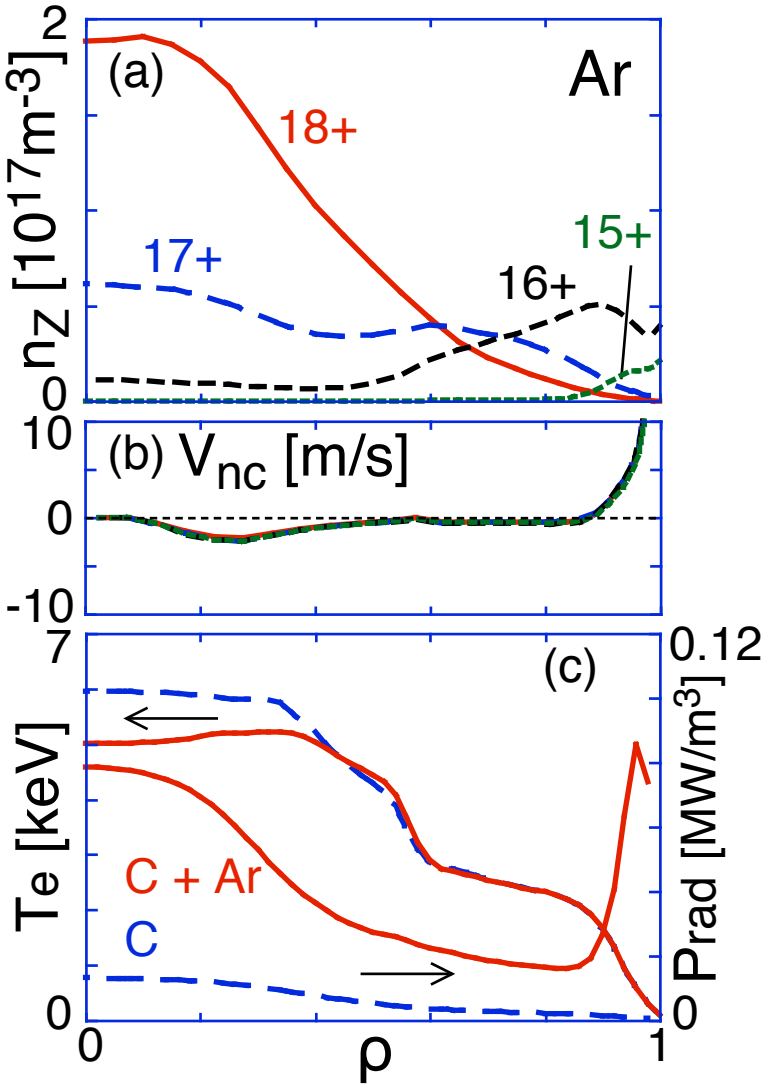
Core-edge coupled predictive modelling of JT-60SA high-beta steady-state plasma with impurity accumulation

- Simulations by integrated modelling code TOPICS for prediction of accumulation of Ar seeded to reduce divertor heat load (< 10 MW/m^2) and its effect on performance ($\beta_N > 3.5$)
- Inward neoclassical pinch due to bulk density gradient in core and outward convection due to temperature gradient in pedestal, resulting in Ar$^{16\text{-}18+}$ accumulation in core
- Radiation increases by 3.8 MW and thus temperature decreases in core. However, it can be recovered by adding NB power to supplement radiation increase within machine capability.



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