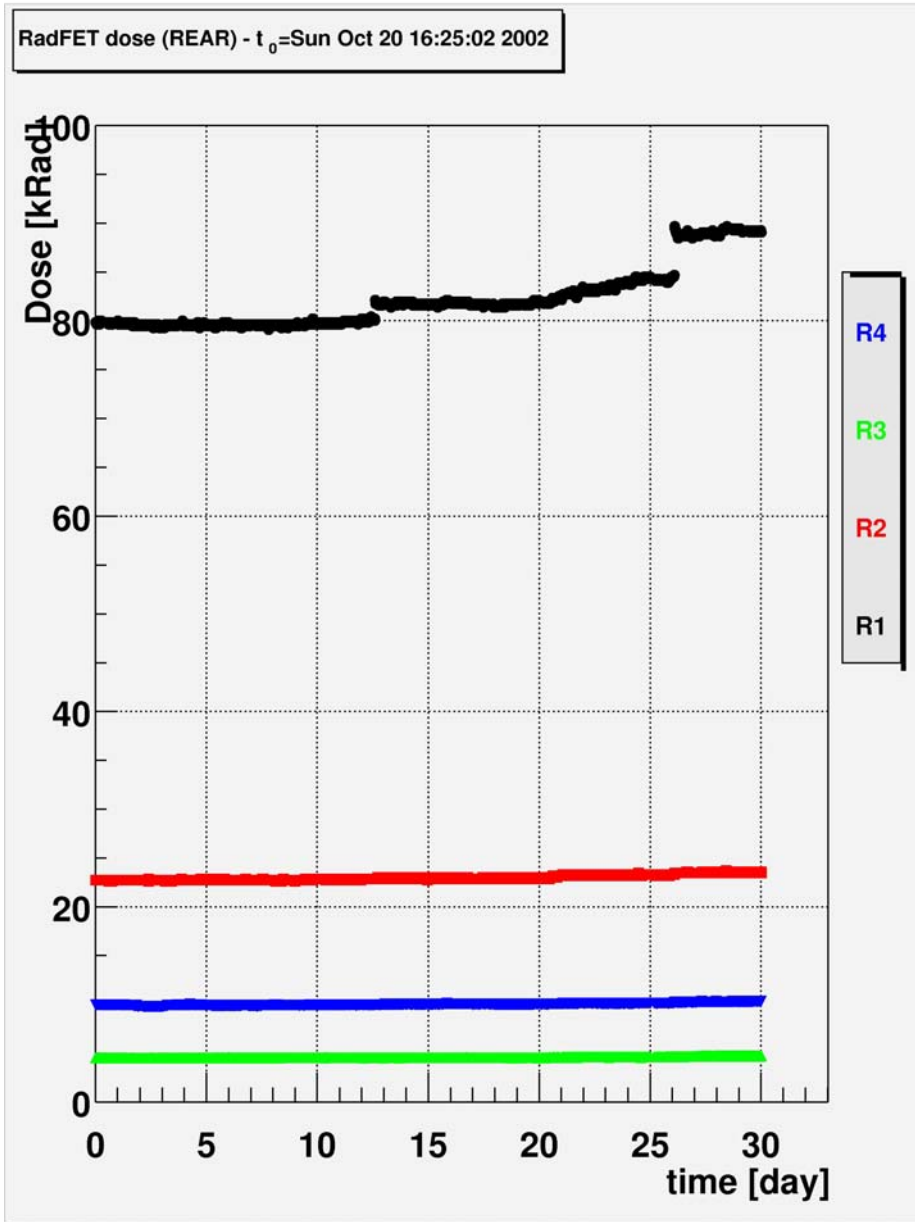
Area of current operation
Expect currents between
125 and 250
The lower half of yellow area
CTD can stand
**if the beams are well tuned**

# First week of data taking showed good conditions

Ratio of measured to predicted current in CTD




Some correlations with vacuum readings visible, but not conclusive




Concerned about slope during normal running

Diodes also show higher current

# SUMMARY

- **ZEUS can take data with the CTD at 95% of nominal HV**
- **All components are operational**
- **Data chain from online data recording to the reconstructed events for analysis is working**

**Problems**

- Loose too much time at begin of run – loose lots of luminosity
  Faster tuning desirable – info for fast feedback has been supplied to HERA
- Reproducibility of good background conditions must be improved

- Some internal problems
  - Component dead time – tuning of new components
  - Reliability of DAQ of some components

Thanks to HERA Machine Group for all the efforts to provide collisions routinely