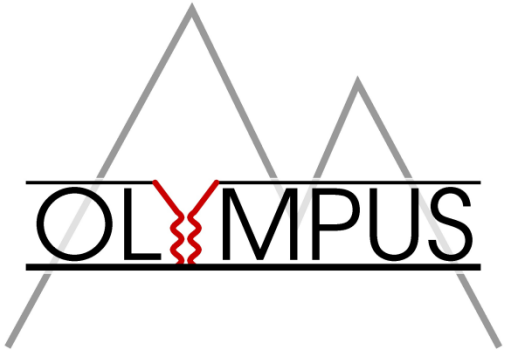




# 2 GeV studies in June and proposal for startup in August

Olympus collaboration meeting
DESY, June 28 th 2011, F.Brinker

# Parameters for 2 GeV run

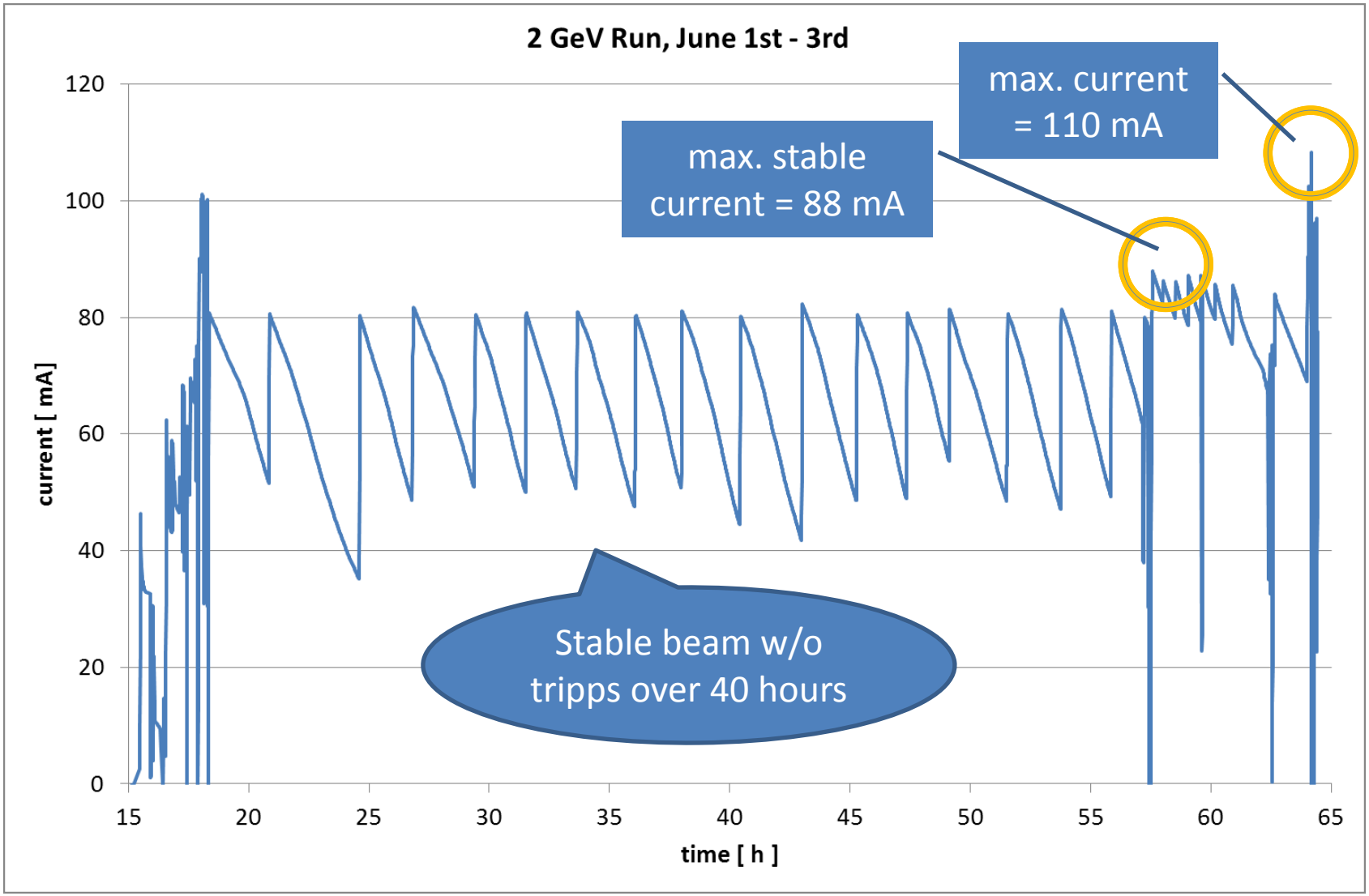
- RF-station NL connected to 4 cavities 3.1 – 3.4
- Cavities detuned by 30°to encrease RF-power
- Cavities 4.1 – 4.4 detuned to f-min
- Phases of FB- amplifiers optimized
- Sum of cavity voltages = 1.5 MV
- Moderate longitudinal oscillations
- RF-power about 100 kW ( dep. on beam current)

