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TRANSFER LINE STABILITY STUDIES

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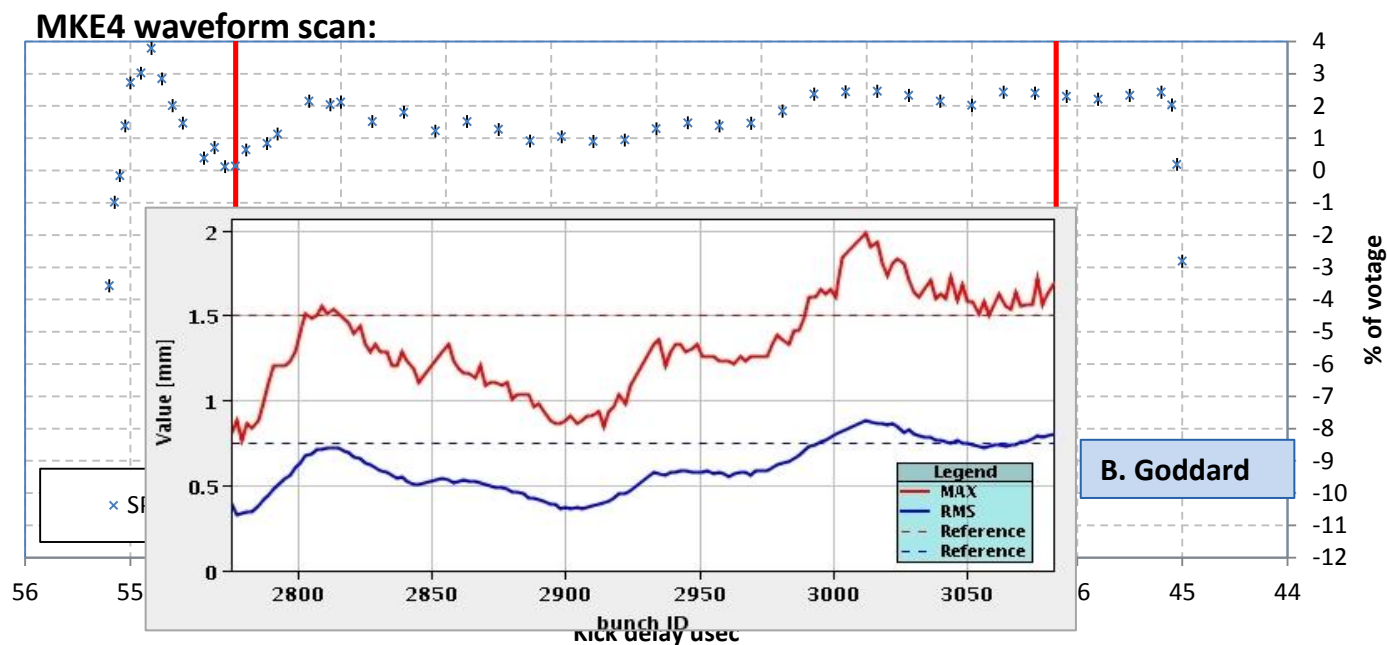


Transfer line studies

- **No MD time, but some studies possible in downtime:**
 - MKE waveform scans
 - TI 8 stability study
- MD request on transfer line stability

MKE4 waveform scan

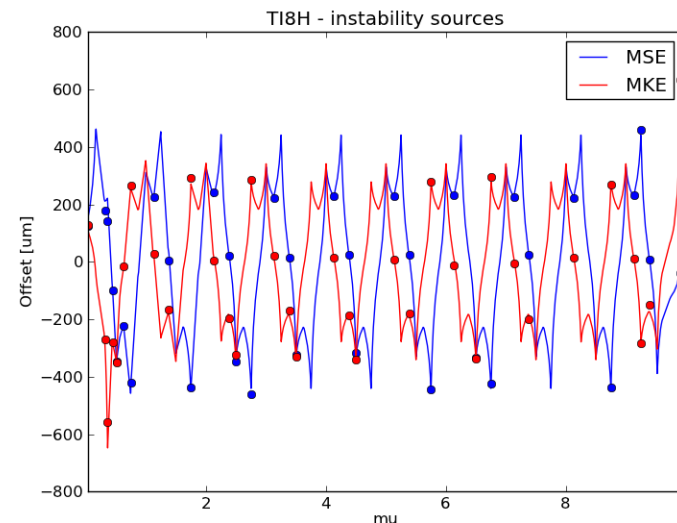
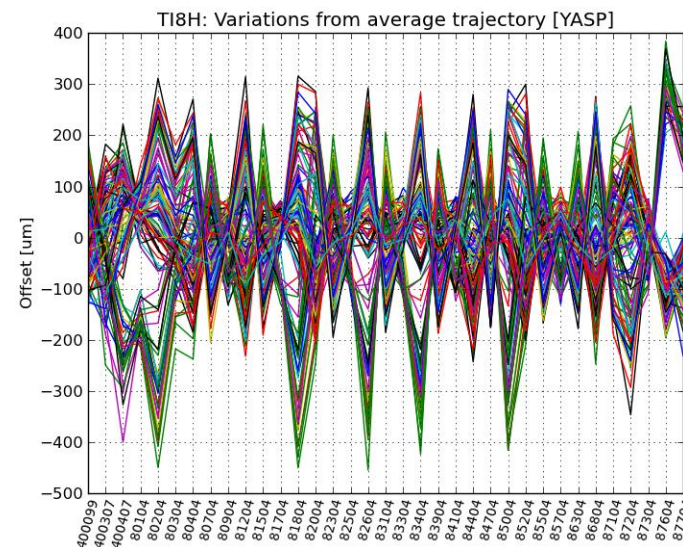
- The MKE4 (B2) waveform shows a ripple varying up to **4%** of voltage – **out of specifications**



Shape of ripple is similar to observed bunch-by-bunch variations!

TI 8 stability studies

- Stability studies was done on TI 8 for a period of 1.5h (177 shots) of 12 bunch injections
 - Variations from average trajectory up to **770 μm**
 - MIA analysis gives two sources: **MSE and MKE** (SPS extraction)
- Reminder: Similar studies for TI 2 also points to the MSE





Further studies

MD next year:

- Work has been done to improve the stability of the MSE → repeat stability studies of both lines
- Investigate sensitivity to steering at transfer line collimators
- Study effect of super cycle changes
- Investigate possible MKE timing jitter