H1

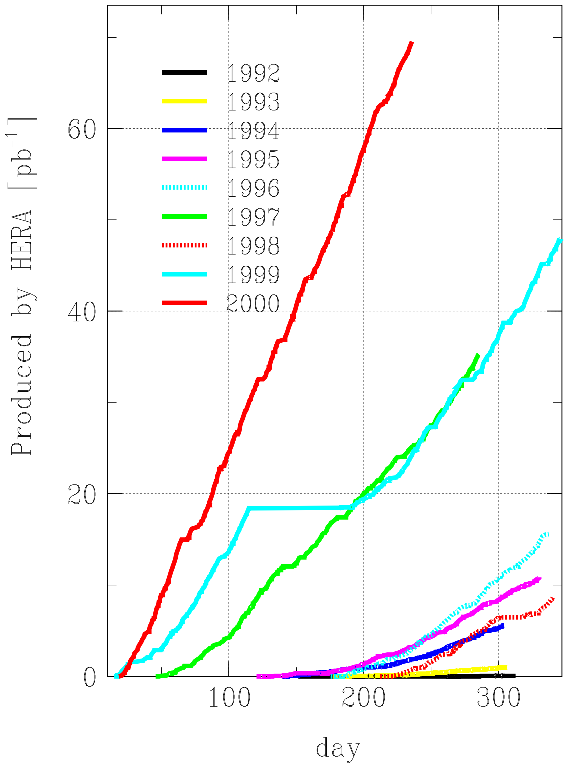
E.Elsen

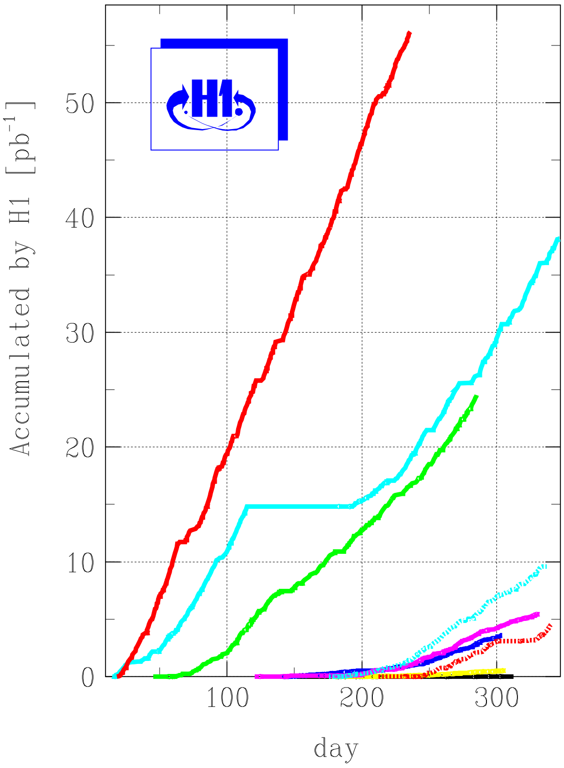
Topics

- Summary of run
- Status of luminosity upgrade
- HERA parameters for restart in 2001

Summary of Current Run

69.5 pb^{-1}





- record luminosity (exceeding expectations)
- very stable detector operation
- 1 pb^{-1} of extra data with shifted vertex at 70 cm (before and during the shifted vertex program we experienced increased background levels in the lower part of the VLQ detector. Had to be switched off for the trigger).
- 12 GeV have been used parasitically to obtained cross calibration points from beam gas scattering

