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Diamagnetic measurements in the STOR-M tokamak[1] DALLAS TREMBACH, Plasma Physics Laboratory / University of Saskatchewan — Diamagnetic measurements of poloidal beta have been successfully performed on the Saskatchewan Torus-Modified (STOR-M) using a compensated coil system mounted exterior to the vacuum chamber wall. A significant challenge in performing these measurements on STOR-M is the presence of a decaying toroidal magnetic field over the duration of the discharge. A simple method for compensating these measurements based on independently measuring the vacuum field signal and correcting during post-processing is presented. Measurements of poloidal beta using the diamagnetic coil arrangement are compared to calculations of poloidal beta based on the Spitzer conductivity corrected for trapped electrons.

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