Some instabilities in the LHC

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Thanks to G. Arduini & E. Métral

Flat top instabilities

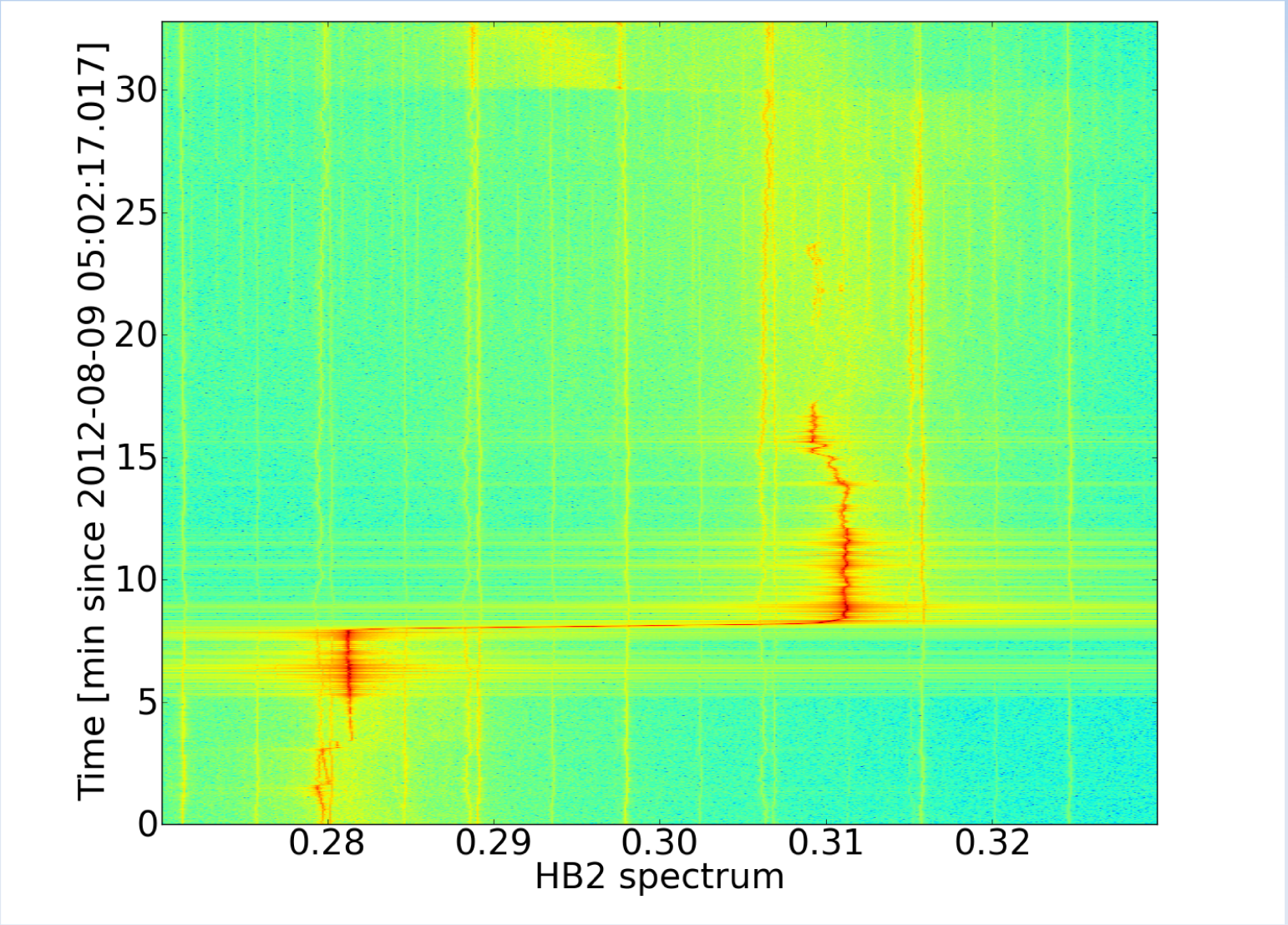
- From G. Arduini (LMC 145 – 15/08/2012):

Stability level investigations in the ramp

Fill	<Ib>	Q'	Oct (ramp)	Instability end of ramp (first)	Comment
2908	1.51	2/2/2/2	-417	None	OK
2911	1.51	2/2/2/2	-417	B2H	Losses at the end of flat-top Saved by raising Q' (+3H/+3 V)(EM,LP)
2912	1.52	7/7/7/7	-417	B1H or B2H	OK
2913	1.56	7/7/7/7	-417	B2H starting first	Ramp OK Losses in collision BP
2915	1.52	7/7/7/7	-330	B1H starting first	Ramp OK Losses in collision BP
2917	1.48	7/7/7/7	-150	B1H starting first	
2918	1.48	7/7/7/7	-150	B2H	Saved by raising Q' (+2 H/+3 V)
2919	1.47	7/7/7/7	-200	B2H	
2920	1.46	7/7/7/7	-200	B1H	Saved by raising Q' (+2 H)

