

Contribution ID : 95

Simulation of magnetic storms generated from solar flares in a laboratory set up

Content :

An experimental set up to study the interaction between magnetic field of plasma and the calibrated magnetic geometry, similar to the sun flare affecting the earth's magnetic field resulting the magnetic storms is reported. A magnetic chamber whose magnetic induction, strength and direction can be varied by a variable capacitive discharge network has been set up in the Plasma research Laboratory of Ravenshaw University, Cuttack, Orissa, India. A plasma source and chamber have been designed to generate pulsed plasma of various duration starting from 10 micro second to 250 micro second with provision of poloidal and radial magnetic field interaction with the magnetic chamber. To study the change in pre-calibrated magnetic field with the pulsed plasma similar to the sun flare generated at the time of solar storms. The data will be co-related with the sun flare affecting the earths' magnetic field resulting the magnetic storms.

Collaboration :

Institute for Plasma Research, Bhat, Gandhinagar, India

Primary authors : Mr. PATRA, Dheeren Chandra (Ravenshaw University, Cuttack, Orissa, India)

Co-authors : Mr. SAHOO, Gourishankar (Ravenshaw University, Cuttack, Orissa, India) ; Mr. SAMANTARAY, Subrat (Christ College, Cuttack, Orissa, India) ; Mr. PAIKARAY, Rita (Ravenshaw University, Cuttack, Orissa, India) ; Mr. SASINI, Narayan (Ravenshaw University, Cuttack, Orissa, India) ; Mr. GHOSH, Joydeep (Institute for Plasma Research, Bhat, Gandhinagar, India)

Presenter : Mr. PATRA, Dheeren Chandra (Ravenshaw University, Cuttack, Orissa, India)

Session classification : --not yet classified--

Track classification : --not yet classified--

Type : --not specified--