

Abstract Submitted  
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**Developments for the ICRH System of the Ignitor Machine\*** M. SASSI, CREATE, S. MANTOVANI, CIFS, B. COPPI, MIT — The ICRH system that is suitable for the high-density plasmas to be produced by the Ignitor machine[1] has been designed and components of it have been tested. This system will operate over the range 80-120 MHz, consistently with magnetic fields in the range 9-13 T. The maximum delivered power is in the interval 8 MW (at 80 MHz) to 6 MW (at 120 MHz) distributed over 4 ports. A full size prototype of the VTL between the port flange and the antenna straps, with the external support and precise guiding system has been constructed. The innovative quick latching system located at the end of the coaxial cable has been successfully tested, providing perfect interference with the spring Be-Cu electrical contacts. Vacuum levels of  $10^{-6}$ , compatible with the limit of material degassing, and electrical tests up to 12 kV without discharges have been obtained. \*Sponsored in part by the US DOE.

[1] B. Coppi, et al. *Nucl.Fus.***53**, 104013 (2013).

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