



Data consistency checks of JET discharge 95272

Frida Eriksson



CHALMERS

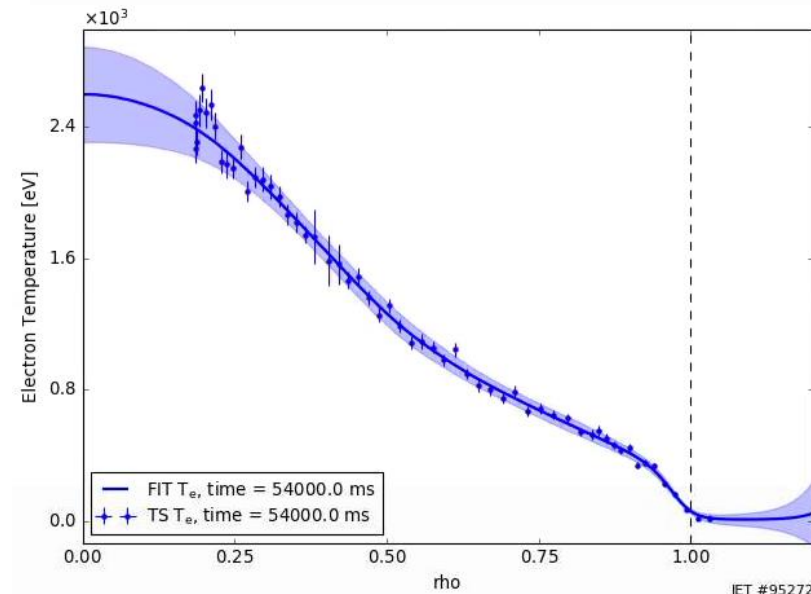
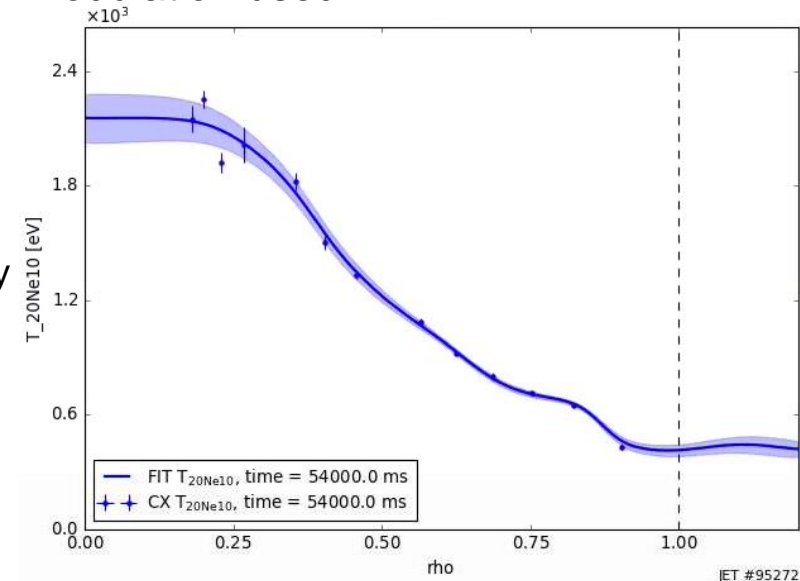
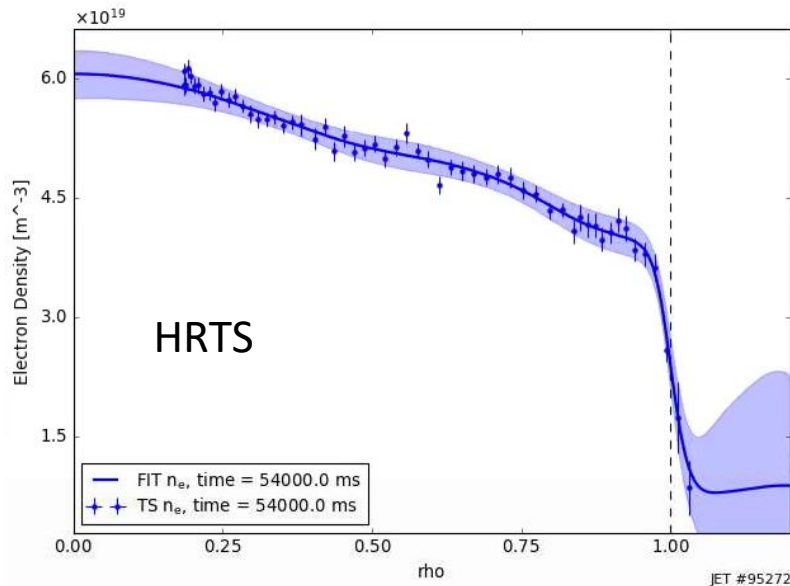


