

Abstract Submitted
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Control System for the High-Field-Side Lower Hybrid Current Drive System on DIII-D¹ YIJUN LIN, A. BINUS, S. WUKITCH, MIT PSFC — A high-field-side LHCD system will be implemented on DIII-D for off-axis current drive. The LHCD system will have a new launcher but will re-use many major parts from the LHCD system of Alcator C-Mod, including the klystrons, carts and the HV power supply. The low-power control system needs to be improved. The main task of the control system is to feedback control the power of the 4.6 GHz klystrons and their relative phases so that the LH wave spectra is maintained for current drive operation. The C-Mod system used 2 PXI modules running MatLab Simulink for real-time control. Its interface with the MDSplus system was very cumbersome. Moreover, some major parts of the software and hardware are no longer upgradable. We plan to replace it with a Linux-server-based controller like the one used for the C-Mod ICRF fast-ferrite-tuning system. This setup will allow a much simpler interface with the MDSplus data system and have better upgradability. The GUI of the LH control will also be upgraded to work smoothly with the new control system.

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