

# Understanding of complex response of seeding needed for reaching higher T pedestal



Ne-seeding needed for JET-DT and ITER power load control

Ne-seeding can result in a decrease or increase of pedestal density depending on  $v^*$  and  $\beta_N$

Seeding Ne does not lead to an increase of pedestal ion and electron temperature.

Injecting C recovers the pedestal degradation at high D-gas rate with rise of pedestal electron, ion temperature and density.

Ion heat transport is not neoclassical

ETG is the dominant instabilities leading to energy losses for these JET-ILW plasmas.

High- $\beta_N$  plasmas