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Introduction



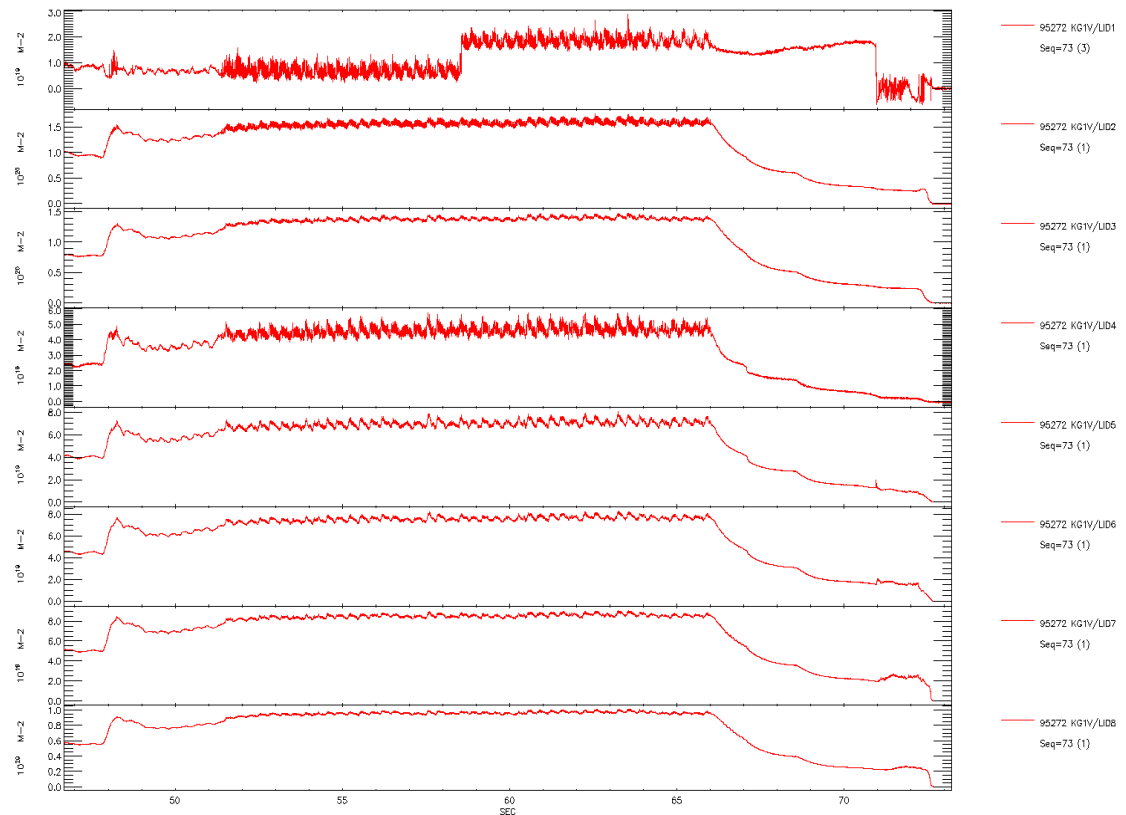
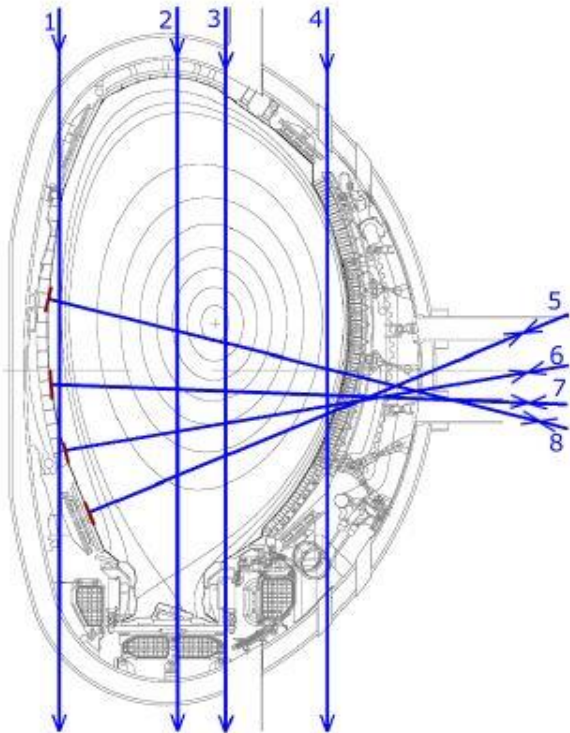
- 95272 is an NBI heated discharge where gas puff modulation used
- Evaluated at steady state, $t = 54\text{-}55\text{s}$
- Input data from IMASgo!
 - T_e , n_e from HRTS
 - Proxy impurity set to the one used by CX, Neon
 - Ion and imp. density from $Z_{\text{eff}}=1.4$, quasineutrality
 - Ion temperature CX (G6 and D6 available)



