

M17 Effect of central ECH/ECCD deposition on (N)TM onset

Pulse Plan

Effect of on-axis co-/cnt-ECCD on (N)TM onset at $I_p=500$ kA.

- 1) Zero at 5.3 T
- 2) 5.3 T / 500 kA/ $n_e \sim 0.65$ (ref. #37581), 2 gyrs. , co-ECCD (? polar. problems) *
- 3) Repeat 2) with 3 gyrs. , co-ECCD
- 4) Repeat 3) with 4 gyrs. (if possible), if not repeat 3) with $n_e \sim 0.4$
- 5) Repeat 3) with EC deposition around $q=1$
- 6) Repeat 3) 2) in cnt-ECCD (? polar. problems & 1 gyr.) *
- 7) Repeat 5) in cnt-ECCD
- 8) Repeat 4) in cnt-ECCD
- 9) Repeat 3) in pure heating
- 10) Repeat 4) in pure heating

→ bad session , need to repeat the 2 shots (*) at least

Effect of on-axis co-/cnt-ECCD on (N)TM onset at $I_p=360$ kA and same pulse sequence as before.

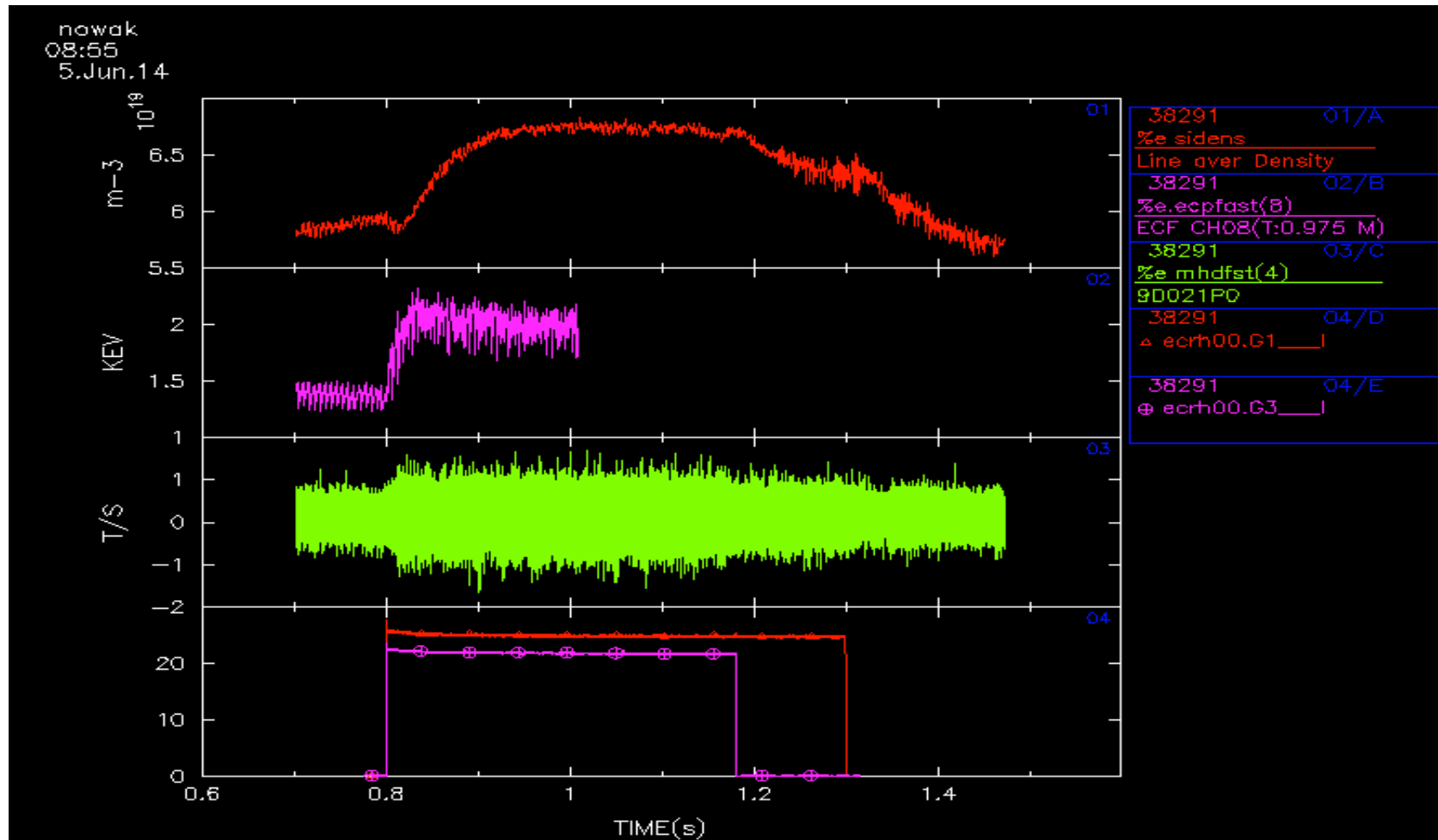
- 11) Zero at 5.3 T
- 12) 5.3 T / 360 kA/ $n_e \sim 0.65$ (ref. #37599) 2 gyrs. , co-ECCD
- 13) Repeat 12) with 3 gyrs. , co-ECCD
- 14) Repeat 13) with 4 gyrs. (if possible), if not repeat 13) with $n_e \sim 0.4$
- 15) Repeat 13) with EC deposition around $q=1$
- 16) Repeat 13) in cnt-ECCD
- 17) Repeat 15) in cnt-ECCD
- 18) Repeat 14) in cnt-ECCD
- 19) Repeat 13) in pure heating
- 20) Repeat 14) in pure heating

