

ADT FAST LOSSES TEST

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AIMS AND CONDITIONS

AIMS:

- Can the ADT create „UFO-like” timescale losses?
- Check what the fastest losses can be made with ADT (ADT fastest failure scenario)

CONDITIONS:

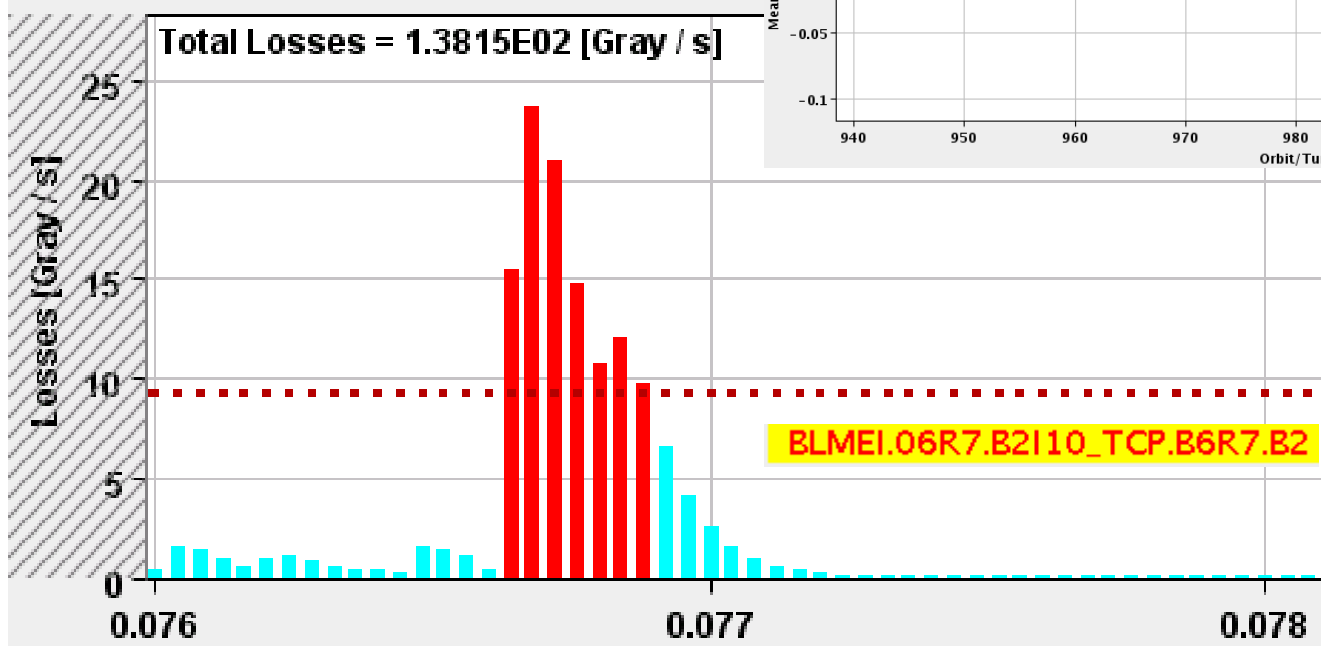
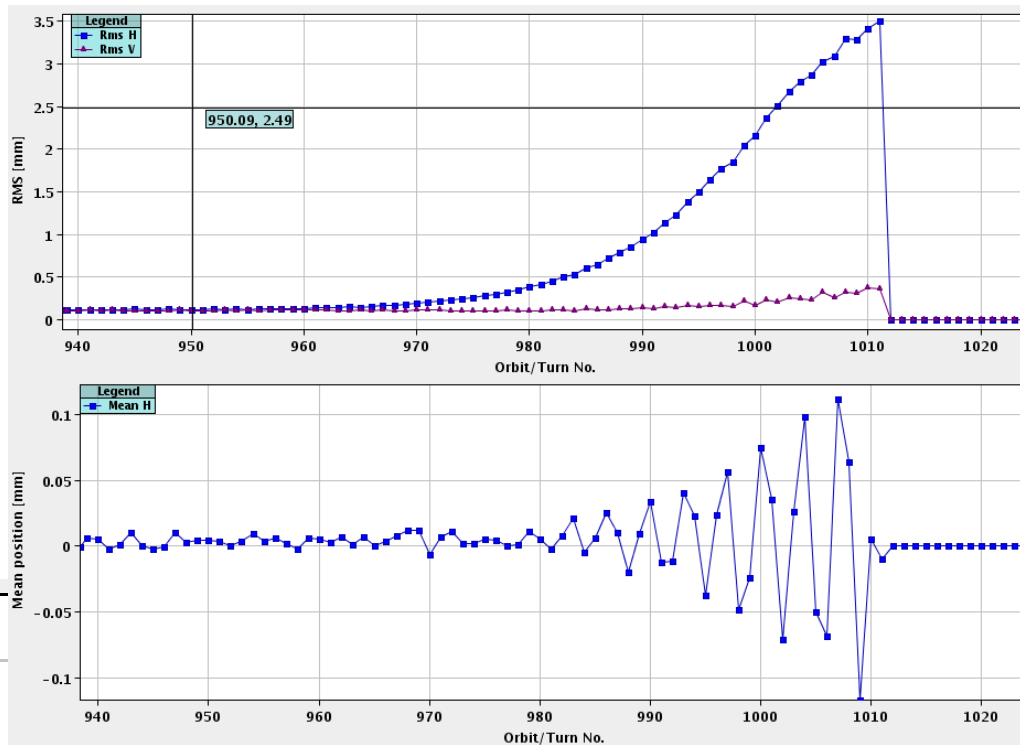
- Beam 2 horizontal (probe beam at 450 GeV)
- Intensity: 10^{10} charges

