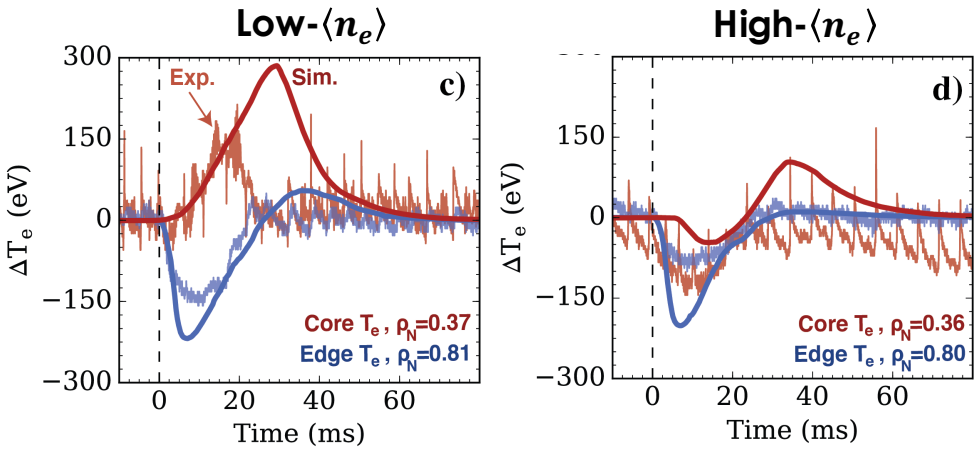
EX/10-3, P. Rodriguez-Fernandez *et al.*, "Explaining Cold-Pulse Dynamics in Tokamak Plasmas using Local Turbulent Transport Models"

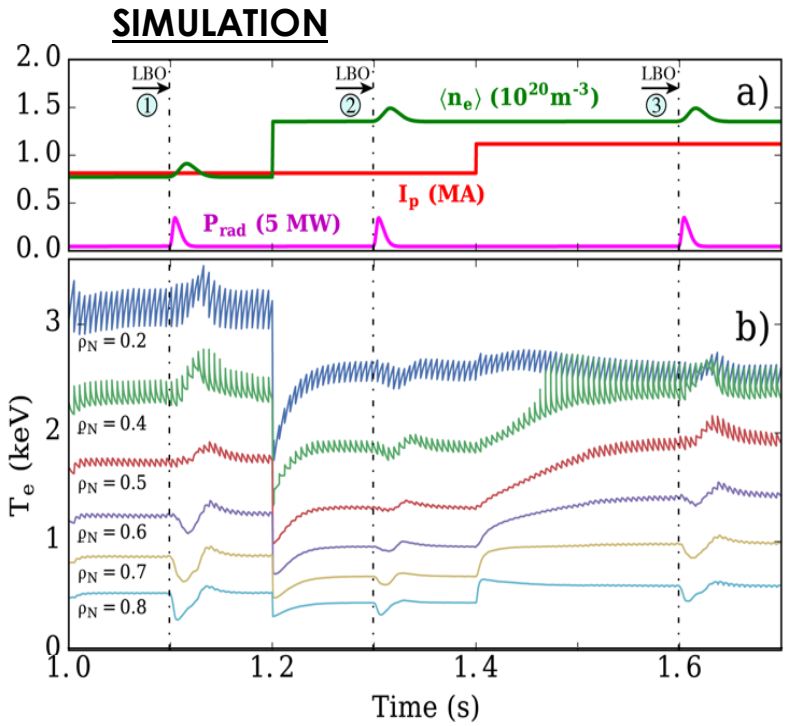
This work demonstrates that local transport simulations capture the phenomenology of cold-pulses in tokamak plasmas, which had long been considered evidence of nonlocal transport *[Gentle, PRL 1995]*

By means of an increase of edge radiative losses and a propagating density pulse, simulations with the local TGLF-SAT1 transport model capture:

1. Temperature inversion effect.
2. Experimentally-relevant time scale and magnitude.
3. Robust trends with density and plasma current.



[Rodriguez-Fernandez, PRL 2018]



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