11	Program
2	Zero
4	Recovery
3	Repeat

#38291 : 500 kA, 5.3T, 1 gyr. 500ms, 1gyr. 380 ms

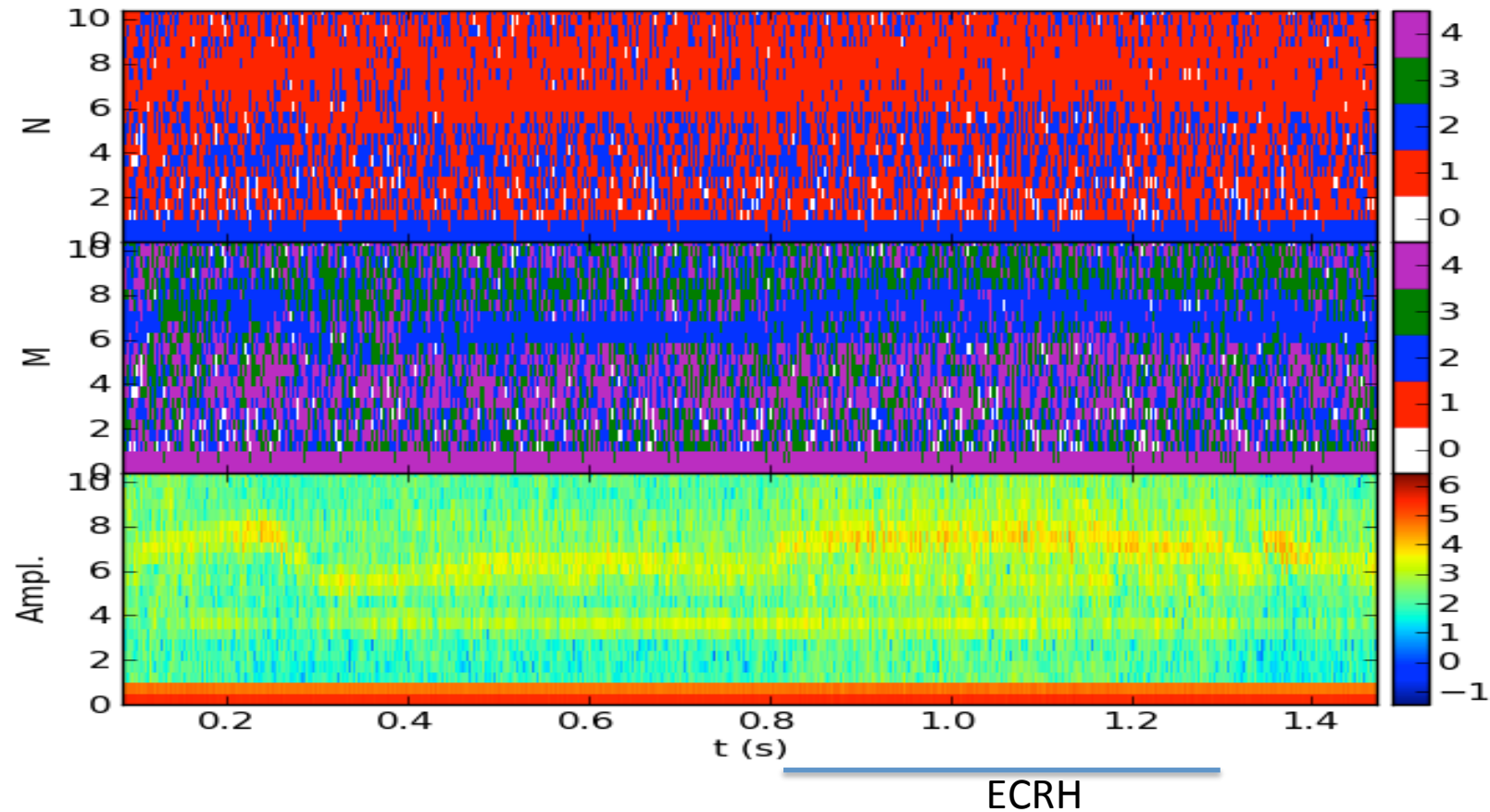
co-ECCD

(but with bad polarization) /1/



#38291 : 500 kA, 5.3T, 1 gyr. 500ms, 1gyr. 380 ms

co-ECCD (but with bad polarization) /1/

