

by M. Hirsch, A. Dinklage, A. Alonso, G. Fuchert, S. Bohzenkov, U. Höfel and the W7-X Team

○ **Experimental background** in the first Operational Phase

- > inboard graphite limiters
- > fuelling still determined by outgassing
- > yet high impurity content from metal walls (pure metaoperational range:
- > quasi-stationary discharges with high reproducibility

$$T_e = 8...10 \text{ keV}, T_i = 1.5...2 \text{ keV}, n_e = 2... 3 \cdot 10^{19} \text{ m}^{-3}$$

○ **Energy content, power balance and global energy confinement**

->  $\tau_E \sim 80 - 160 \text{ ms} \sim \tau_{E, ISS04}$

-> with configuration factor  $\sim 1$   
(although limiter plasmas)

○ **Local transport analysis**

- > Core Electron Root Confinement not reaching fully neoclassical conditions in the core
- > on- and off- axis ECRH heating no profile stiffness observed

