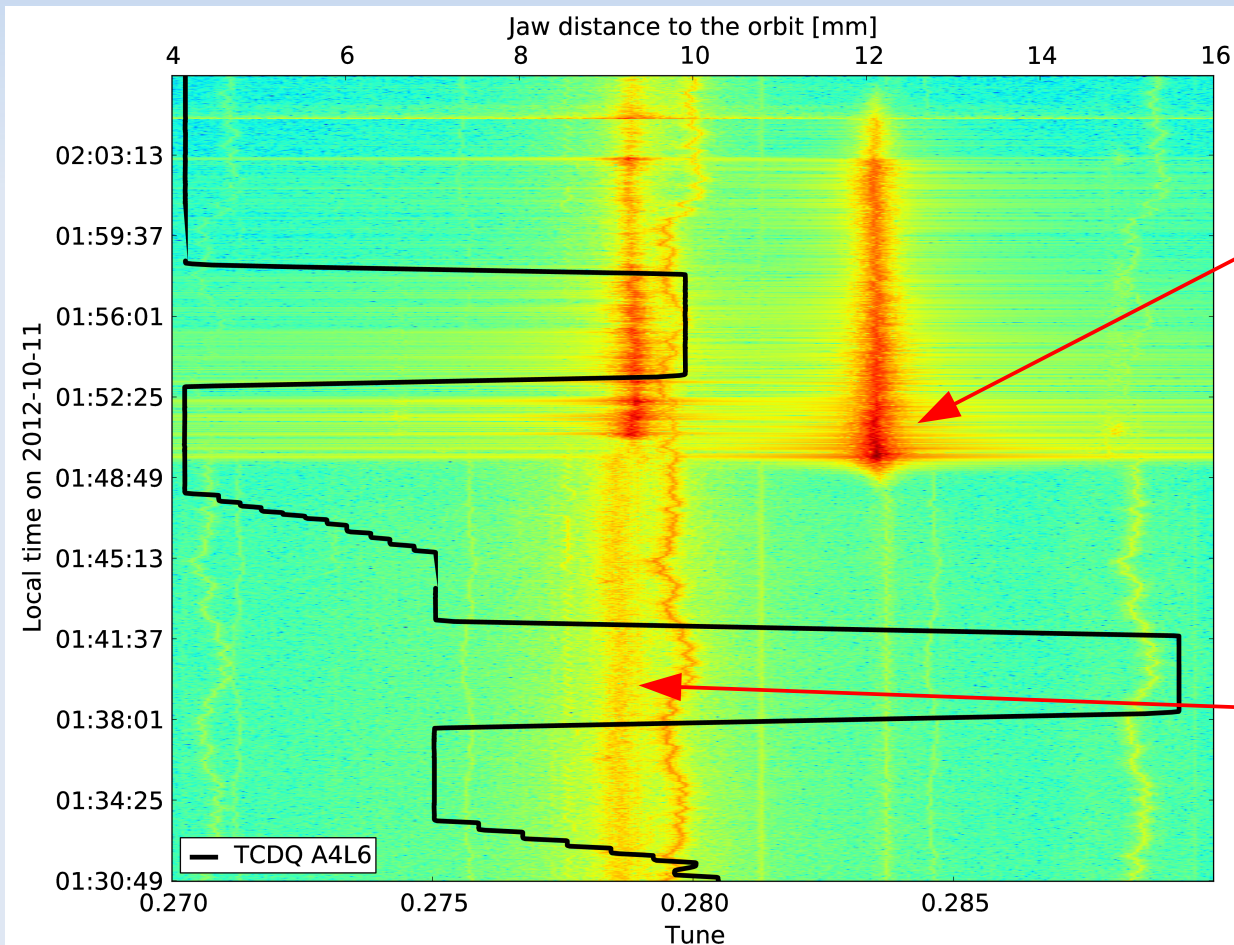


TCDQ impedance MD

C. Bracco, W. Bartmann & injection team, N. Mounet & impedance team

- Idea: test impedance of TCDQ which will become **50% longer** & **20% closer** to the beam (but 2-3 times less resistive) after LS1.
- With single-bunch at injection, tune shift vs. TCDQ jaw movement:



Bonus: **instability** (presumably headtail), seems stabilized by damper (switched on at 2:04).

Tune shift $\sim 1-2 \cdot 10^{-4}$ (model $\sim 1 \cdot 10^{-4}$).