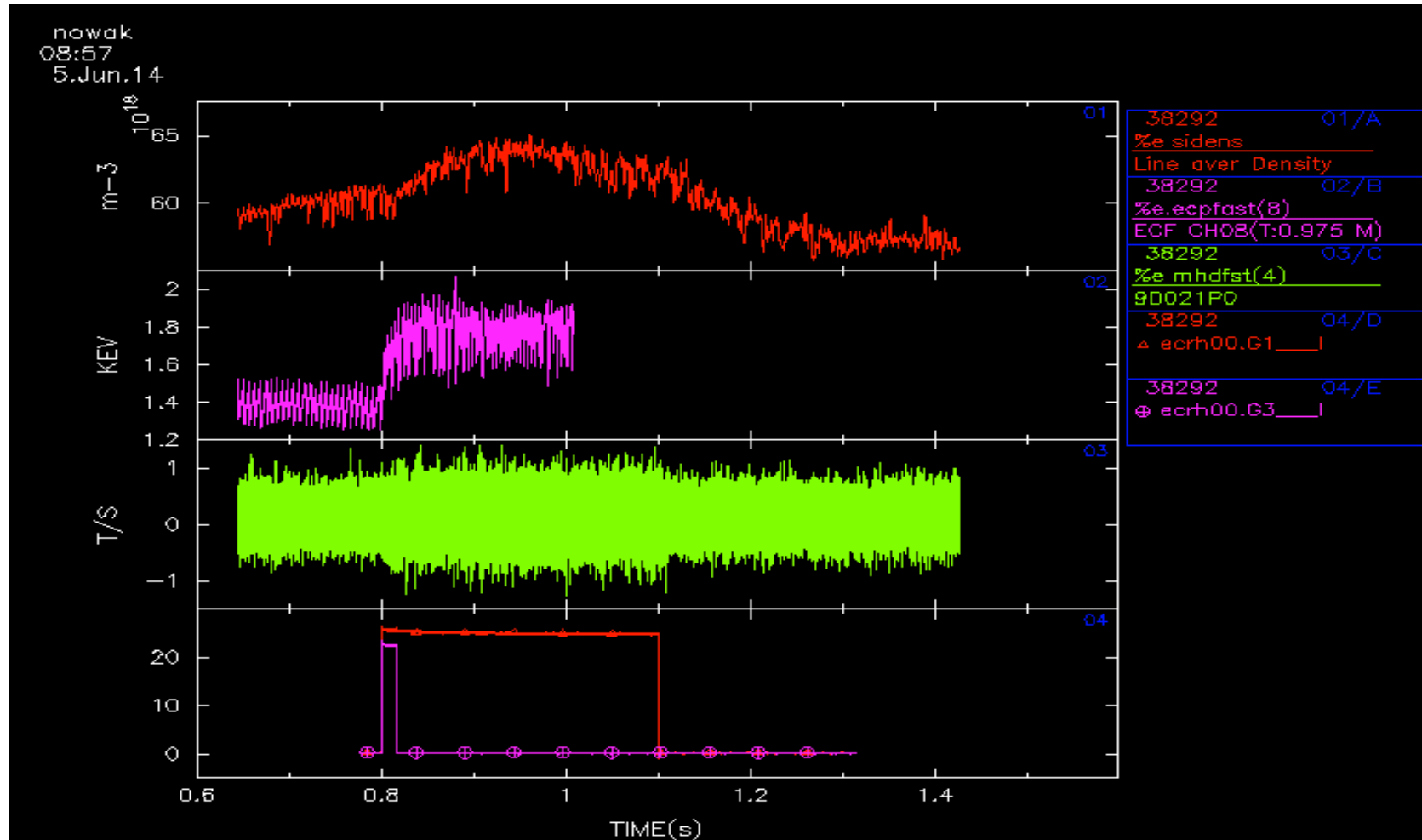


2/1 seems destabilized/amplified by ECRH, but EC data not good

#38292 : 500 kA, 5.3T, 1 gyr. 300ms, 1gyr. few ms

cnt-ECCD

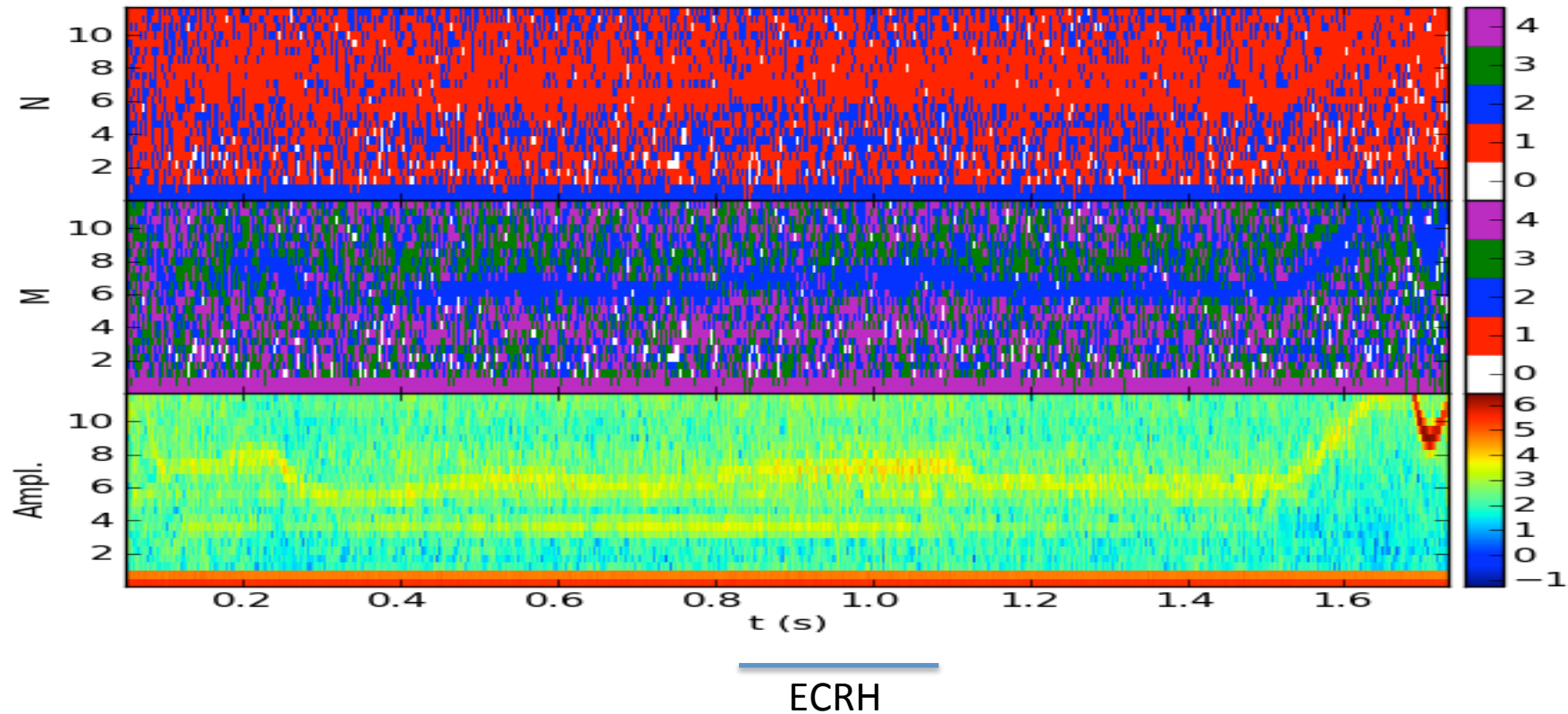
(but with bad polarization) /1/



#38292 : 500 kA, 5.3T, 1 gyr. 300ms, 1gyr. few ms

cnt-ECCD

(but with bad polarization) /1/



Similar behaviour (?) as #38291 cnt-ECCD \sim coECCD (?): probably because the polarization was not good and the low level of power (low in O-mode) used ?

Need to repeat #38291 & #38292 , if possible