Shutdown

Upgrade Work

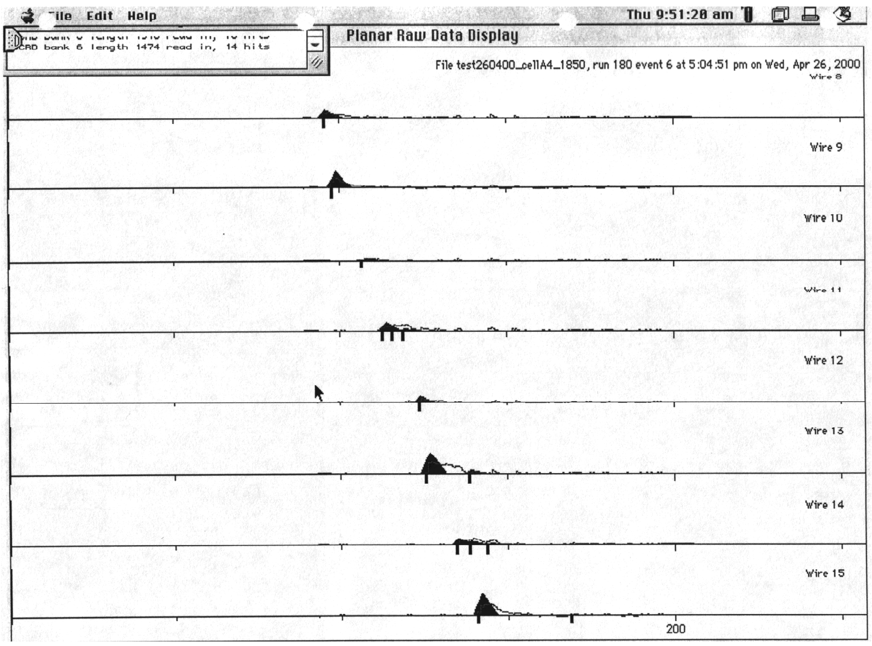
- **Beam pipe**: Welding procedure has been established. H1 pipe is being produced at Brush Wellman.
- **Magnet** construction at BNL being helped by J.Schaffran.
  - GG production **(required all tested at H1 10.4.2001)**
  - GO being tested at DESY **(req. 8.2.2001 at H1)**
- **CIP** construction on schedule (helped by two technicians of DESY).
- **CST** radiation hard APC:
  Submitted together with CMS and SLS: Delivery just before Christmas 2000. Bonding January 2001 - tight.
- **FTD** 5 new planar chambers being tested in hall PETRA SE
- **BPC** production in Dubna
  scheduled for arrival Nov. 2000
- **Luminosity Detectors**
  successful test beam calibration runs at CERN
- **FNC**
  Test beam calibration runs at CERN

H1 is on schedule for the shutdown which ends with interlock test on 5.6.2001.

