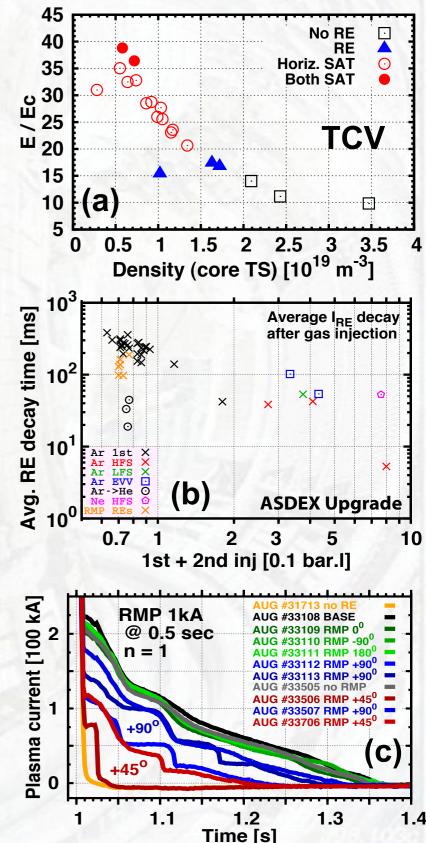
G. Papp *et al.*: Runaway electron generation and mitigation on the European medium sized tokamaks ASDEX Upgrade and TCV

• Reliable runaway electron (RE) scenarios developed on both AUG and TCV

- ➡ Low density (0.25-3.5 x 10¹⁹ m⁻³), circular plasmas
- Pre-disruption suprathermal seed survives the quench
- Confident RE beam position and current control
- ➡ Full conversion of Ohmic into RE current on TCV
- ⇒ RE generation in TCV quiescent plasmas if E/E_c >15 (a)
- Secondary injection of neon or argon leads to runaway dissipation / suppression (b)
 - HFS and LFS injections are practically identical, ex-vessel 2nd MGI requires ~2x more gas than in-vessel
- Resonant magnetic perturbation on AUG significantly decreases RE beam current (c)
- Elongated (κ = 1.4) TCV plasmas lead to no post-disruptive RE beam generation



IAEA-FEC 2016 EX/9-4

G. Papp et al.

ASDEX & TCV Runaways