

ZEUS Status

HERA Coordination Meeting

W. Zeuner

- ZEUS Running
- Next Steps

- Shutdown Preparation
- Shutdown date and length

ZEUS Running

Congratulations to the HERA Crew

Since the exchange of the BU-magnet HERA can provide very good beam conditions.

However, observed bad p-background since a couple of days (de-tuned machine, polarization tuning ?,...)

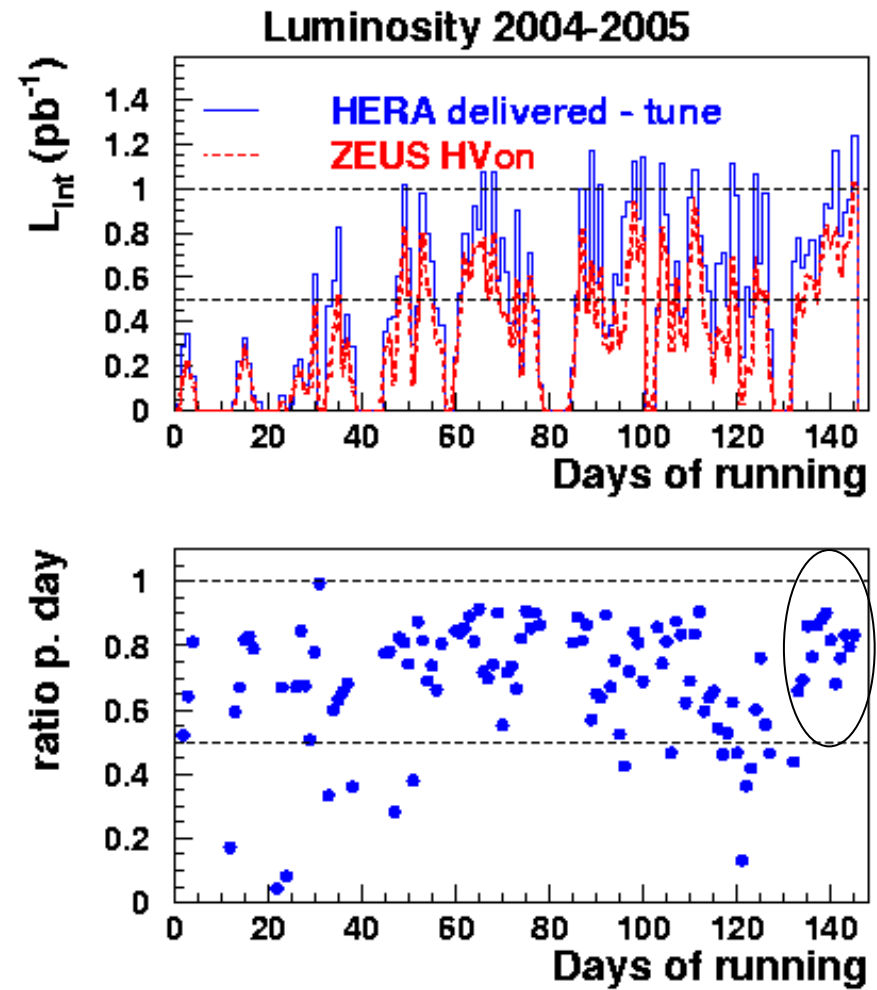
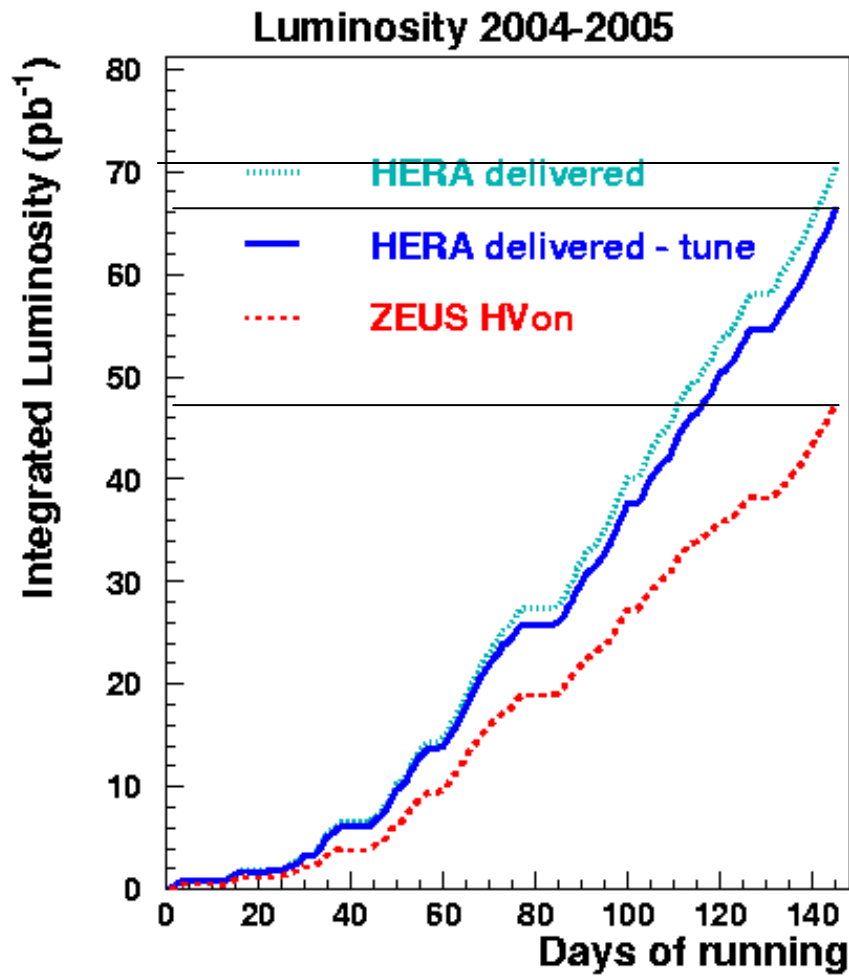
ZEUS detector is in good shape

