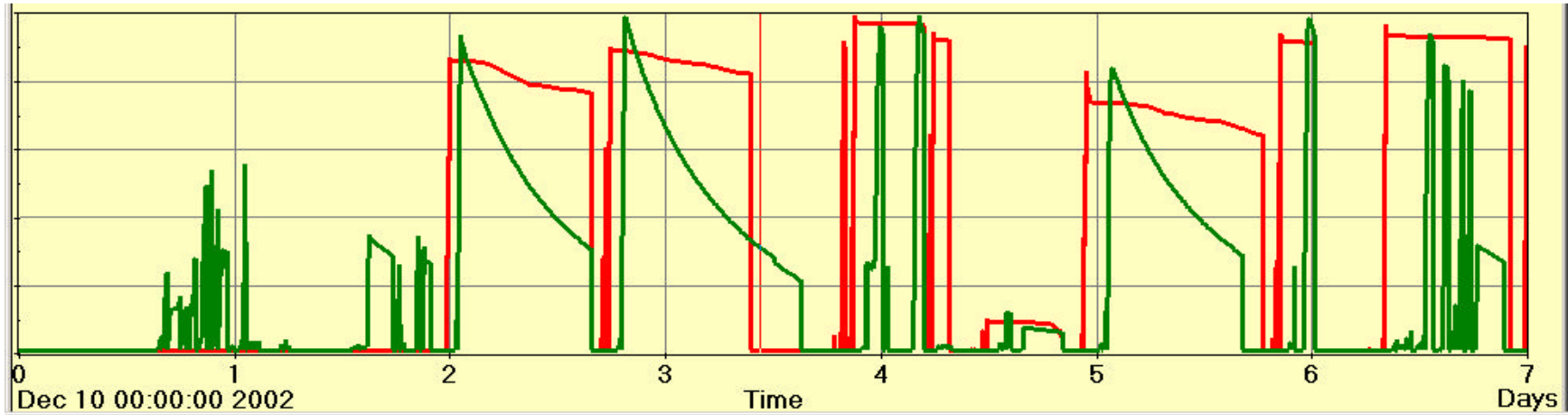


# HERA

- Week 50
- Nov-Dec Running
- Shut-down at the end of the year
- Startup in January
- January-February Running

