

**ECH MIRROR INTERFACE TANK  
FOR 110 GHZ, 1 MW GYROTRON\***

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A 1 MW, 110 GHz gyrotron is to be installed at General Atomics in mid 1995. A Mirror Optics Unit (MOU) has been designed and built to connect the gyrotron to the existing 110 GHz transmission line system. The unit reduces and directs a 145 mm diameter beam from the gyrotron to a 19 mm diameter beam which is then injected into a 31.8 mm diameter corrugated waveguide of the transmission line system. The unit operates under vacuum and is able to absorb any beam spray from the gyrotron. The tank also contain various diagnostic equipment to protect the gyrotron and to determine the amount of energy loss in the tank, and at the window of the gyrotron output. This paper discusses further the design parameters, assembly and installation of the unit in the transmission line system.

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