

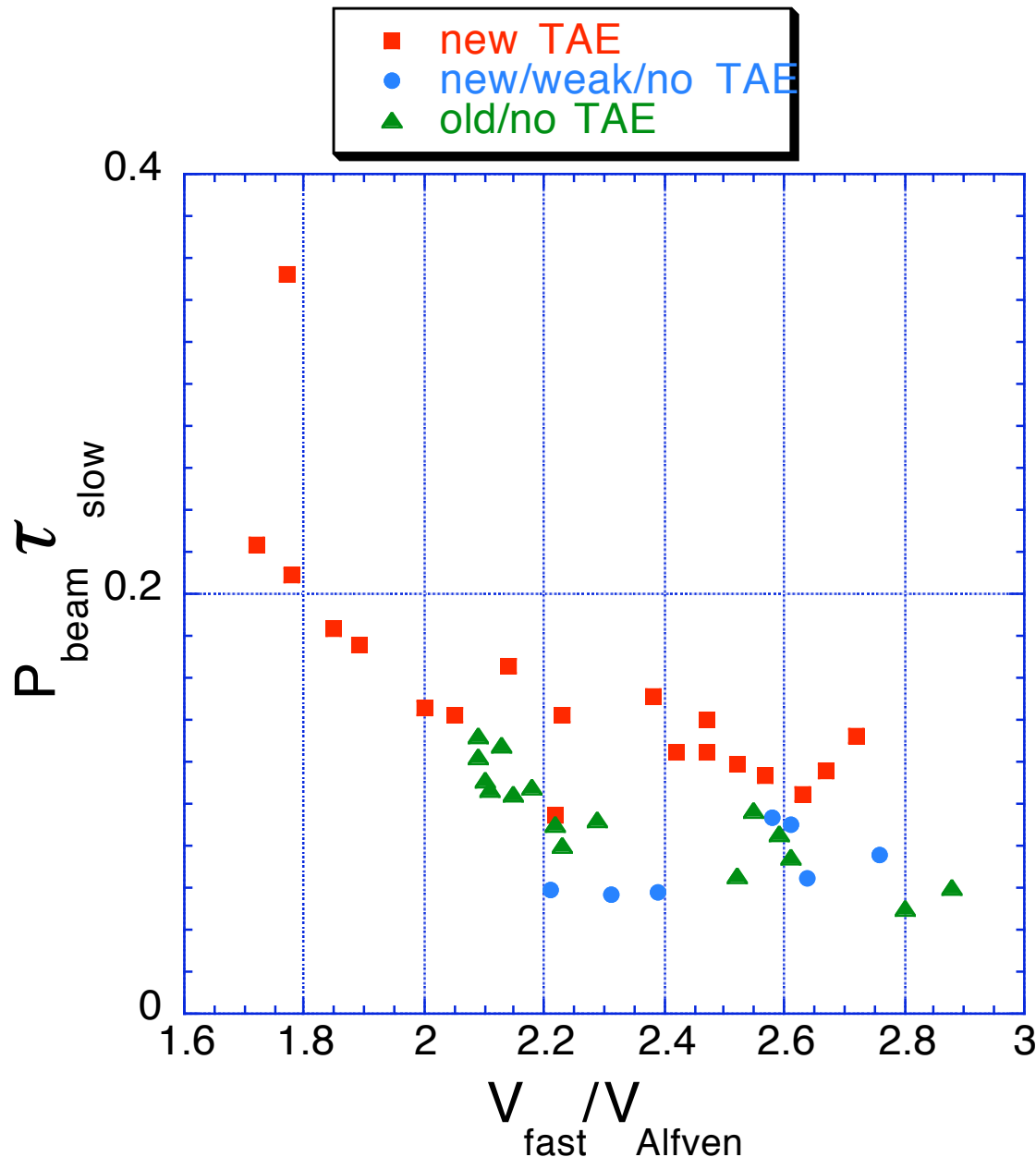
Status of analysis for XP608

E D Fredrickson

Goal: find quiescent plasma

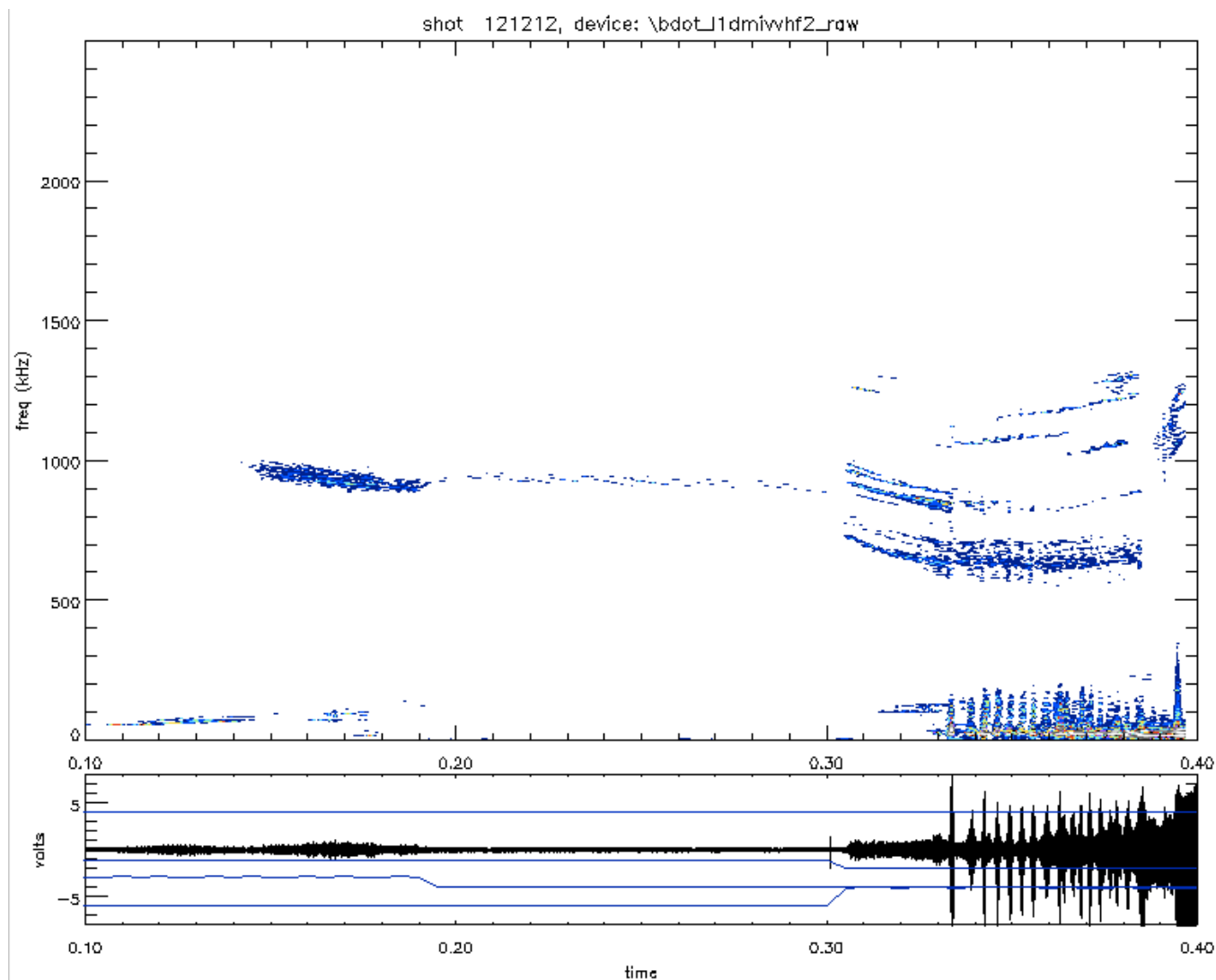
- Toroidal field scan - scan in $V_{\text{fast}}/V_{\text{Alfvén}}$
- Density scan - $V_{\text{fast}}/V_{\text{Alfvén}}$ and β_{fast} .
- Power scan - β_{fast} .
- Beam voltage for source C (58 to 61 kV)
source B was less reliable (63 - 79 kV,
average 66 kV).

Quiescent at low “ β_{fast} ”



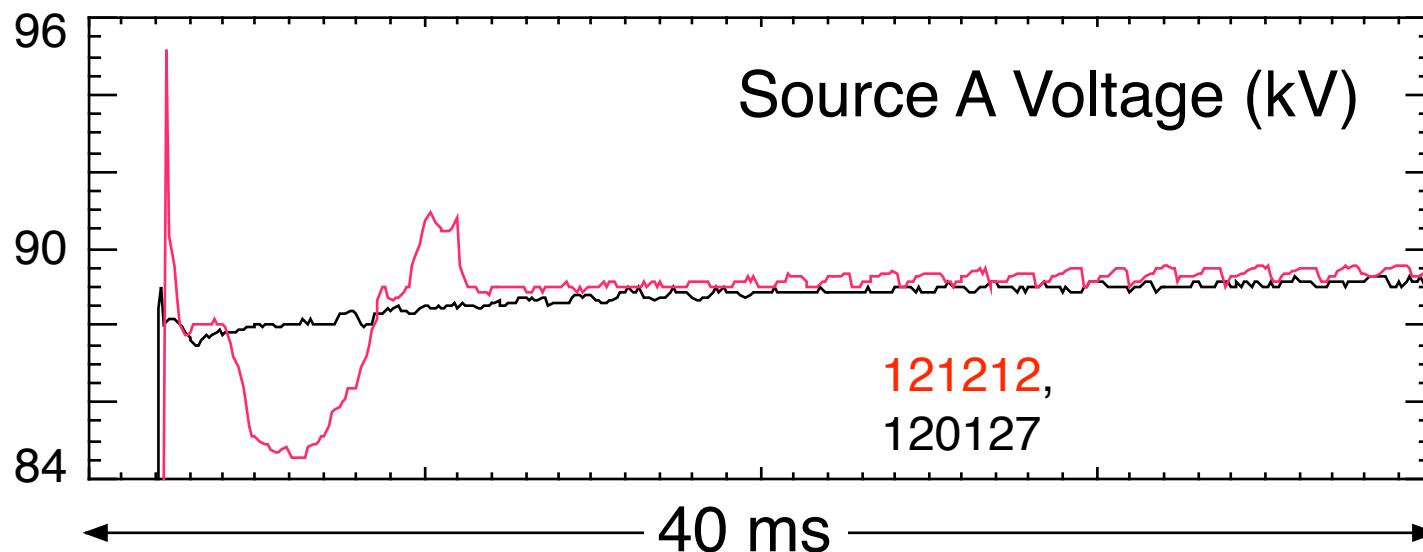
- Proxy for “ β_{fast} ” is: $P_{\text{beam}} * \tau_{\text{slow}}$
- Probably not possible to reduce $V_{\text{fast}} / V_{\text{Alfven}}$ enough to stabilize TAE.

Shots 121212 - 5 quiescent: documented condition



Beam-on issues

- Source A turn-on transients were much worse on this day than normal (even after loss of calorimeter).
- Documentation of q-profile evolution somewhat problematic, but a good test case



Summary

- Parameters required for quiescent plasmas identified?
- Time required to optimize quiescent plasmas.
- Need to develop transient MSE measurement technique