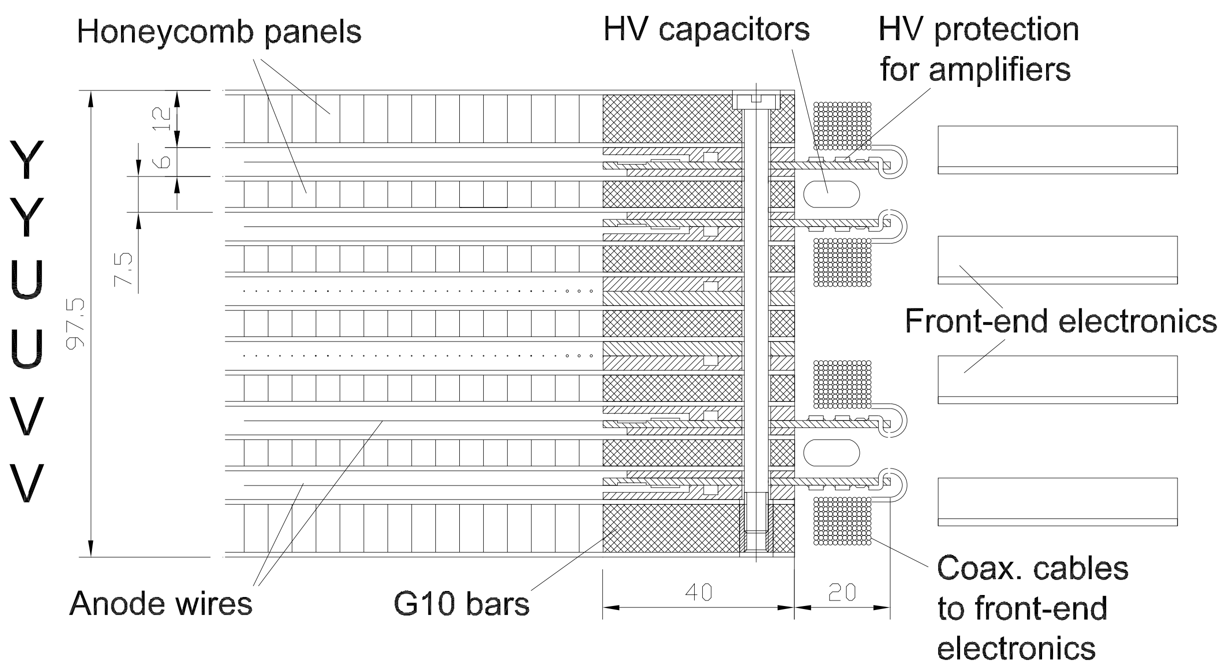
Forward Tracker

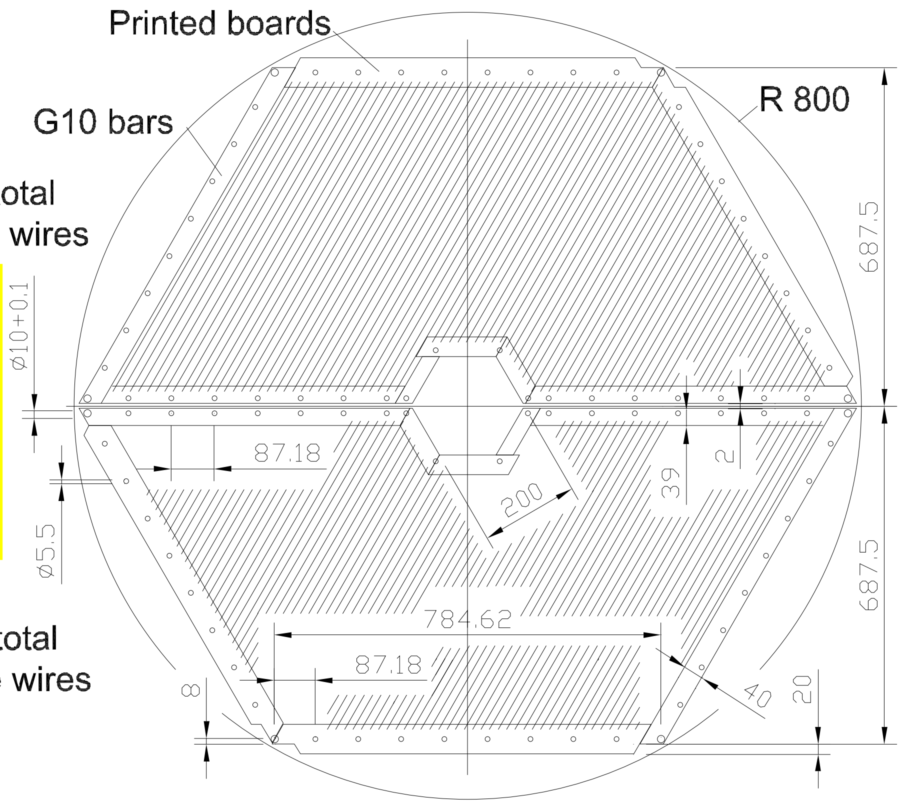
Forward Tracker (5 new planar DC) has been assembled in Daresbury and is now undergoing cosmics tests at DESY.

Cosmics recorded in Planars



BPC





U up

500 wires in total

494 sensitive wires

resolution for e^- impact point 0.8 mm

U down

500 wires in total

494 sensitive wires

Running after the Upgrade

H1 wishes to come back to efficient running as quickly as possible while the windows of opportunity are still open.

Start up:

Clarify the uncertainties at large scales while we compete with the Tevatron

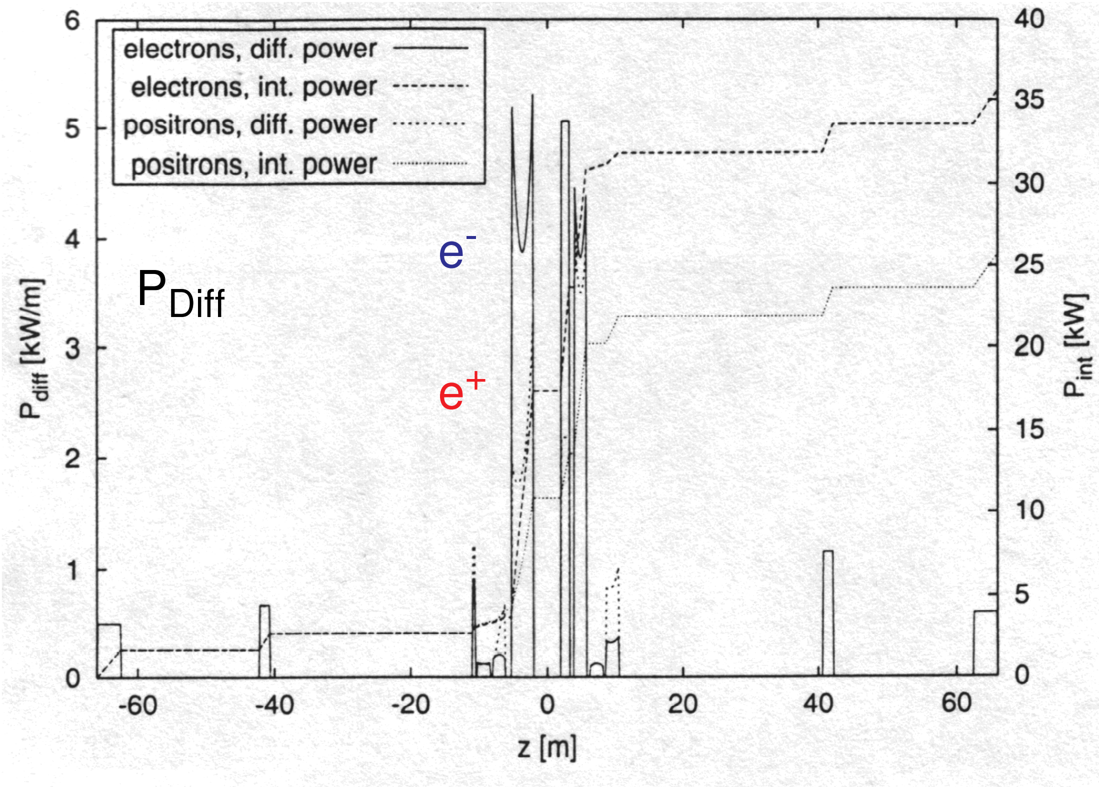
- **e^+**
  synchrotron radiation: 7 mm more clearance, lower critical energy, less power in the interaction region
  longer lifetimes of positron beam
  higher currents positron currents
  (less load on apparatus due to more favourable magnet forces)
  more efficient access to the programme with polarized beams (a few pb^{-1} are in enough to explore σ^{cc} dependence)

