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The 110 GHz Gyrotron Installation on DIII–D: Status and Experimental Results[1] JOHN LOHR, DAN PONCE, R.W. CALLIS, General Atomics, L. POPOV, Gycom, Nizhny Novgorod, Russia, M. ZERBINI, ENEA, Frascati, Italy, P. CAHALAN, CPI, Palo Alto, Ca. — The 110 GHz installation on DIII–D consists of two gyrotrons each of which operates at generated power levels between 0.5 and 1.0 MW for pulse lengths up to 2.0 s. The gyrotrons are connected to DIII–D by windowless evacuated transmission lines. The greatest experience to date has been accumulated with the Gycom Centaur gyrotron, a diode tube which has been operated reliably at generated rf power levels in excess of 0.80 MW for pulse durations of 2.0 s. This tube has been modulated at 100% depth at frequencies up to 1 kHz. The second gyrotron is a Communications and Power Industries model VGT-8011A, a triode geometry, which is in initial testing. For this gyrotron, collector power loading has been measured, the beam steering has been set and pulse/power extension is in progress. DIII–D tests of the system performance are ongoing and initial tokamak experiments on transport, H–mode physics and scaling have begun.

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☐ Prefer Oral Session
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