# HERA Week 50



Machine  
Studies

Background  
Studies

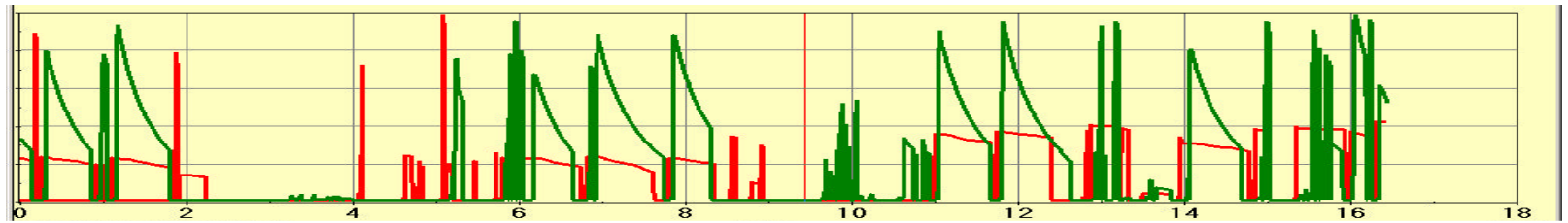
Luminosity  
Runs  
40mA p

Proton  
filework

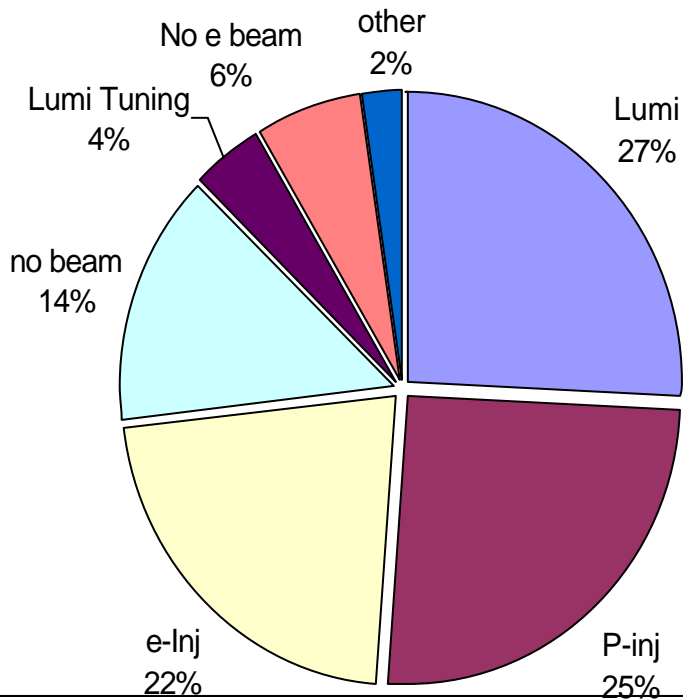
Luminosity  
Run  
40mA p

Technical  
problems  
SEDAC,  
SC RF

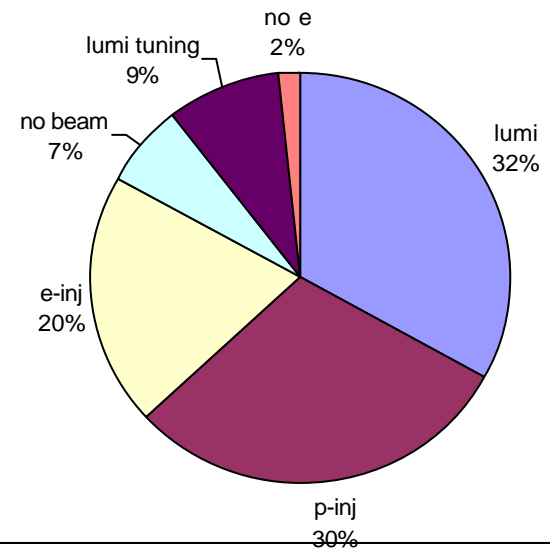
# December Running



December Running



November Running



# Schedule Week 51

Fri Jan 3 - Mo Jan 6

start Up

Tu Dec 23- Thu Jan 2

shut down

Mo Dec 23

shutting down

So December 22

N high lumi / warm up GO/GG

S high lumi

F high lumi

Sa December 21

N MD: bb beta beat vs p bunch intensity

S MD: test phase trombone

F MD: lumi preparations

Fr December 20

N MD: Invest. of Synchro betatron resonances

S MD: Invest. of Synchro betatron resonances

F MD: Invest. of Synchro betatron resonances

Th December 19

N MD: long e run

S MD: high intensity e+

F MD: high intensity e+

We December 18

N luminosity operation

S luminosity operation

F luminosity operation

Tu December 17

N luminosity operation

S luminosity operation

F luminosity operation

# Short Shut Down

## Proposal:

- Do not break IR Vacuum North
- Warm up GO/GG beam pipes to room temp.
- Pump the warm pipes for 10 days
- Activate NEG pumps
- Cool down

# January Running

Continuous running without interruption by  
machine studies or background studies

Machine studies en bloc in February

# Machine Shut Down Activities

IR Survey before and after installations

Exchange bellows in the IR by bellows with SR shield

Add pumping ports to GA 30L? (not decided yet)

Install SR absorbers to protect rf screens in rotator area

Exchange Absorber 4

Install movable collimator at absorber 1 ?

Install movable collimator at L60m

Realignment of East Rotator

Repair wire alignment system

Replace electronics of e BPM monitors

Install bipolar chopper VO

Install fast injection kickers

Repair p-BPM

Repair vacuum leak, damaged windows, insulation SC cavities

Improve QR cooling

# Restart in July

- Start to close tunnel 4 weeks before shut down ends for ps tests (West, East, South)
- 3 weeks of start up with beams