H1 Status and Plans

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DESY

HERA Coordination meeting

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- H1 and HERA beams
- Planning

H1 and HERA beams

- Operations:
  - 2-person shifts since 11.3.2002.
  - Most HV operation is still expert action.

- Background monitors:
  - Backward Veto Wall scintillators.
  - Spacal calorimeter with lowest CFD thresholds.
  - Backward Silicon Pad detector.

    Rate limit: 250 kHz for 30 min. every day gives 100 Gy dose per year.

    2 beam dumps requested so far.
  - Drift chamber currents.
  - All rates are available at HERA BKR.

- Backgrounds:
  - 12 mA protons only: CJC 35 μA.
  - 7 mA e^+ only: CJC 90 μA.
  - 7 mA e^+ with 9 mA p: CJC 140 μA.
  - Main source: backscattered synchrotron radiation.

- Luminosity monitor:
  - Specific lumi available on-line since 15.4.2002
  - Highest value so far $1.3 \cdot 10^{30}/\mathrm{cm}^2\,\mathrm{s}\,\mathrm{mA}^2$ (17.4.)
  - 10% systematic error for acceptance correction and energy calibration.

- Data taking:
  - One lumi run with trackers on: 17.4., 4 mA e^+, 34 mA p.
  - Insufficient to check timing, establish triggers, for calibration, alignment, or performance tuning.

Shutdown planning

- VFPS:
  - Ready for installation in Jan 2003
  - Warm up NL Octant: 10 days.
    Remove shielding concrete in Hall North for access.
  - Remove drift section at 220 m: 3 days.
  - Install 5 new support pillars: 5 days.
  - Install and test cold bypass: 3 weeks.
  - Install new warm beam pipe: 1 week.
  - Install and test 2 Roman Pots: 1 week.
  - Cool down proton ring: 10 days.
    Re-install shielding
  - Total: 10 weeks.

- Central Inner Proportional Chamber:
  - 5-layers, segmented pads, for z-vertex track trigger.
  - 300 W in front end electronics.
  - Limit at 45^o C, can operate only 3 layers, with problems.
  - CMOS chip: wire bonded and covered with epoxy, fails under thermal stress.
  - Plan: make 40 new front end cards with better podding by Nov. 2002.

- CIP repair:
  - In beam position.
  - Remove Spacals and BPC: 1 week.
  - Break vacuum, raise GG magnet by 50 cm: 3 days.
  - Remove Silicon detectors: 3 days.
  - Exchange CIP front end cards, re-using optical links: 4 weeks
  - Re-install and test Silicons: 10 days.
  - Connect GG beam pipe: 3 days.
  - Re-install BPC and Spacals: 10 days.
  - Total: 10 weeks.
  - Possible conflict with VFPS crane work in Hall North.