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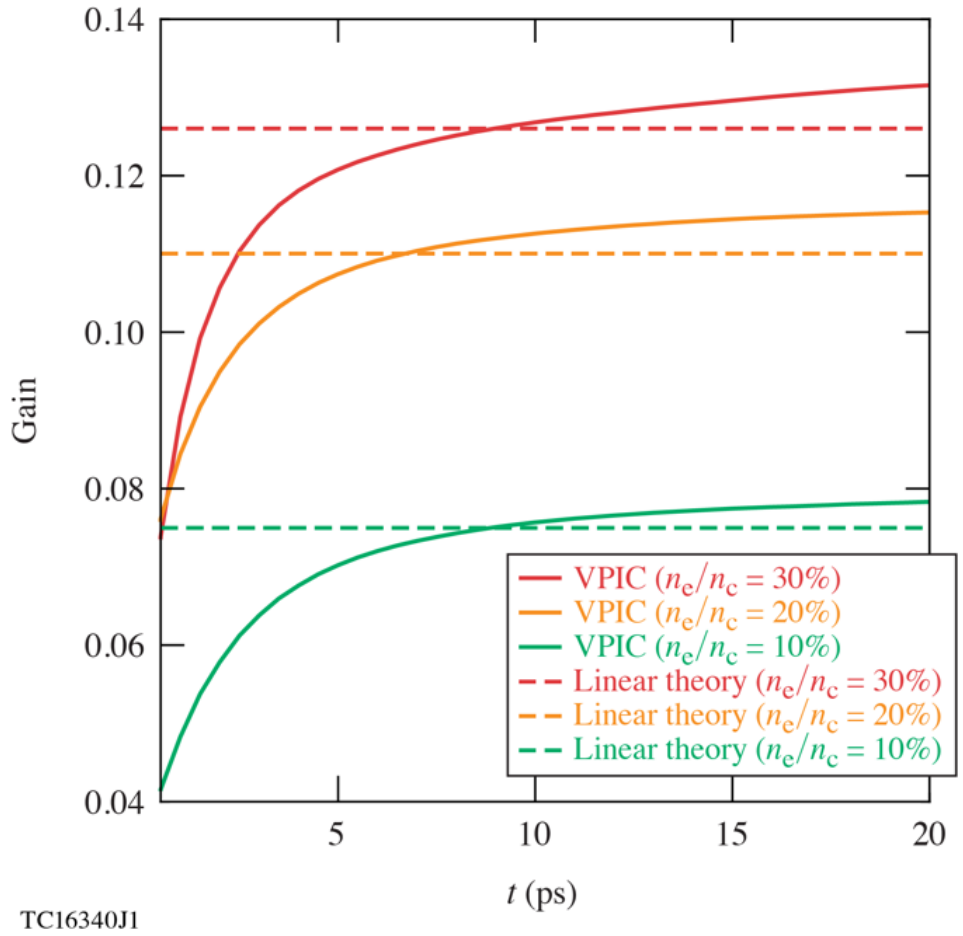
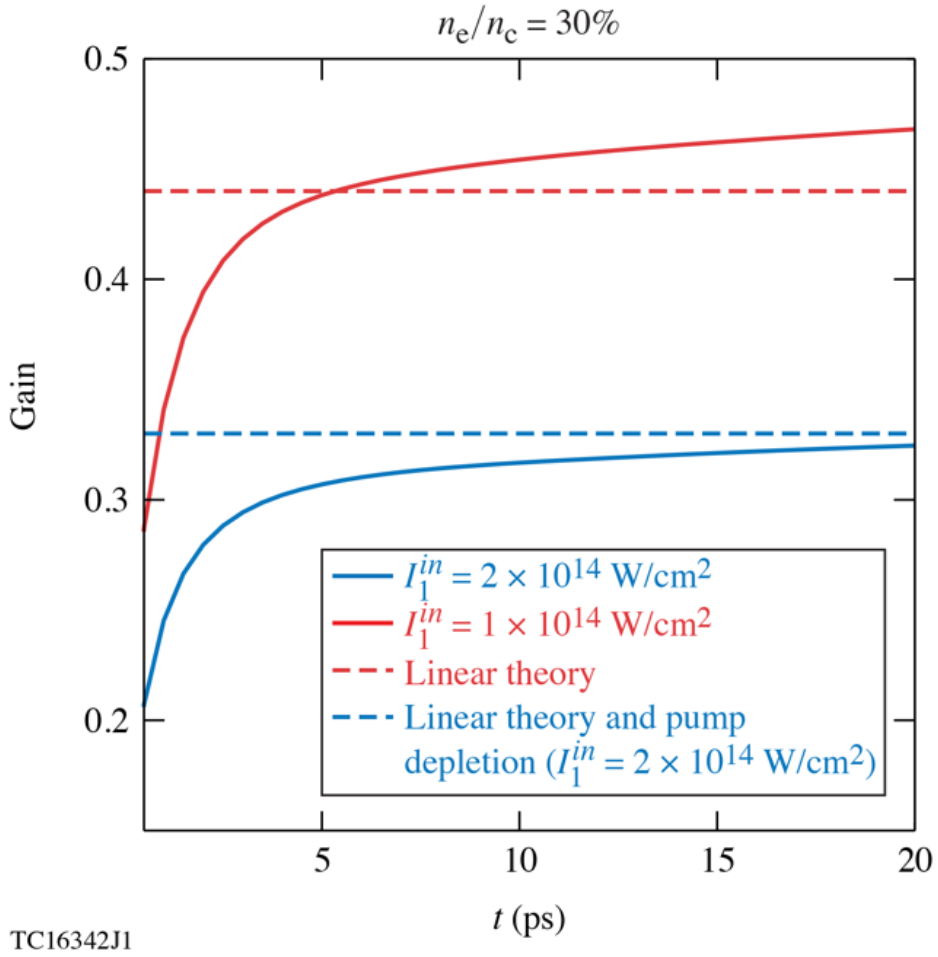
2022 IC report viewgraph

