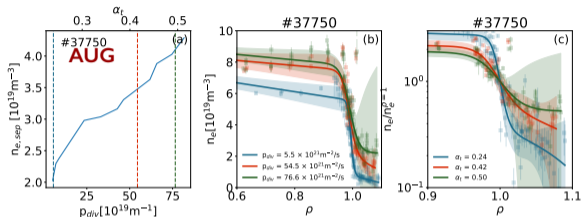




SOL profile and fluctuations in different divertor recycling conditions in H-mode plasmas



- ✓ H-mode inter-ELM profile evolutions investigated on **ASDEX upgrade, JET** and **TCV** at different level of gas fueling
- ✓ In all the cases **strong relation observed between achieved divertor neutral pressure, divertor temperature and separatrix density $n_{e,sep}$**
- ✓ Changes of separatrix parameter cause an **increase of the normalized collisionality $\alpha_t \propto Rq^2 n_e Z_{eff} T_e^{-2}$**
- ✓ **Inter-ELM shoulder formation at higher $p_{div} \rightarrow \alpha_t$**

- ✓ **Higher α_t** achieved because of $n_{e,sep}$ dependence on p_{div} **causes enhanced filamentary activity in the far SOL**
- ✓ **Higher blob frequency f_b** , and higher filament radial velocity observed at larger p_{div} or equivalently higher α_t

