

Abstract Submitted  
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**Evolution of plasma rotation, radial electric field, MHD activity and plasma confinement in the STOR M tokamak**<sup>1</sup> DALLAS TREMBACH, Plasma Physics Laboratory / University of Saskatchewan, MYKOLA DREVAL, STOR-M TEAM — Experimental results from the STOR-M tokamak detailing simultaneous behavior of plasma SOL rotation, radial electric field, main plasma column parameters, and MHD activity are presented. In the STORM tokamak, fast ( $\sim 1$  ms), well correlated changes in the radial electric field, plasma rotation, and floating potential fluctuations in the periphery are observed. During the correlated phase, the radial electric field changes its sign from positive to negative, the Mach number of toroidal plasma rotation, which is co-current, decreases from  $M_{||} = 0.4$  to nearly 0. MHD activity in STORM tends to be suppressed if the radial electric field is negative. When the electric field is negative, MHD frequency decreases and increases in the average electron density and poloidal beta are observed.

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