METHODS:

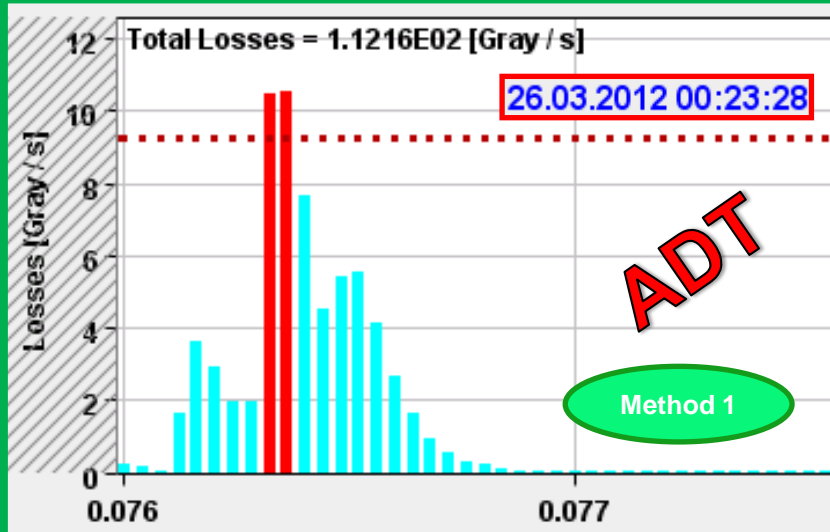
- 1.Method → Coherent excitation (ADT feedback loop disabled)
- 2.Method → ADT feedback loop sign swap

ADT feedback loop sign swap method

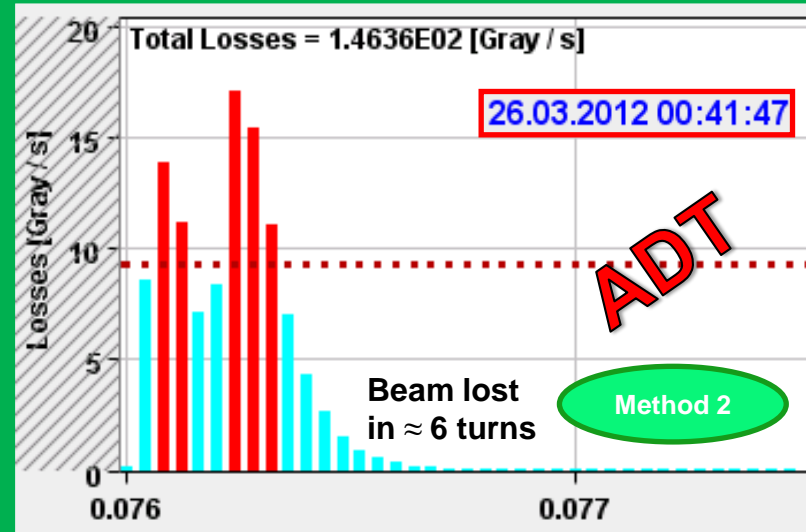
Beam lost in ~500 μs (6 turns)



COMPARISON (ADT vs UFO)



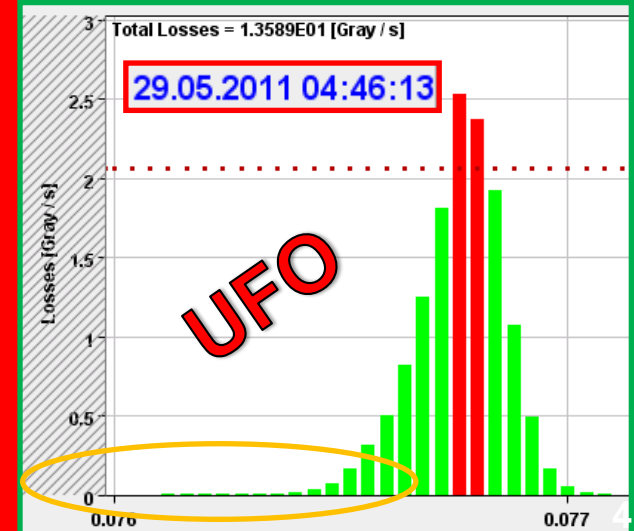
BLMEI.06R7.B2I10_TCP.B6R7.B2



BLMEI.06R7.B2I10_TCP.B6R7.B2



BLMEI.06R7.B2I10_TCP.B6R7.B2



BLMQI.28L8.B1E10_MQ

SUMMARY

- ADT can be used in two modes for a beam manipulation:
 - Coherent excitation
 - ADT feedback loop sign swap
- ADT can induce UFO-time scale losses (6 turns $\approx 500 \mu\text{s}$) but with different time distribution
- Additional studies required (the same intensity)



ADT can be used for Quench Test 2012

Thank you for your attention !!!

UFO → 29.05.2011 04:46:14

