

Summary slide for paper EX/P8-27

J.Ongena et al. “Preparing the ICRH system for the W7-X Stellarator”

- An ICRH antenna system is under construction for W7-X, to deliver ICRF power in OP2 in pulses of up to 10s for 25-38 MHz at power levels of 1-1.5MW, depending on the coupling.
- Main aim is to produce fast particles ($>100\text{keV}$) needed to verify the confinement properties of the optimized stellarator W7-X at high densities above 10^{20}m^{-3} .
- Main ICRH scenario planned for use in W7-X is the D-(^3He)-H three-ion heating scenario at 25 MHz at $B=2.5\text{T}$. This newly developed scenario has been successfully tested on JET and Alcator C-Mod.
- Construction of the antenna is ongoing A teststand is prepared to check the vacuum, RF, high voltage, water cooling, and mechanical characteristics