# Limitations and possible improvements

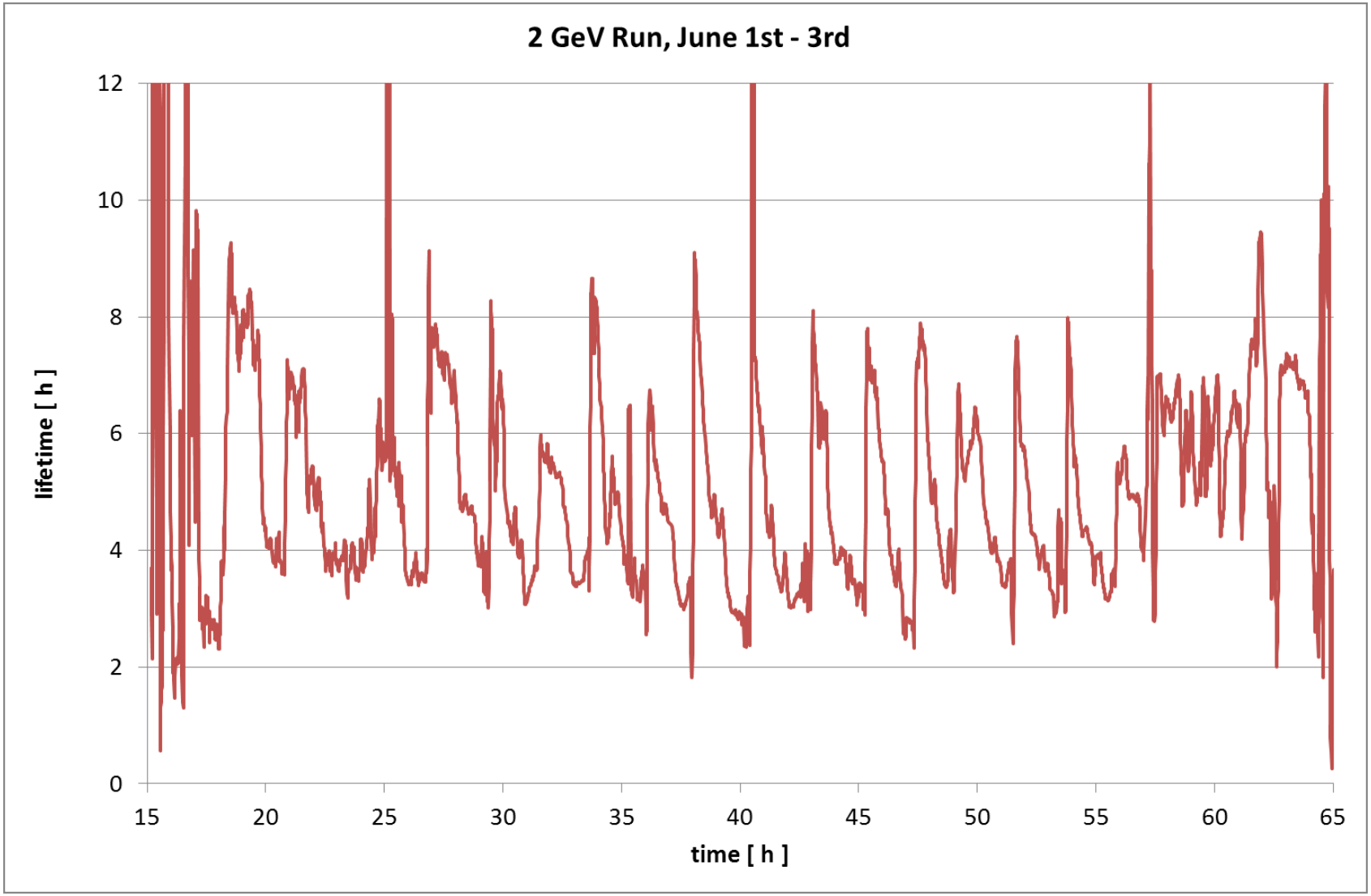
- Cavity voltage limited to values larger than 1.1 MV by minimal stable RF-power
- Maximum current is limited by longitudinal instabilities
- Self stabilising effect : higher HOMs encrease beam length, encrease
- Active Feedback needed to damp coherent oscillations

