Stefan Schmitt
Polarimeter meeting

October 15, 2002

Transverse polarimeter status

TPOL performance during last week

- Polarization measurement
- Automatic operation
- Hardware problems
- TPOL/LPOL comparison

Polarization measurement

First hints of polarization at HERA II on Oct. 10 during energy scan

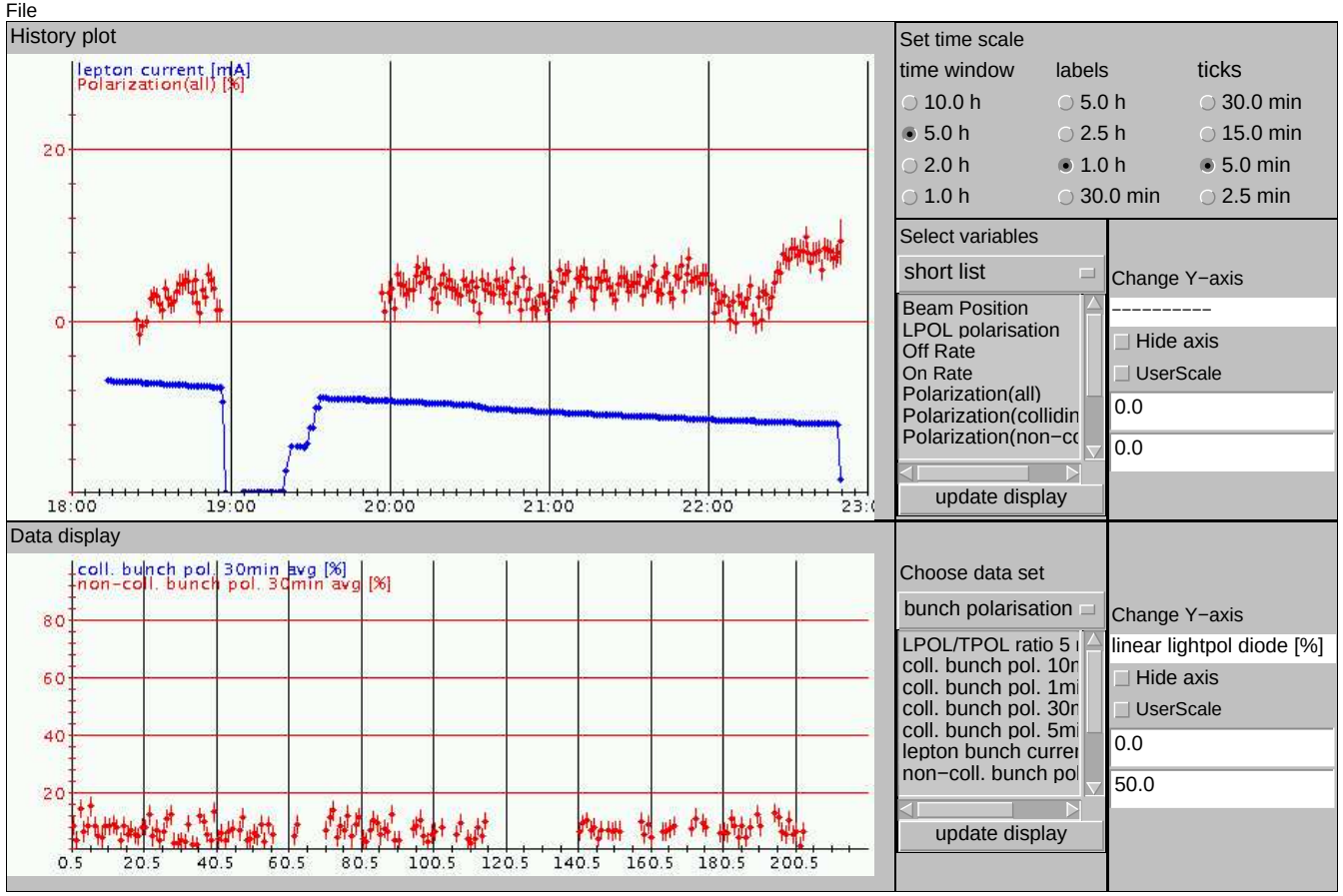
time	polarisation		
01:11:52	1.1%	±	2.6%
01:12:54	2.7%	±	2.6%
01:13:56	−5.9%	±	2.6%
01:14:58	−5.5%	±	2.6%
01:16:00	−5.8%	±	2.6%
01:17:02	−5.1%	±	2.6%
01:18:04	−2.0%	±	2.6%
01:19:07	−3.1%	±	2.6%
01:20:08	0.0%	±	2.7%

Wrong sign! Corrected Oct 12, 17:00

after confirmation by more data

Polarization measurement (continued)

TPOL now measuring continuously (see TpolMonitor):



Automatic operation

In general: works very well!

- Table centering, luminosity optimization
- Between fills: mirror and Pockel's cell HV optimization

A few failures of the AUTOPILOT have been observed:

- clean run stop fails in rare cases (should be fixed now)
- table centering: bad motor response (motor reset required)
- table centering: table can not be moved at first try (re-enable AUTOPILOT)

Improvements of the AUTOPILOT are ongoing...

Hardware problems

- HERA clock instabilities. Visible as BAD calibration, DAQ error messages about wrong bunch offset.

  → Clock module at HERA West will be exchanged soon

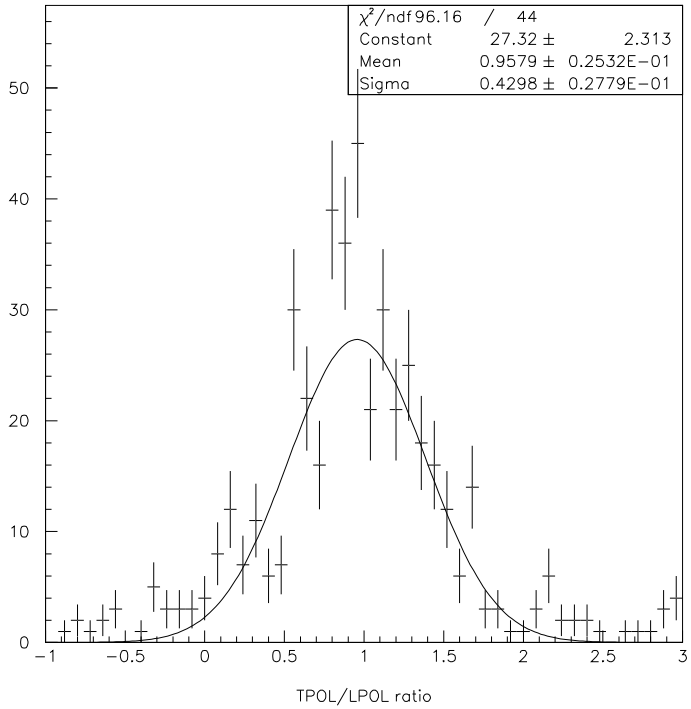
- LASER has been tuned once → significant improvement in luminosity (smaller uncertainties)

- Pockel's cell amplifier negative voltage failure. Visible as high "linear light" polarization ($\approx 40\%$).

  → "solved" by switching from TRIGGERED to OFF and back

TPOL/LPOL comparison

Difficult, since polarization is not very high (yet). Very first look at online numbers:



Agreement on the 5% level.