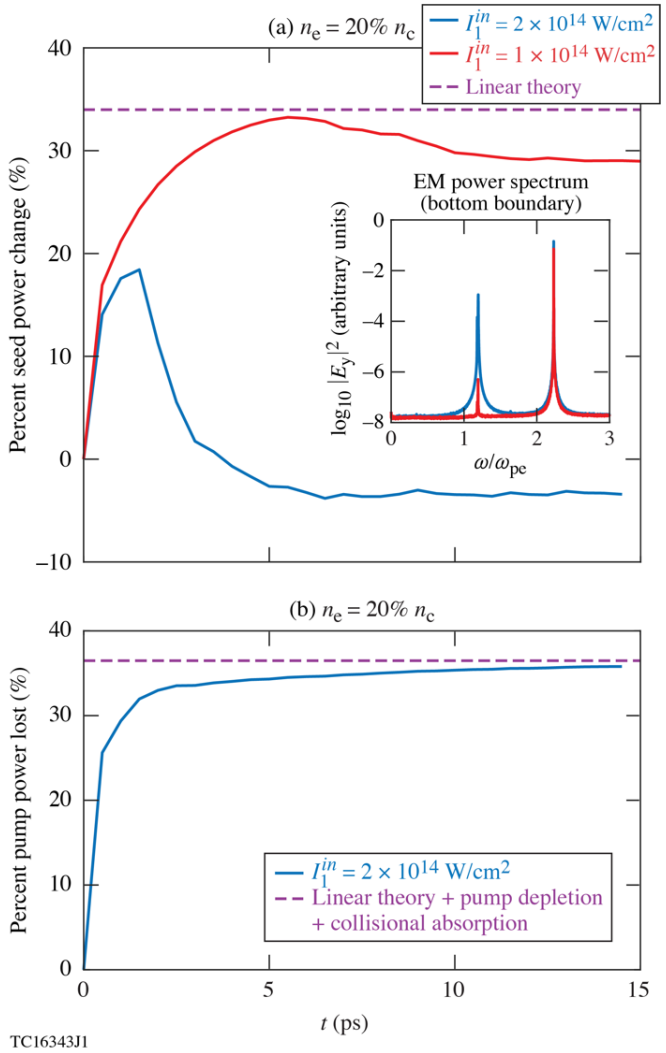
VPIC gain is in excellent agreement with the linear kinetic theory for the laser intensities relevant to OMEGA implosions



At high plasma density, $n_e = 0.30\ n_{cr}$, CBET saturates due to pump depletion for higher seed intensity



At intermediate densities, $n_e = 0.20\ n_{cr}$, the seed undergoes Raman backscattering, which reduces the apparent energy transfer



- Despite SRS backscattering of the seed, the energy lost from the pump beam is in good agreement with the linear theory, pump depletion and collisional absorption

At low plasma densities, $n_e = 0.10\ n_{cr}$, the gain is enhanced for higher seed intensity due to ion trapping