Single-beam instability MD

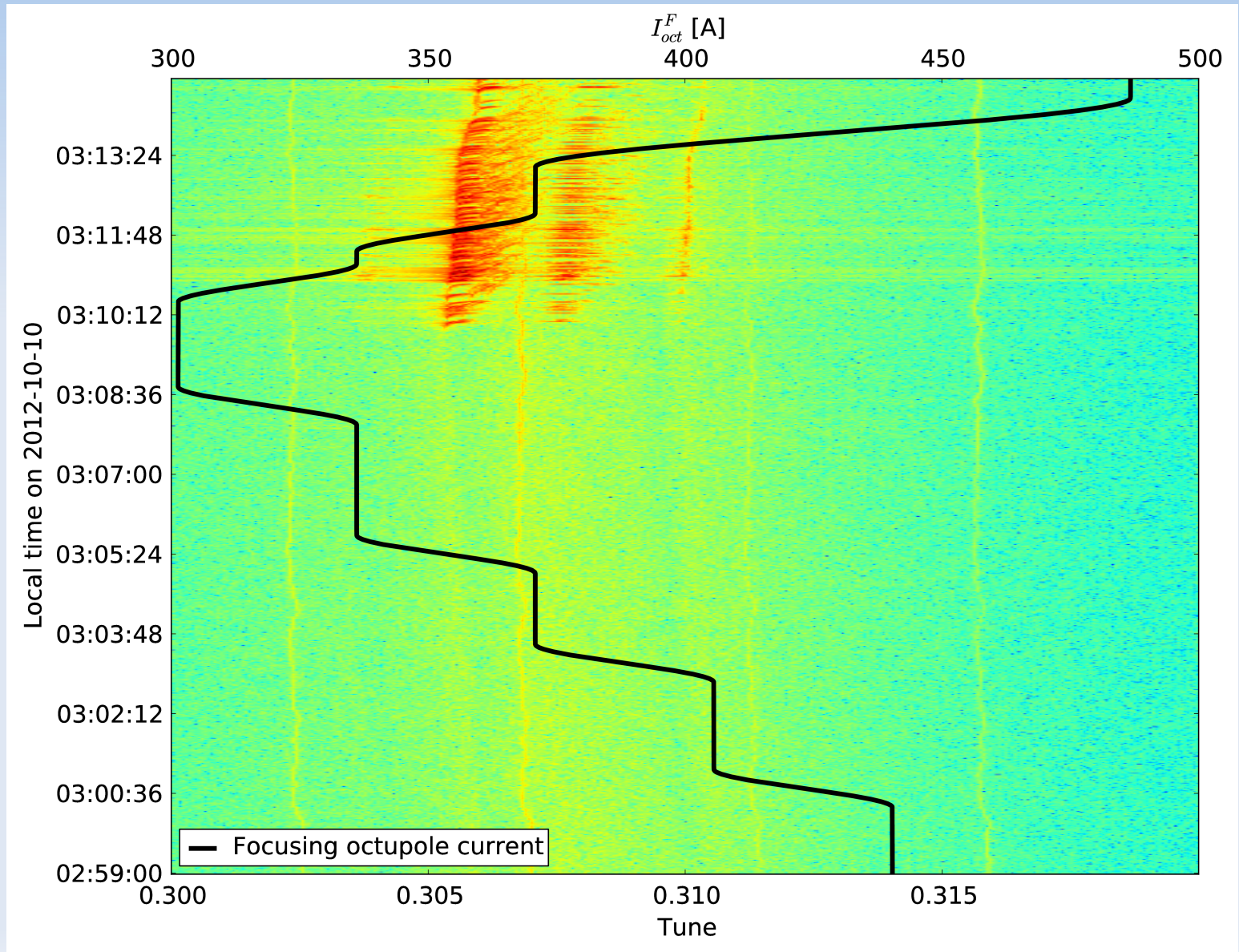
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- B2, 1374 bunches, $2.3 \cdot 10^{14}$ total intensity, emit. ~ 1.6 - 1.7 mm.mrad (at injection). **Positive** (new) octupole polarity.
- Fill 3145:
 - flat top, ADT 100 turns in x & 200 turns in y. Instability thresholds:
 - $Q'_x=9, Q'_y=4 \rightarrow 300$ A (vertical instab.), (with "old" polarity: -100 A)
 - $Q'_x=15, Q'_y=15 \rightarrow 208$ A (horizontal),
 - squeeze, ADT 50 turns in x & 100 turns in y. Instability thresholds:
 - $Q'_x=12, Q'_y=4 \rightarrow > 510$ A (vertical), (with "old" polarity: -20 A)
 - $Q'_x=12, Q'_y=15 \rightarrow 185$ A (horizontal and vertical),
 - negative chromaticities, ADT 50 turns in both planes \rightarrow always unstable at **510 A**.
- Fill 3146, flat top, ADT 100 turns x & y, $Q'_x=13, Q'_y=15 \rightarrow$ threshold at **34 A** (H & V) (6 times less than previous fill with \sim same conditions !)

