

Wall Conditioning RF Discharges in Uragan-2M Torsatron*

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The studies of the RF discharges for wall conditioning have been performed at Uragan-2M torsatron (stellarator). The purpose of the RF discharge wall conditioning is the removal of adsorbed by the wall species, so that they may then be pumped out of the vacuum chamber. Continuous RF discharges in Uragan-2M torsatron are sustained by the 1 kW RF oscillator in the frequency range 4.5-8.8 MHz and 2.5 kW oscillator with frequency 150 MHz. For wall conditioning a special small size antenna is designed. It could be fed by both generators. The discharge parameters are measured in wide range of confining magnetic field and pressures. The dependence on launched power is also investigated. Evolution of the impurities in the discharge signified by the optical measurements, the residual gas composition and partial pressures measured with the mass-spectrometer indicate the wall conditioning. Their development is analyzed during days of operation.

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