- ➢ Improvements on feedback system seem possible
- ➢ Further reduction of cavity voltage might help
- ➢ For the last run period ( end 2012 ) two cavities could be replaced by smooth vacuum chambers ( reduce impedance )

# Achivements during service week in june

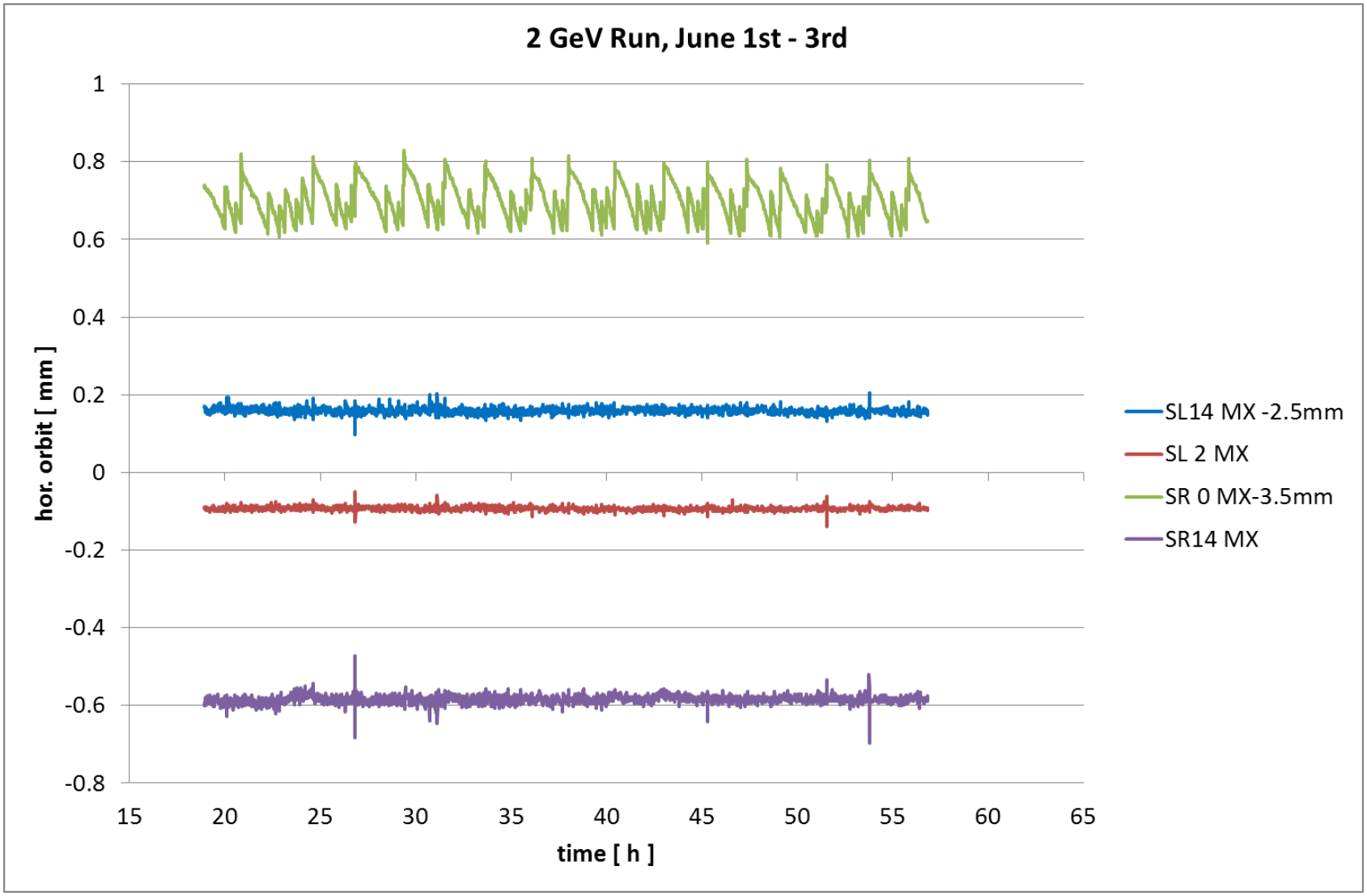


# Lifetime higher at higher currents ( longer bunches )



# Horizontal orbit stability over 40 hours

( technical problems with BPM SR 0 )