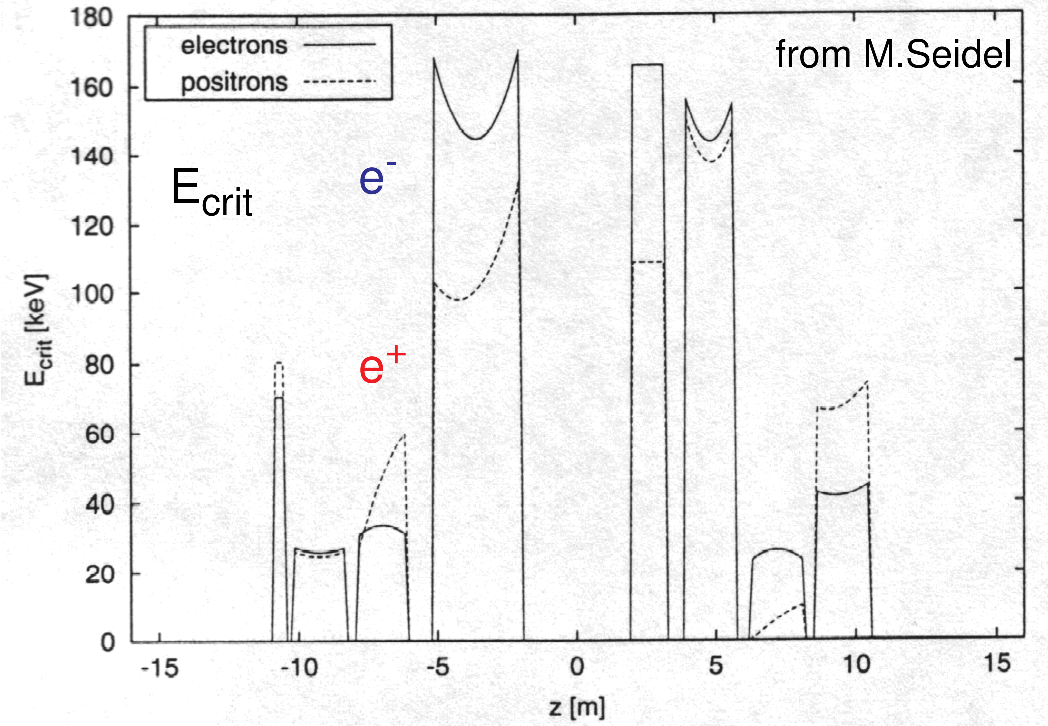
Once efficient running mode with polarized beams has been established

Complete the HERA precision physics programme.

- **e^-**
  perform searches in e^- specific channels
  start a comprehensive electroweak programme:
  measure xF_3
  determine light quark coupling

Synchrotron Radiation





Conclusions

H1 is

- looking back to a very successful running period 1999/2000
- ready for the shutdown
- looking forward for a timely end of the shutdown in May 2001.

Longer Term Future

- Have to start to think about shutdowns 2001/2002, when we would like to modify the cold section at 220 m for introduction of a very forward spectrometer (PRC 01/00)