Abstract Submitted
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Analysis of Charge Fusion Product Rates: Initial Data from the Mega Amp Spherical Tokamak (MAST)[1] PIERRE AVILA, Florida International University, MEGA AMP SPHERICAL TOKAMAK, CULHAM CENTRE FOR FUSION ENERGY COLLABORATION, PRINCETON PLASMA PHYSICS LABORATORY COLLABORATION — Tokamaks are used to create high temperature plasmas that are studied intensively with the use of various diagnostic equipment. Charged particles such as protons and tritons emitted from fusion temperature plasmas follow complicated trajectories due to their electromagnetic interaction with the magnetic fields inside the tokamak. The objective of this study is to detect these charged particles which give a different insight to the stability of plasmas generated within the tokamak. At the Mega Amp Spherical Tokamak (MAST) located at the Culham Centre for Fusion Energy (CCFE), solid state surface barrier detectors (SSBDs) were installed inside the vacuum to detect protons and possibly tritons. The SSBDs converted the particle's energy into electrical signals, which were then amplified and recorded by a Data Acquisition system (DAQ). Protons and tritons were successfully recorded after an initial data analysis.

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