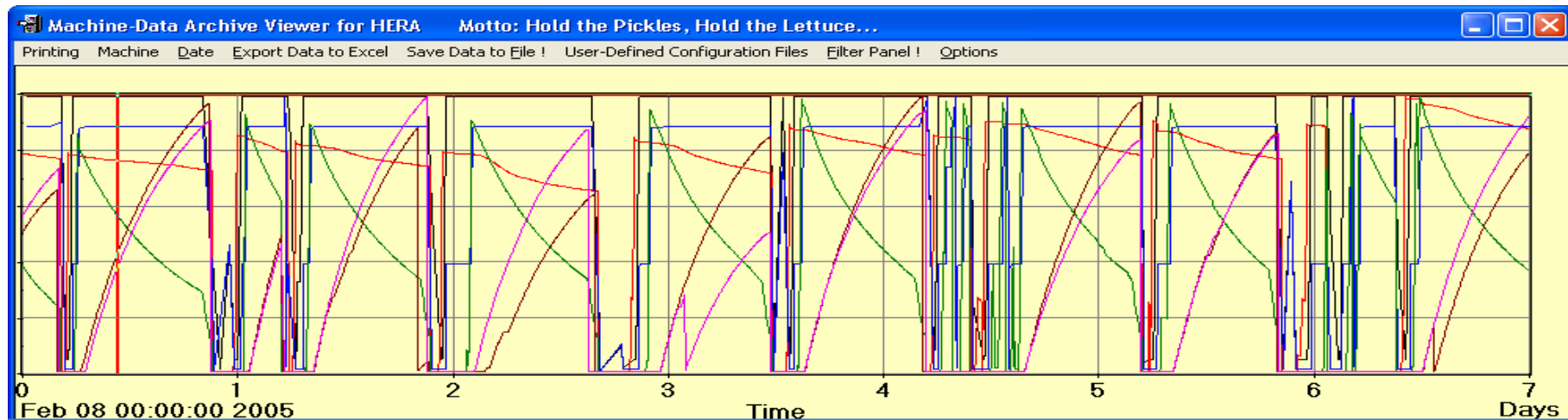


HERA Week #6

Feb 8-14, 2005



Luminosity production $\int Ldt = 6.4 \text{ pb}^{-1}$

Polarization tuning disappointing: 30%

Backgrounds: still critical but somewhat better

Monday: Number of bunches increased from 120 to 150

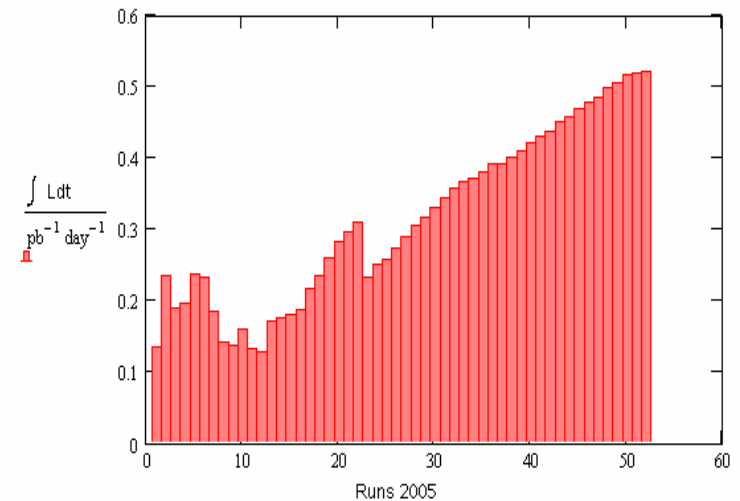
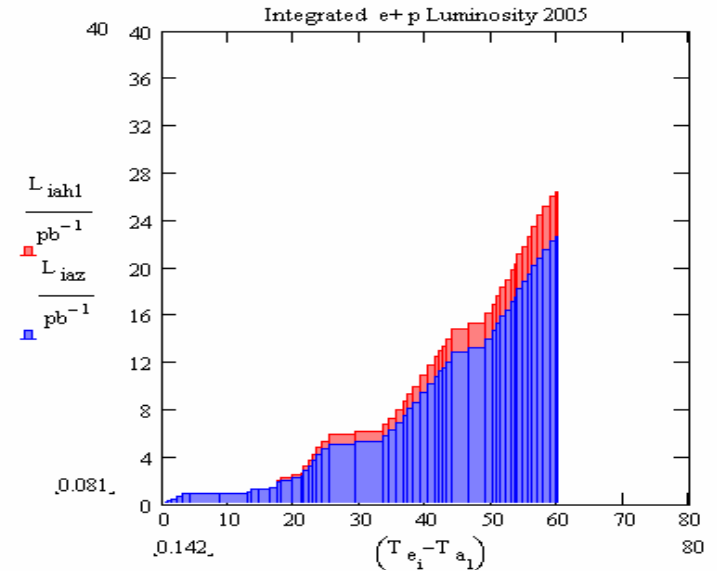
Luminosity Production