- All components are running

- Data taking has high efficiency (>80%)

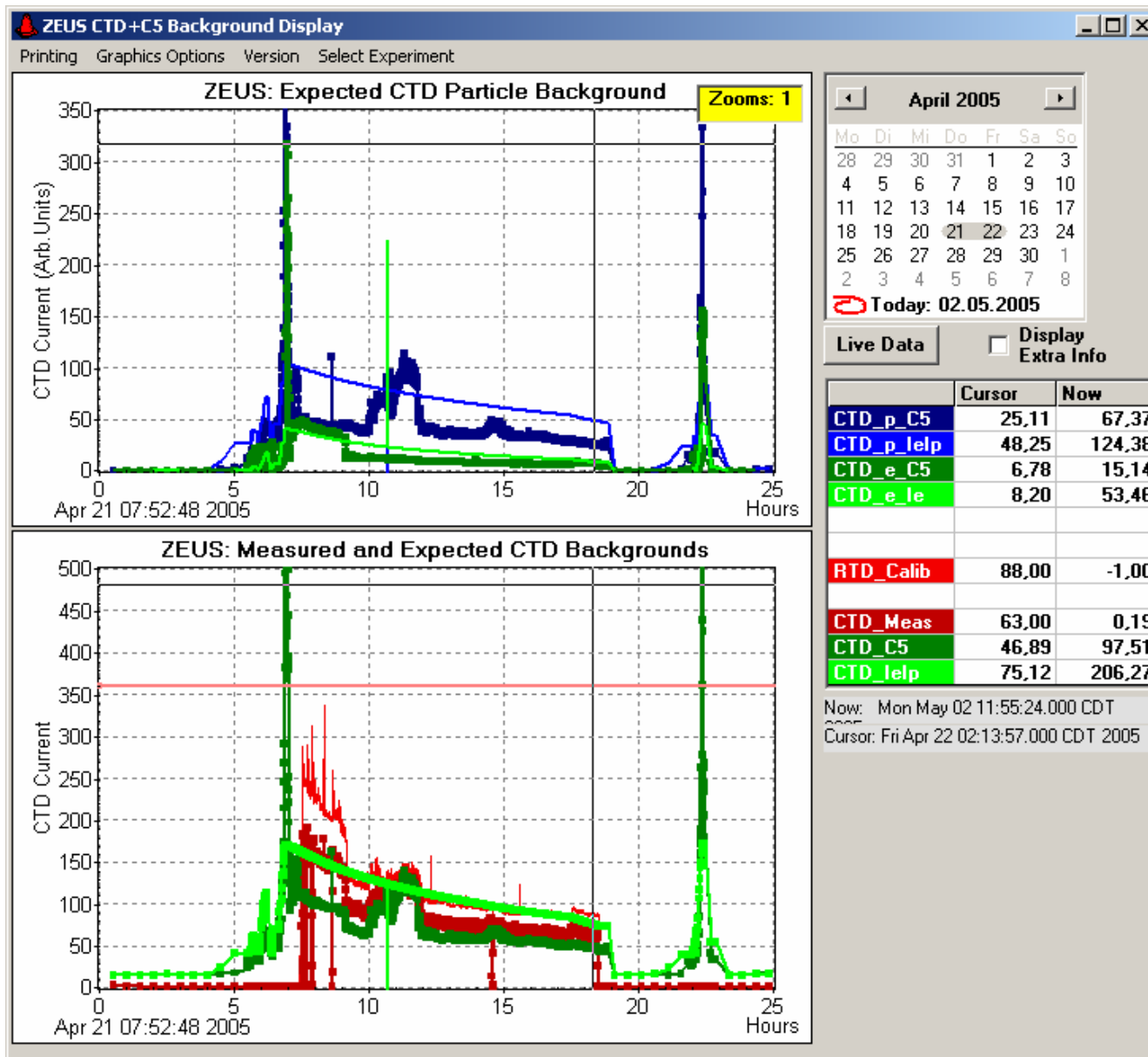
- Data quality is very good