Single-beam instability MD

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Ex: flat top,
fill 3145

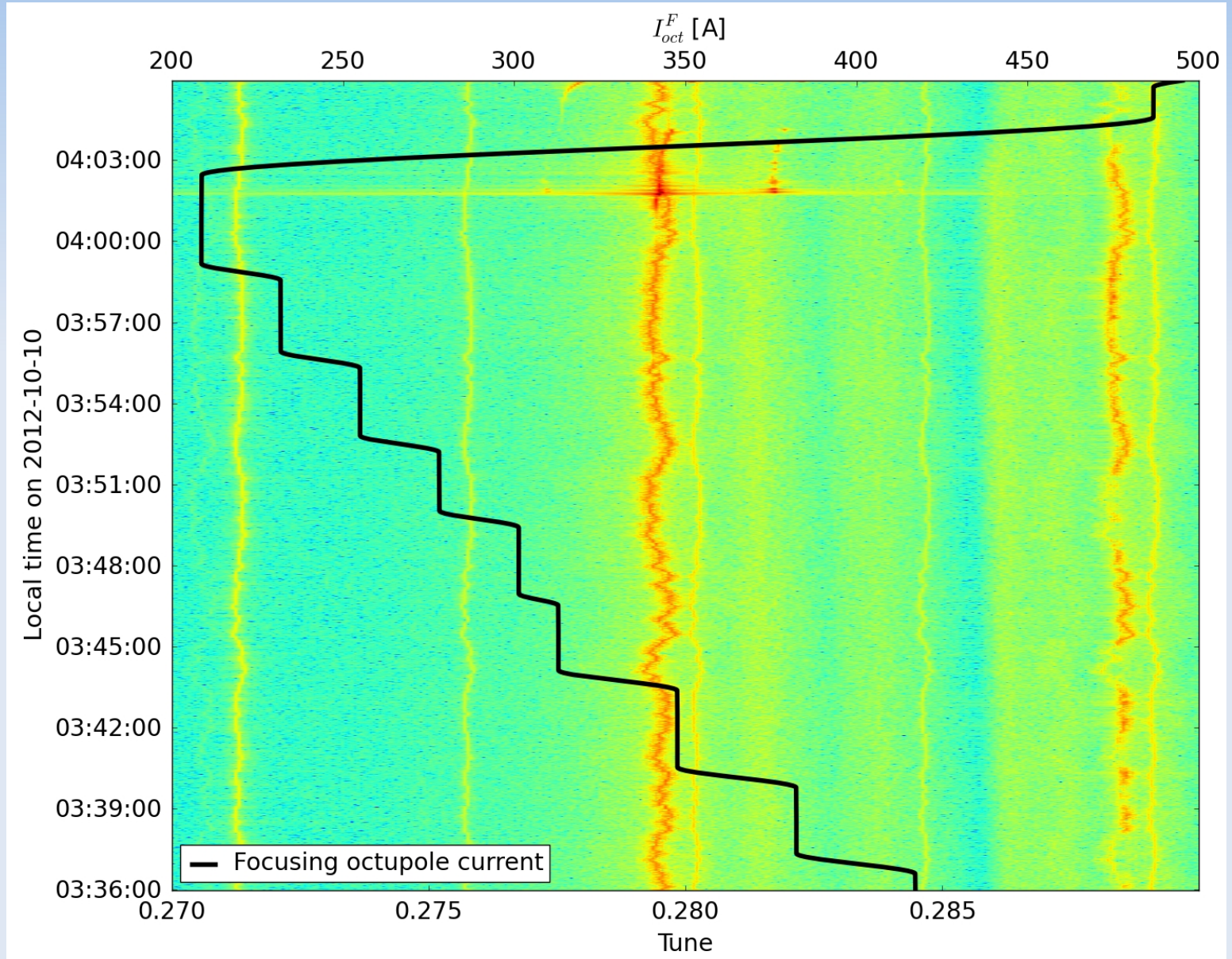


SPARES

Single-beam instability MD

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Flat top, fill
3145, $Q'_x=15$,
 $Q'_y=15$, **208A**



Single-beam instability MD

N. Mounet, E. Métral, A. Burov, X. Buffat, B. Salvant, G. Papotti

Flat top, fill
3146, $Q'_x=13$,
 $Q'_y=15$, **34A**

