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HERA coordination meeting

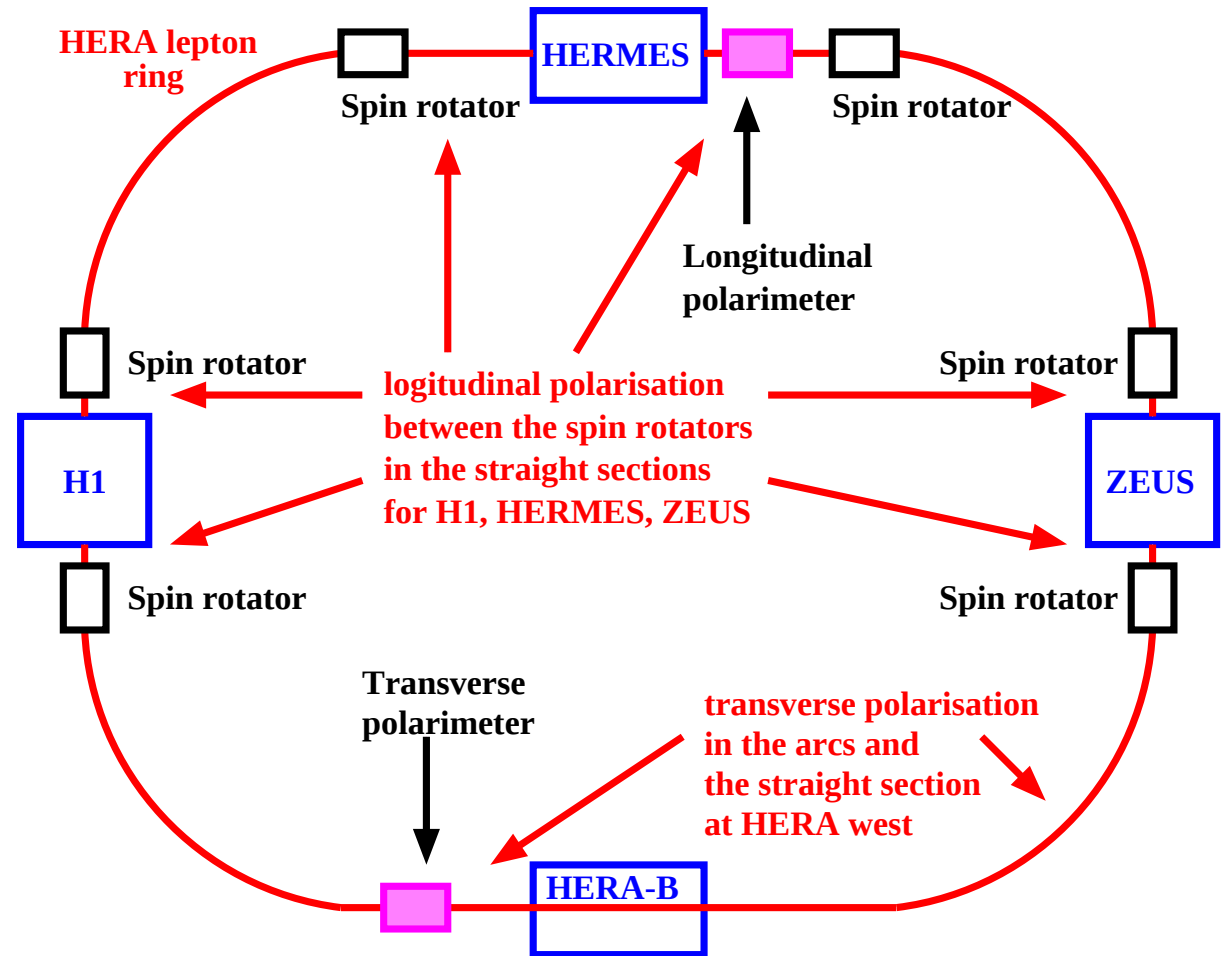
September 25, 2002

# HERA lepton beam polarimeters status report and shutdown plans

- Overview
- Polarimeter status
- Shutdown plans
- Conclusions

# Introduction

- Transverse polarimeter (TPOL) is located near HERA-B
- Longitudinal polarimeter (LPOL) is located between HERMES spin rotator



## Polarimeter status

### TPOL

- Can be switched on within hours
- New calorimeter and readout
- Successfully tested with unpolarized beam
- Absolute polarization scale will have some uncertainty ( $\approx 5\%$ ) until cross-calibrated with polarized beam and LPOL data