HERA delivered $\sim 66-71 \text{ pb}^{-1}$, ZEUS on tape $\sim 48 \text{ pb}^{-1}$,



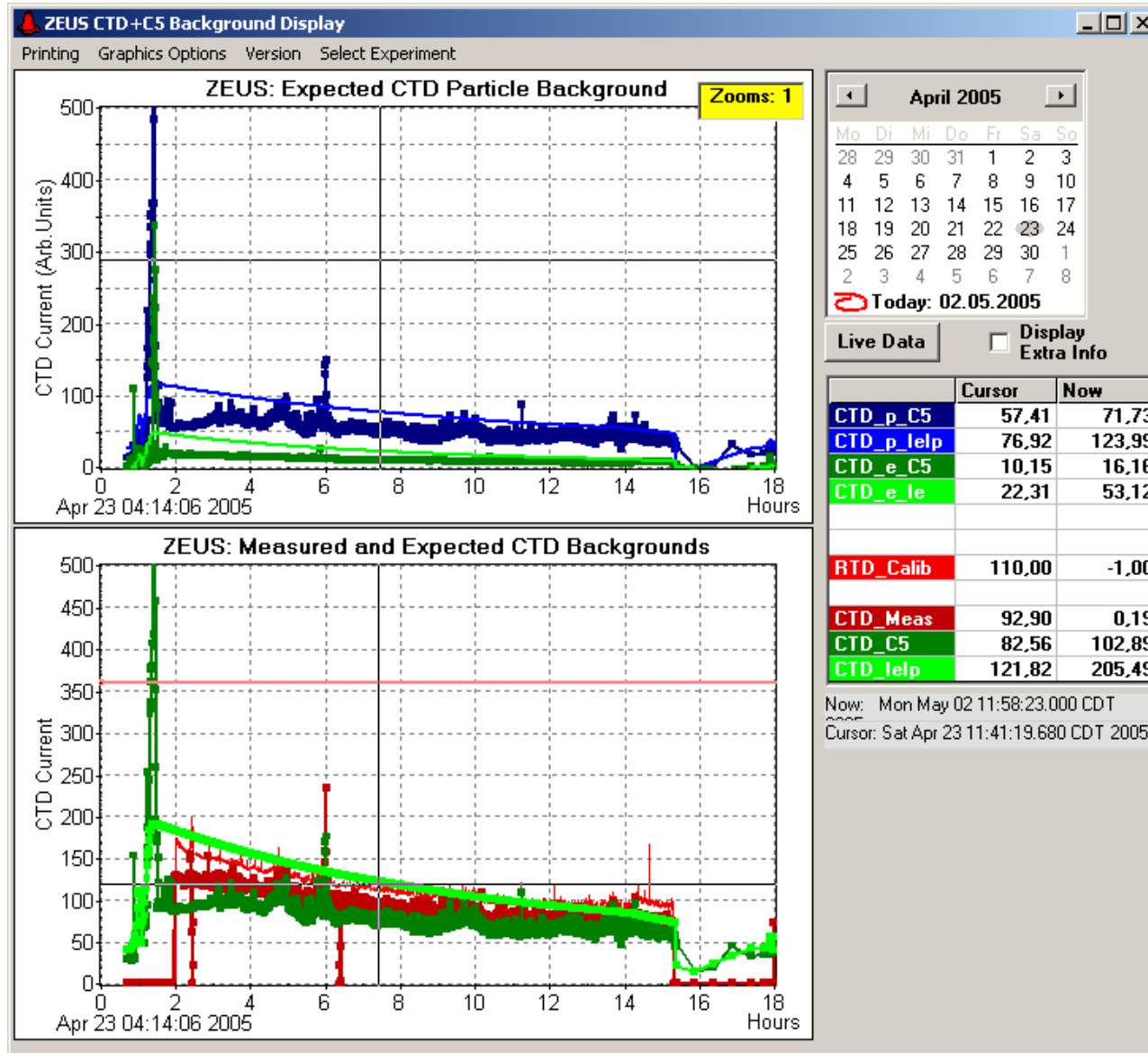
April 29, ZEUS recorded 1.03 pb⁻¹ on tape