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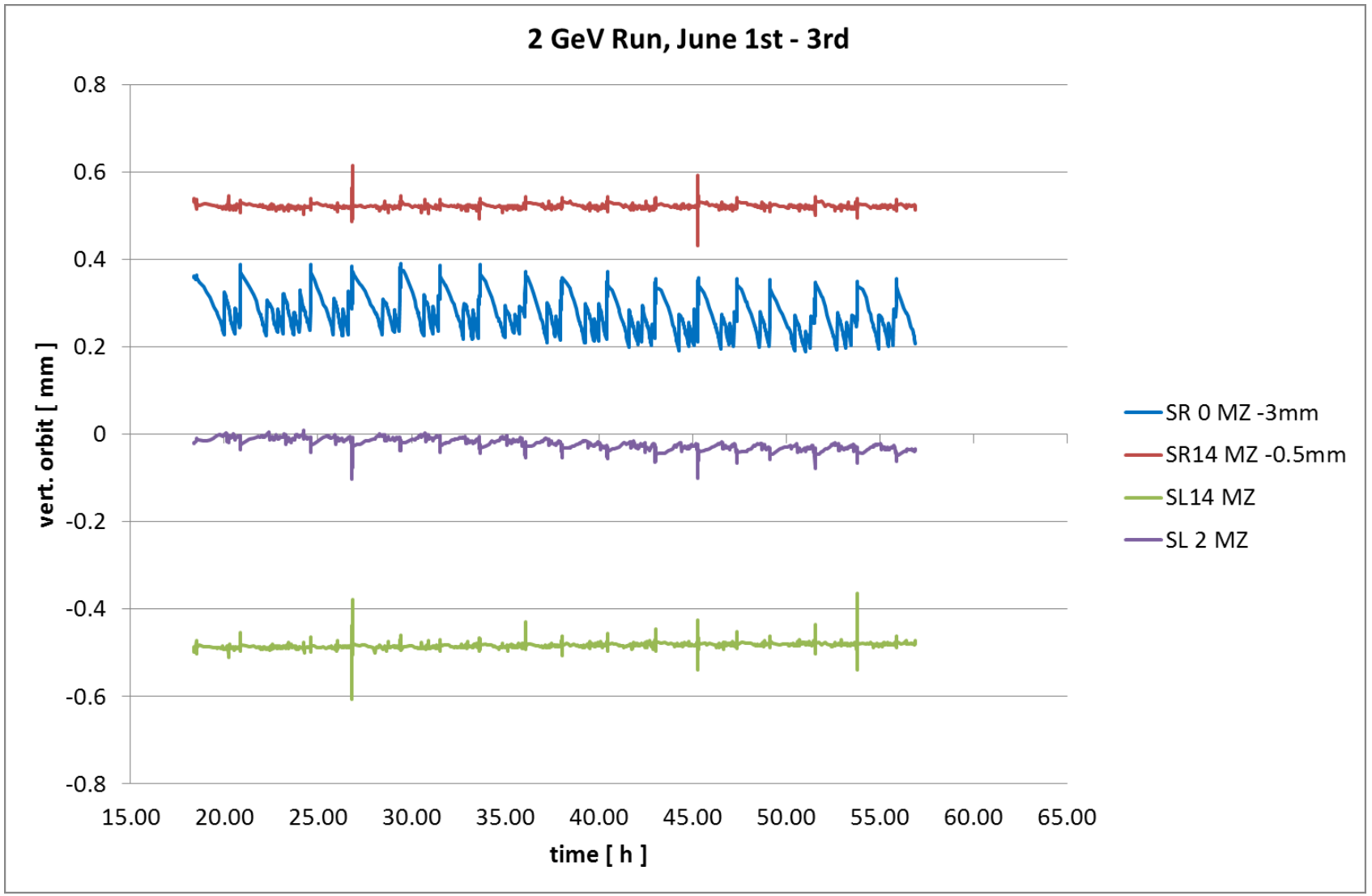
