

Abstract Submitted
for the SES13 Meeting of
The American Physical Society

Charged Fusion Product Diagnostic Detector Efficiency Study¹

CARLOS LOPEZ, FIU, CULHAM CENTRE FOR FUSION ENERGY COLLABORATION, PRINCETON PLASMA PHYSICS LABORATORY COLLABORATION — The results of experiments performed by a member of the Florida International University's experimental plasma physics research group will be presented. The work was done in preparation for the testing of a proton detection system implemented at the Mega Amp Spherical Tokamak at the Culham Centre for Fusion Energy in Oxfordshire, England. Monte Carlo methods were implemented in Python to model and calculate the solid angle of acceptance of the detectors leading to an efficiency calculation. The results of the computer simulation were confirmed using a radiation source in a vacuum chamber. This experiment was implemented in order to measure the counting rate of the detector, where particular interest was given to the change in said counting rate as the source position changed. The results of both works will be compared and presented.

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Date submitted: 20 Sep 2013

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