Good background conditions = far below prediction

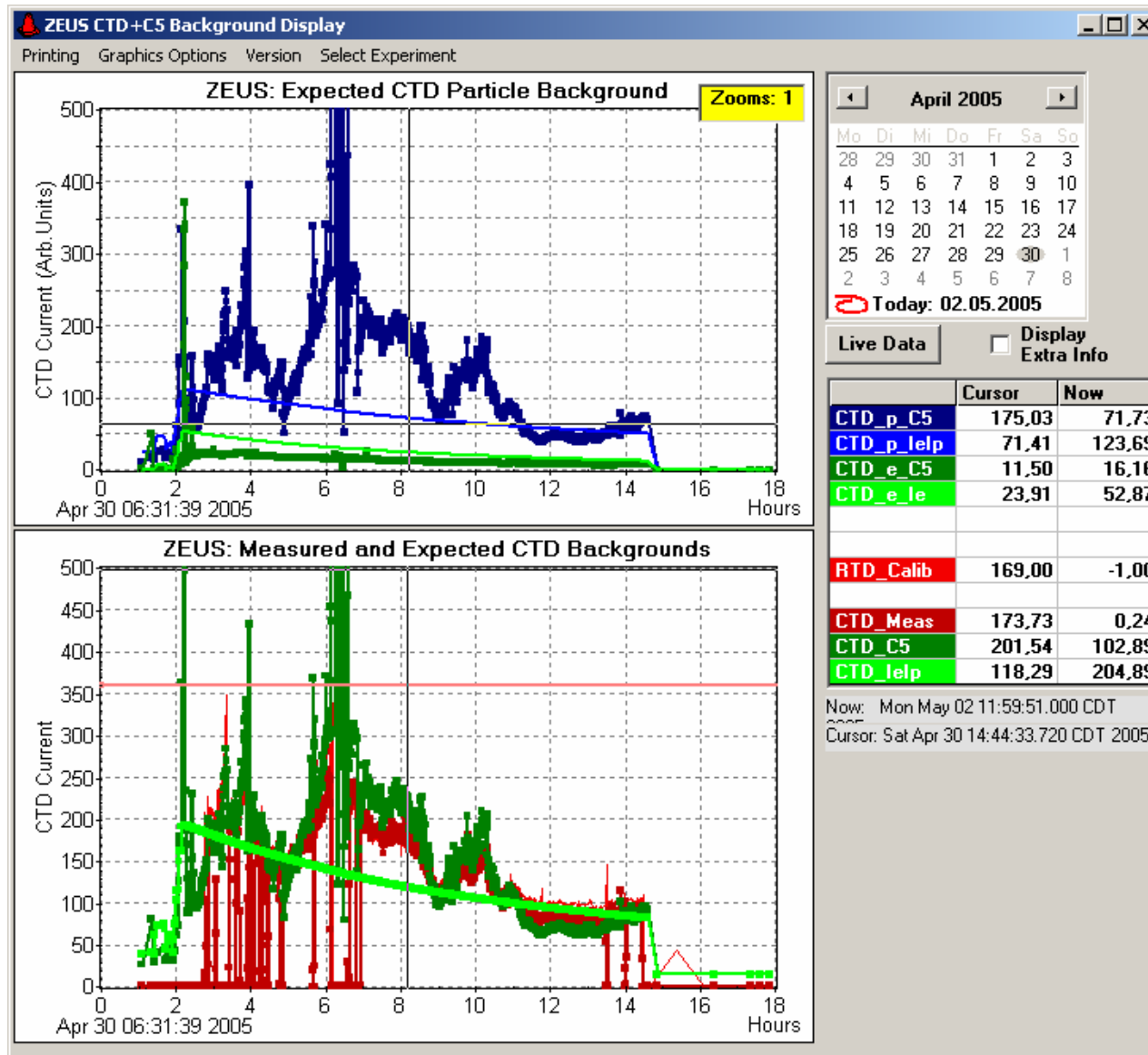