Peak Luminosity H1 / Z :
4.11 / 3.53 $10^{31} \text{cm}^{-2} \text{s}^{-1}$

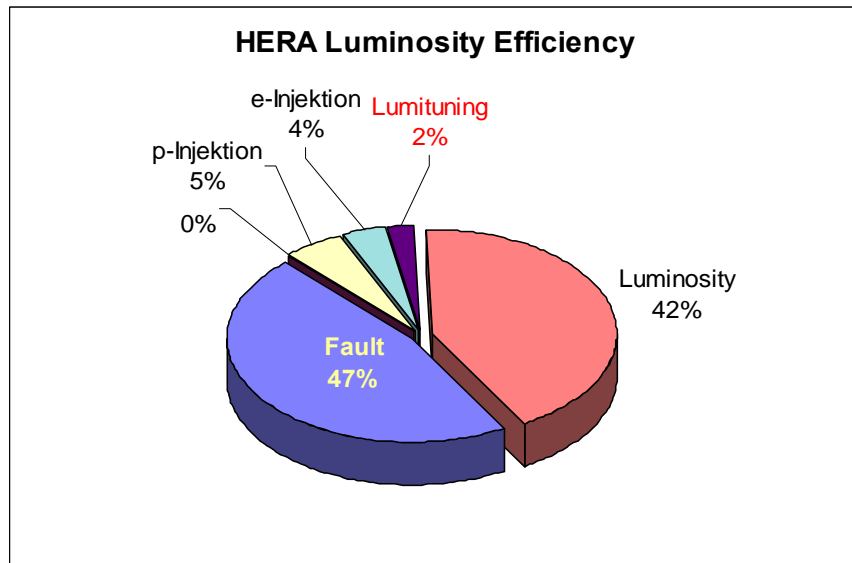
Integrated Luminosity H1 / Z :
6.4 / 5.3 pb^{-1}

Specific Luminosity H1 / Z :
2.0-2.4 / 2-2.4 $10^{30} \text{mA}^{-2} \text{cm}^{-2} \text{s}^{-1}$