### LPOL

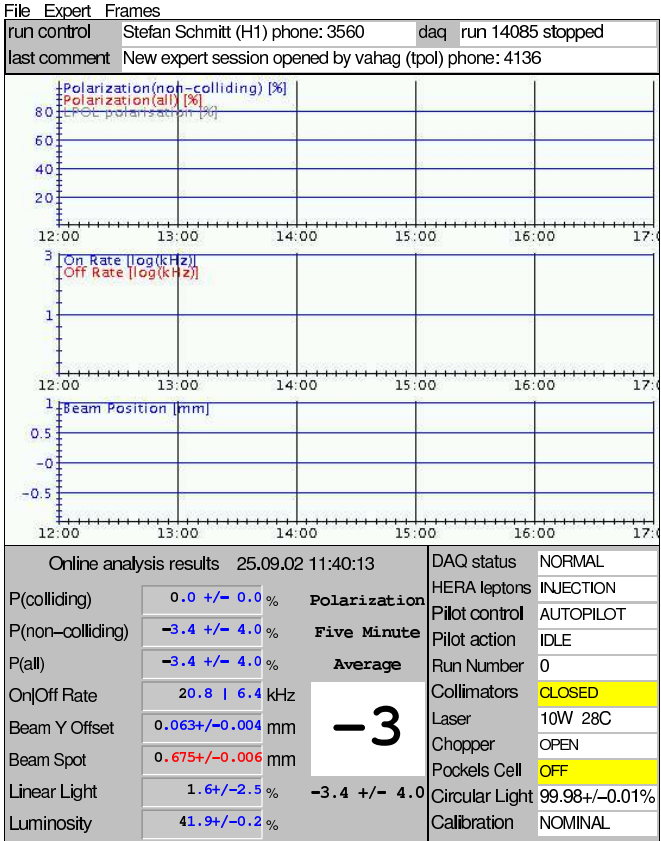
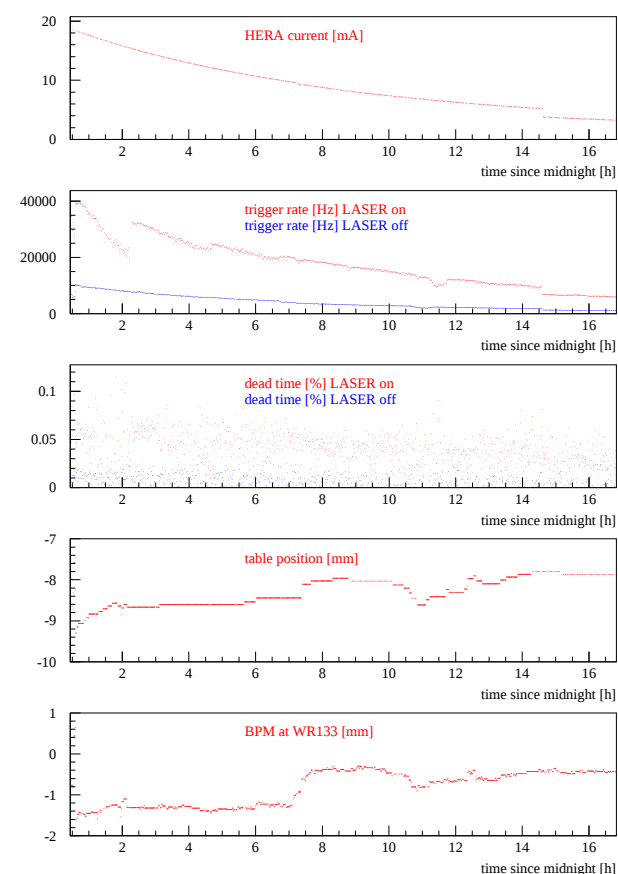
- Optical components checked and adjusted recently
- Operated from HERMES control room
- Nothing has changed  $\rightarrow$  accurate numbers from the beginning
- Beam steering required in the LPOL interaction region

Both polarimeters are ready to measure polarization

# Polarimeter status (continued)

TPOL results (July 24, 2002):  
table follows beam movement

TPOL monitor java program  
<http://pctpol03.desy.de>



## LPOL Shutdown plans

- Install Fabry-Perot cavity (high prec. pol. measurement)
- Time estimate: 6 weeks
- Part of the work (beam pipe modifications, vacuum tests) needs support from the machine group
- Polarimeter contact person: Norbert Meyners

## TPOL Shutdown plans

- Install silicon detector, electronics, cooling device
- Time estimate: less than 3 weeks
- Work can be done at any time the tunnel is accessible

## Conclusions

- The polarimeters are ready
- Hope to get polarized beam as soon as possible to cross-calibrate the (upgraded) TPOL with the LPOL
- Contact polarimeter experts a few days in advance to activate polarisation measurements

## Special requests (after the shutdown?)

- Run with completely flat machine and high polarization for some days to do a stand-alone calibration of the TPOL (rise time method)
- Run a few days with HERMES Spin rotators on and do simultaneous rise time calibrations of both polarimeters (HERA II: luminosity + polarization + precision)