We will update the prediction soon

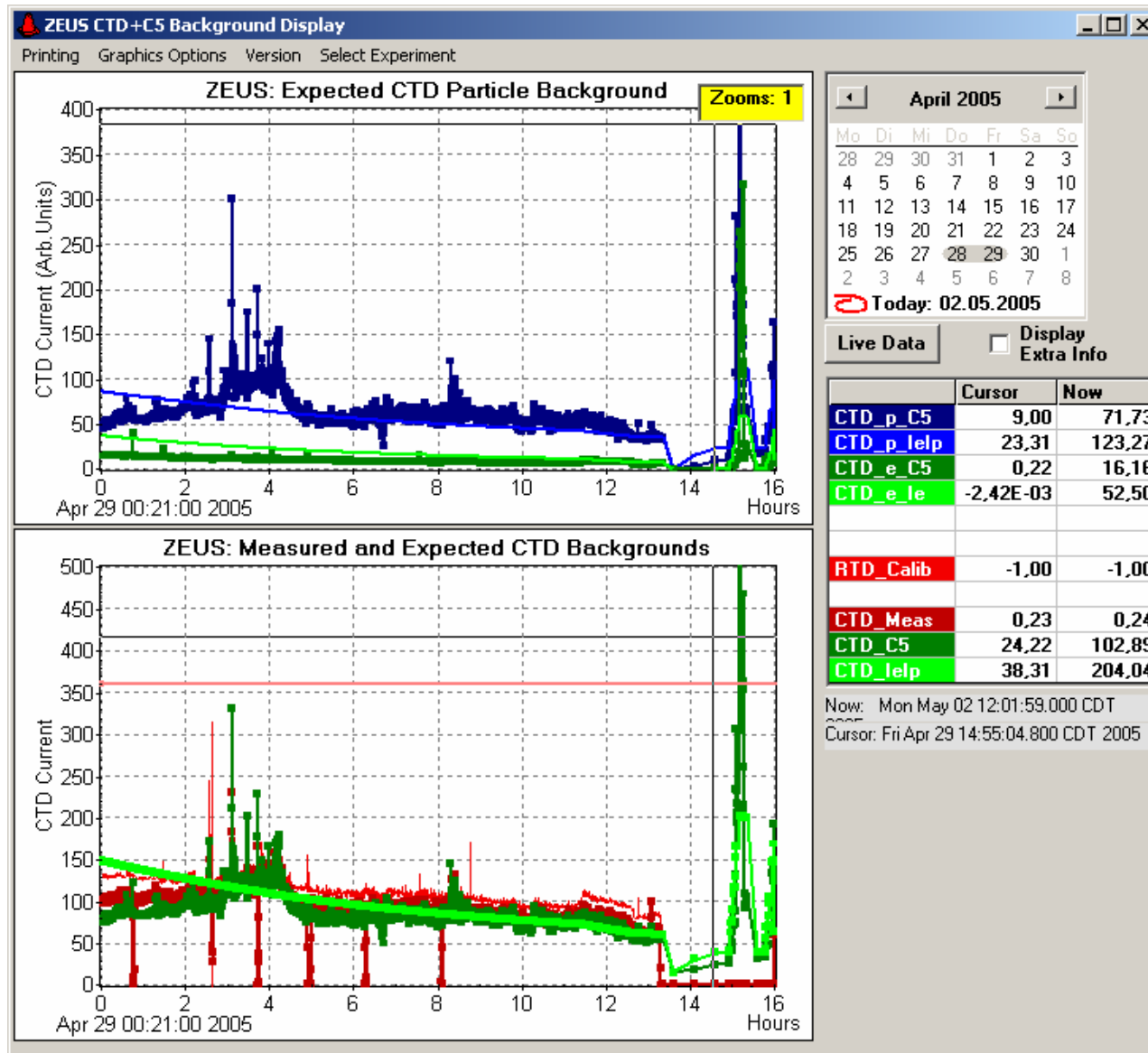
Still acceptable...