Luminosity Efficiency 66%



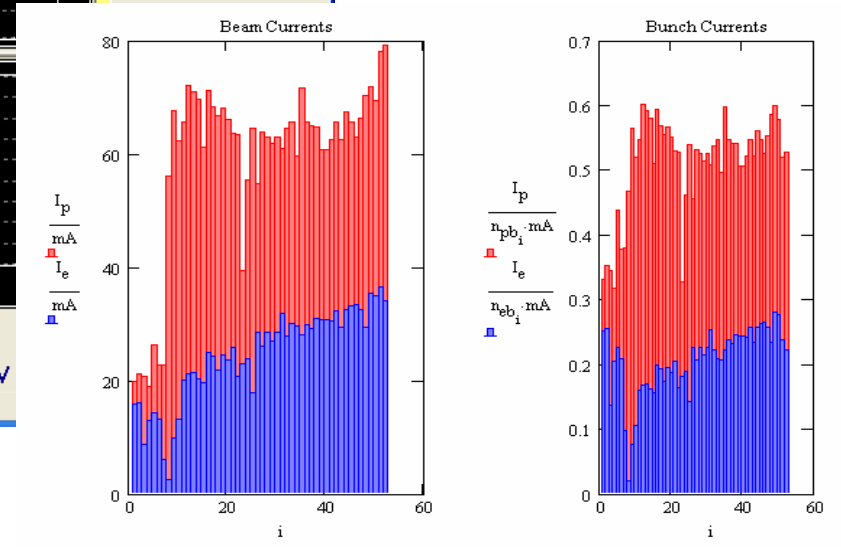
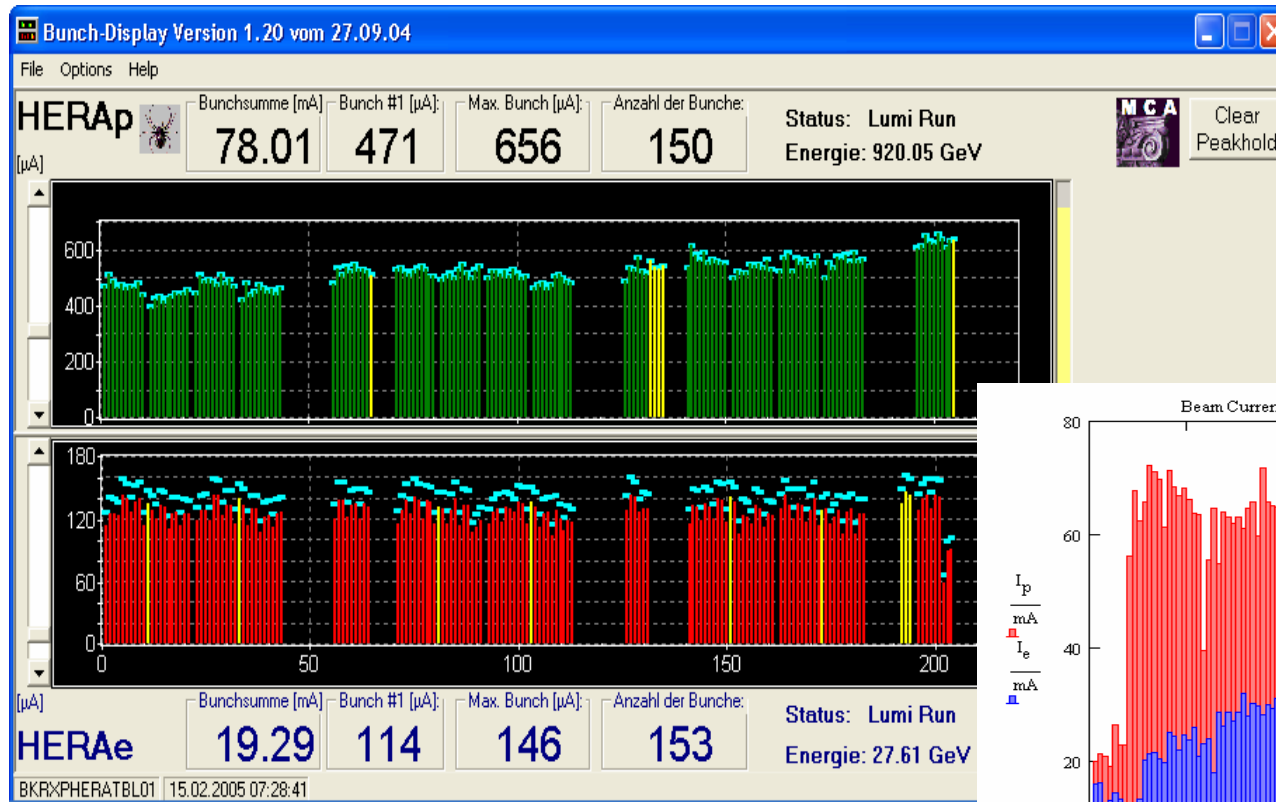
Operational Statistics: improving slowly



