

Overview of KSTAR ICRF Experiments*

S.J. Wang,¹ J.G. Kwak,² S.H. Kim,¹ S.K. Kim,¹ C.Y. An,¹ and the KSTAR Team²

¹*KAERI, Daejeon Korea*

²*NFRI, Daejeon Korea*

Injected RF power to the KSTAR plasma is increasing continuously from the first operation in 2008. In the last campaign, 0.5 MW was applied for the central ion and electron heating for D(H) plasma. Clear evidence of plasma temperature and stored energy increases were observed with less impurity generation compared to the previous campaign. With a RF injection period, sawtooth stabilization was observed and this effect is thought to be caused by conductivity perturbation at sawtooth inversion radius as maximum power deposition layer is located at slightly inside of sawtooth inversion layer inferred from the profile measurement of increase in electron temperature. In contrast with previous results showing increasing RF loading resistance with RF power, stable loading resistance was obtained during the whole operation. This effect and less impurity contents suggest that the stray power absorption was lowered quite a lot. For more reliable operation, all four antenna straps are being prepared for the upcoming campaign. RF frequency will be remain at 30 MHz for D(H) minority heating as a base scenario for 2 T of magnetic field. Experimental proposals for the upcoming plasma campaign will also be presented

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