Even if the chamber does not trip, the conditions are bad !!!!



Conditions like this are not satisfactory....



Next Steps

Two fields of possible improvements

a) Higher currents → higher luminosity

b) Higher polarization – requires setup of HERA at mirror tunes

This cannot be done in parallel

Highest possible currents and luminosity have not yet been reached

Vacuum conditions in all experiments permit much higher currents

- Behavior of e-beam above 40mA not clear

- Impact of 180 bunches on e-lifetime not clear

Next Steps

ZEUS prefers to start with option a)

Try to reach the maximum possible currents and luminosity

- 7 pb⁻¹ per week on tape seems to be in reach

Establish and stabilize machine operation at nominal currents

Permanently tune and optimize polarization with the conventional methods in parallel.

Reconsider going to mirror tunes afterwards.

- Consensus to re-evaluate situation ~May 18

Shutdown Preparation

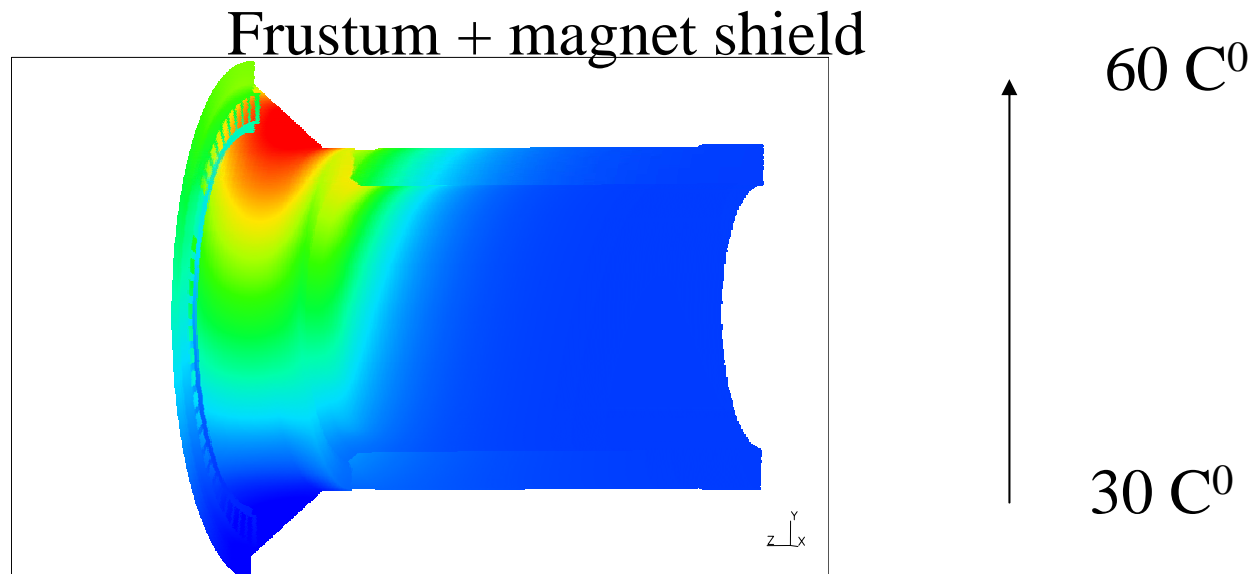
Construction of the STT-removal tool almost finished

Many bits and pieces are already in the ZEUS-hall

Carriage-frame to move the STT out is currently being assembled in the main work shop at DESY.

Test setup starts in the next days.

Understanding of the cooling problem and design of additional cooling in the forward area are in progress



Date for next shutdown

No objections against a delay until autumn

HERA should optimize the time schedule

- Exchange all BU-magnets
- Keep it short
- Start as early as possible

For ZEUS activities a preliminary time schedule exists, it safely fits in the planning of HERA.