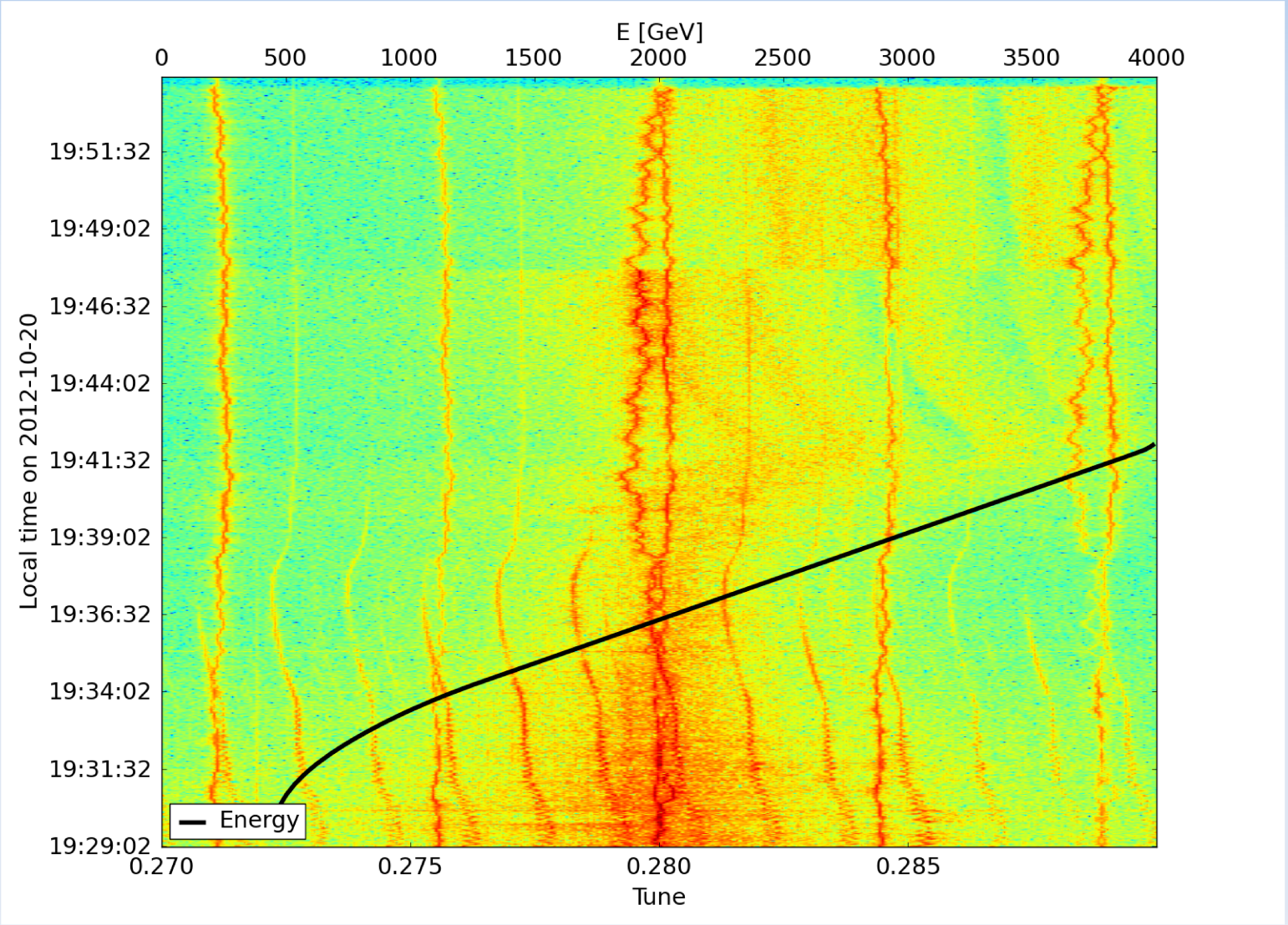
Flat top instabilities

- From T. Pieloni: ex: fill 2932 at flat top (Q' 9-10, octupoles 510 A)



Flat top instabilities: what is the situation now ?

- On two fills (3203 & 3238), I have not seen any instability during ramp + flat top. Ex: B2H for fill 3203



End of squeeze instabilities with higher RF voltage

- Fill 3238 (Monday 29/10 evening): B1V (B2V also unstable)