ABSTRACT

We present the first demonstration that the resistivities of core and halo plasmas are classical following a disruption thermal quench. Simulations of halo current evolution in tokamak disruptions mitigated by massive He gas puff are performed which make use of direct measurements of post-thermal quench plasma electron temperature and Z_{eff}. The knowledge that post-thermal quench plasma resistivities are classical is a key requirement for prediction of peak halo current amplitudes expected in mitigated tokamak disruptions.