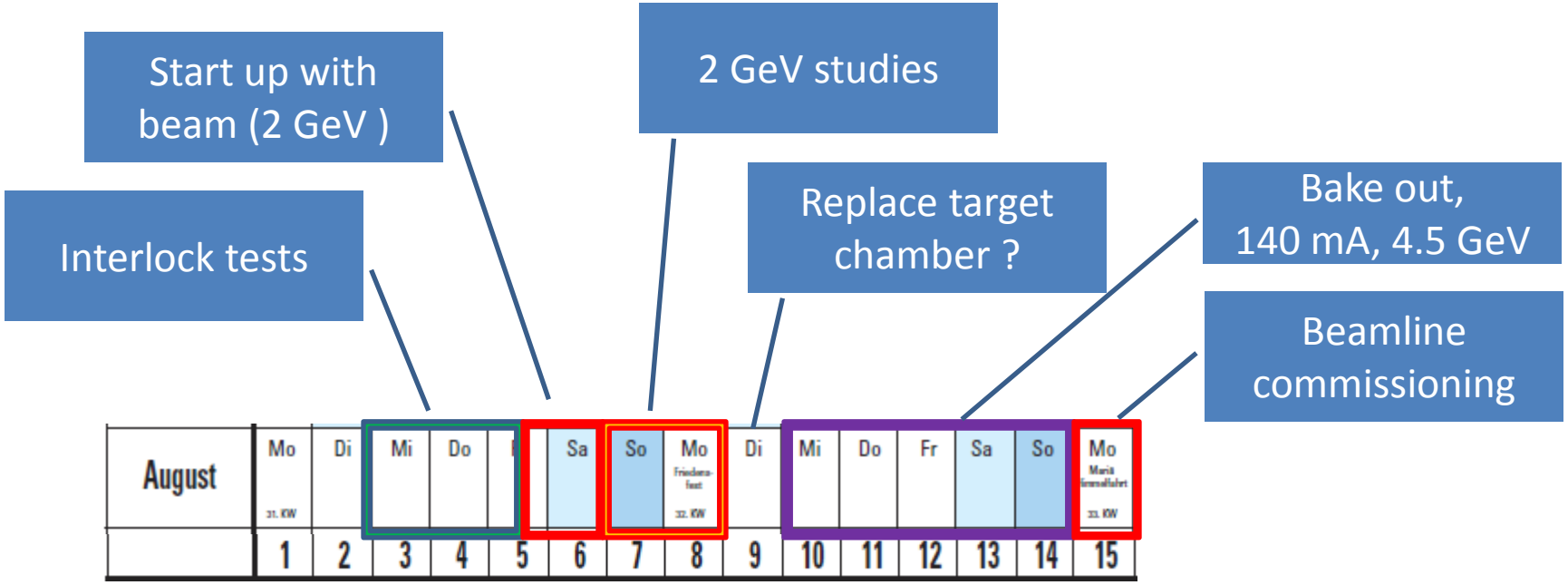


# Expected time schedule for start up with a damaged target cell



*Thank you !*