Development of next-step-relevant ICRF technology in the DIII-D Program

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Abstract. High-power experiments with waves in the ion cyclotron range of frequencies

(ICRF) have been performed on the DIII-D tokamak since 1988. In the course of these

experiments, it has been necessary to carry out some development of the relevant

technology. These developments, primarily in the areas of the plasma/antenna interface,

high power transmission line components, and transmission line configurations, are

reviewed in this paper. They have led to a number of recommendations for specifying

systems in next generation tokamaks.

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