

Relevance of 8T experiments to BPX

Joint experiments with matched non-dimensional parameters to larger devices, especially JET

Similarity scaling experiments and extension to low ρ^* Depending on the physics being addressed, the value of ρ^* achieved at a given machine size, β , and collisionality scales as $\rho^* \propto B^{-r}$ where $1/2 \leq r \leq 2/3$

High absolute performance (*e.g.* pressure) at reduced β to clarify or isolate the role of β , for example in confinement degradation

Increased range for single machine scaling studies, *e.g.* L-H thresholds, rotation studies, error field studies

Access to highest absolute performance (pressure) for non-Kadomtsev phenomena, technology studies.

All proposed tokamak burning plasmas, reactors (except for ST's) feature $B_T > 5T$. For example, Aries-RS is at 8T, with $n_e = 6 \times 10^{20}$

C-Mod can study plasmas at the same β and magnetic field as ITER

