

ECRH and mode conversion in overdense W7-X plasmas

- The O-X mode conversion efficiency in W7-X is not expected to exceed 50-60%.
- With optimization of the 3D stellarator equilibrium a conversion of $\sim 85\%$ could be achieved.
- The density fluctuations expected in W7-X should not have a significant effect ($< 10\%$) on the O-X conversion efficiency.

3D full-wave simulation of O-X conversion in realistic geometry