Line averaged density



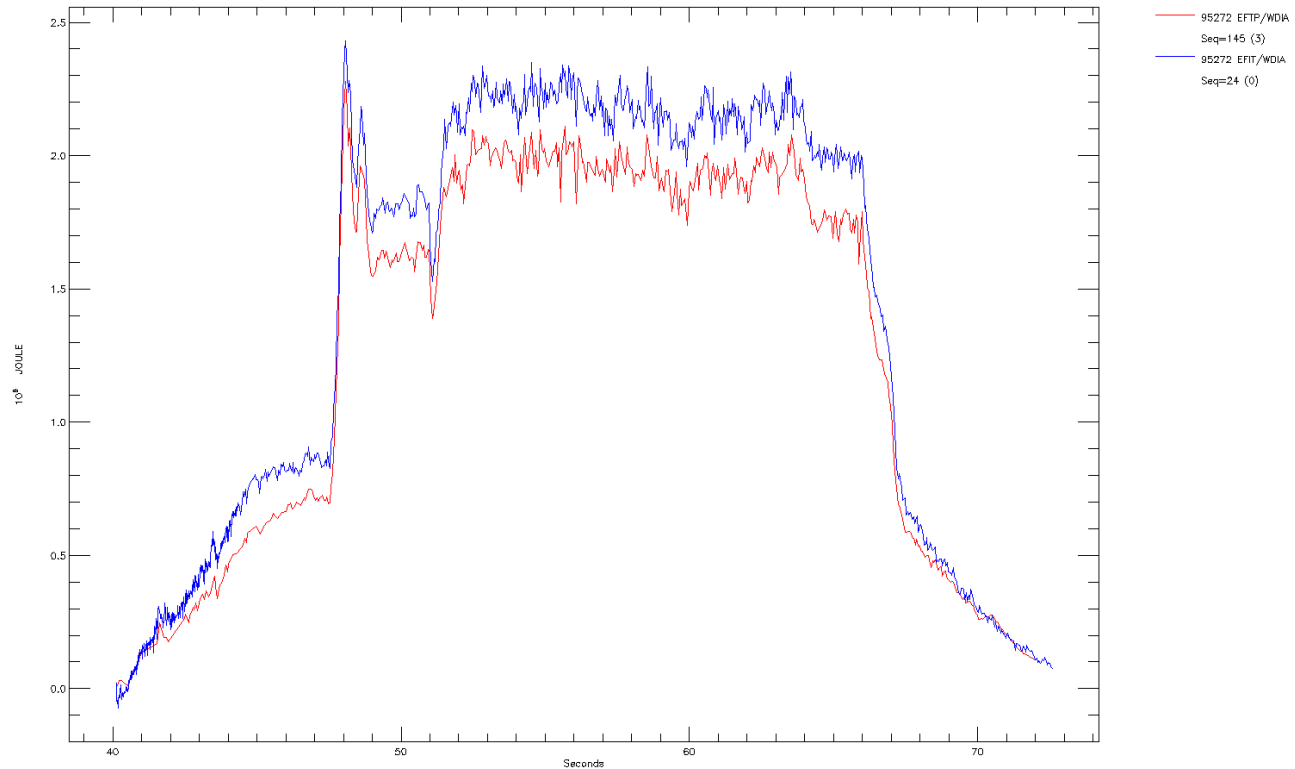
- ETS calculates a synthetic line averaged density corresponding to the 8 interferometer channels KG1V/LID#
 - interdiag CPO with input from equilibrium and coreprof CPOs
- Information currently missing from IMASgo! on “lines of sight”
- Data matched from TRANSP with exp2itm gives good agreement on channels 2-4, overestimates channels 5-8, channel 1 is zero



Diamagnetic energy



- Compare plasma kinetic energy calculated in ETS to the diamagnetic energy calculated by EFIT or EFTP
- At $t = 54-55\text{s}$ $W_{\text{dia}} = 1.3-1.4\text{ MJ}$ calculated in ETS, located in scenario CPO
- At $t = 54-55\text{ss}$ $W_{\text{dia}} = 2\text{ MJ}$ from EFTP
- Where does this difference originate?
- How is the fast particle contribution included?



Neutron rate



- Compare neutron rate calculated in ETS by the experimentally measured
- BBNBI+ASCOT+AFSI
- slightly above experimentally measured values
- These will depend upon input density and temperature profiles
- Impurities included
- Next step: add 3% hydrogen