Wednesday, 09 February, 2005	e-Dump wegen Cavitytemperatur WR	0:45	Ausfall	sl-cav
Wednesday, 09 February, 2005	ZEUS kalibriert	0:56	Ausfall	Exp
Wednesday, 09 February, 2005	PETRA liefert keine Elektronen	2:11	Ausfall	Petra
Thursday, 10 February, 2005	Zugang fuer MVA, Pumpenkabel an der HF OR	1:03	Ausfall	MVA
Thursday, 10 February, 2005	Probleme mit dem Dumpschalter 10 WR	1:25	Ausfall	Powersupp
Thursday, 10 February, 2005	Warten auf DESY3	0:40	Ausfall	DESY3
Thursday, 10 February, 2005	Ejektionsprobleme bei PETRA	0:39	Ausfall	Petra
Friday, 11 February, 2005	Zugang fuer MVA, Pumpenkabel an der HF OR	1:00	Ausfall	MVA
Friday, 11 February, 2005	Ejektionsprobleme bei PETRA	0:20	Ausfall	Petra
Saturday, 12 February, 2005	e-Dump wegen Cavitytemperatur WR	0:10	Ausfall	sl-cav
Saturday, 12 February, 2005	e-Strahlverlust ohne erkennbare Ursache	0:08	Ausfall	Unbekannt
Saturday, 12 February, 2005	Phasenprobleme Sender NR	1:00	Ausfall	e-HF
Saturday, 12 February, 2005	e-Dump wegen Cavitytemperatur WR	0:08	Ausfall	sl-cav
Sunday, 13 February, 2005	ZEUS kalibriert	0:20	Ausfall	Exp
Sunday, 13 February, 2005	Ausfall Polwender QP28 OR	1:00	Ausfall	Powersupp
Sunday, 13 February, 2005	Ausfall Polwender QP28 OR	1:08	Ausfall	Powersupp
Sunday, 13 February, 2005	Warten auf PETRA	1:19	Ausfall	Petra
Monday, 14 February, 2005	Ausfall 208MHz D, Sicherung geflitzt	7:44	Ausfall	p-HF
Monday, 14 February, 2005	Transv. Feedback vergessen	0:20	Ausfall	Bedienung

Only 19 hardware failures last week

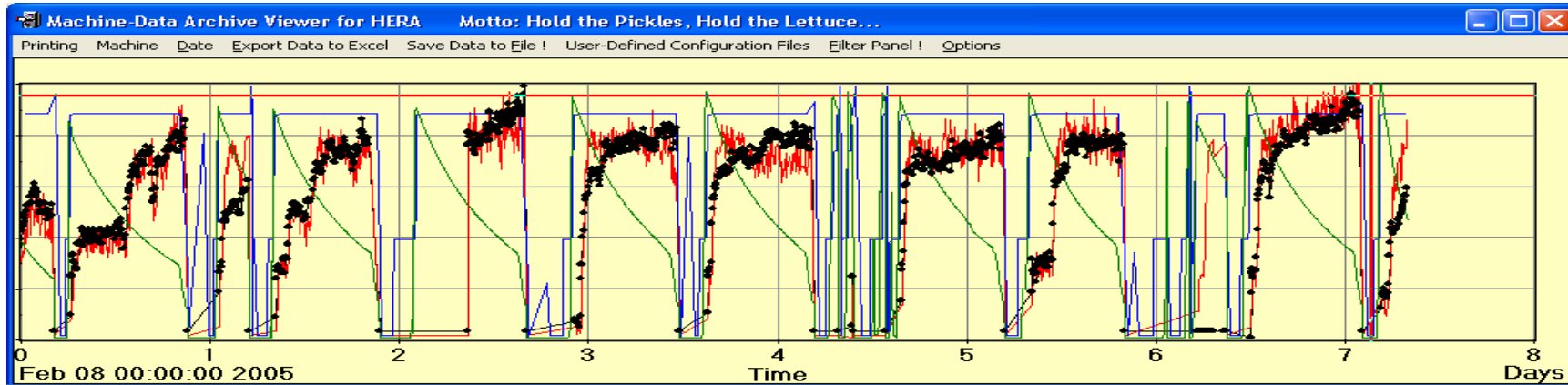
New Bunch Pattern



Protons: 150 bunches (3 x 50), 144 colliding, 6 pilotes (→ 3 pilotes)

Electrons 153 bunches (3 x 42 + 9 x 3), 144 colliding, 9 pilotes (→ 6 pilotes)

Polarization



Energy scan beginning last week: no improvement (already at optimum)

Harmonic bump scans, low orders completed

Polarization $\leq 30\%$ ☹

Further plans:

- **Another Energy scan**
- **optimize higher order harmonics**
- **Scan Vertical rotator magnets**

Electron effects: analysis needed



Feb 7, 126 bunches

Feb 13, 126 bunches

Feb 14/15, 153 bunches

