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Poloidal currents in COMPASS vacuum vessel during disruptions: diamagnetic measurements and comparison with CarMa0NL modeling VADIM YANOVSKIY, Institute of Plasma Physics of the CAS, Prague, Czech Republic, NICOLA ISERNIA, Consorzio CREATE, Naples, Italy, VLADIMIR D. PUSTOVITOV, National Research Centre Kurchatov Institute, Moscow, Russia, VALENTINO SCALERA, FABIO VILLONE, Consorzio CREATE, Naples, Italy, JOSEF HAVLICEK, ALES HAVRANEK, MARTIN HRON, MICHAEL KOMM, JAROSLAV KRBEC, TOMAS MARKOVIC, EKATERINA MATVEEVA, RADOMIR PANEK, DAVID TSKHAKAYA, Institute of Plasma Physics of the CAS, Prague, Czech Republic — For the first time signal from diamagnetic loop is used to deduce poloidal eddy current in the tokamak vacuum vessel during thermal and current quenches as was recently proposed in [1]. The results are in good quantitative agreement with values deduced from toroidal Mirnov coil signal, analytical predictions [2] and numerical modeling with CarMa0NL code. The COMPASS tokamak has a unique set of diagnostics for measurements of poloidal distribution of poloidal current, specifically, 3x24 sensors for the toroidal magnetic field. This feature allows to distinguish between poloidal eddy and halo currents, and to perform comparison with the diamagnetic measurements. Eddy and halo current evolution, and the related electromagnetic forces on the vacuum vessel are calculated using CarMa0NL. [1] Pustovitov V D 2019 Fusion Eng. Des. 138 53-58 [2] Pustovitov V D 2017 Fusion Eng. Des. 117 1-7

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