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Harmonics generation near ion-cyclotron frequency of ECR plasma.[1] SATYAJIT CHOWDHURY, Saha Inst of Nucl Phys, SUBIR BISWAS, Weizmann Institute of Science, NIKHIL CHAKRABARTI, RABINDRANATH PAL, Saha Inst of Nucl Phys — Wave excitation at different frequency regime is employed in the MaPLE device ECR plasma [Review of scientific instruments, 81(7), 073507, (2010)] for varied excitation amplitude. At very low amplitude excitation, mainly fundamental frequency mode of the exciter signal frequency comes into play. With the increase in amplitude of applied perturbation, harmonics are generated and dominant over the fundamental frequency mode. There is a fixed critical amplitude of exciter to yield the harmonics and is independent of applied frequency. Observed harmonics and the main frequency mode has propagation characteristics and are discussed here. Exact mode number and propagation nature are also tried to measure in the experiment. Detailed experimental results will be presented.

[1]Department of Science and Technology of Government of India (Project No. SB/S2/HEP-005/2014)

Satyajit Chowdhury
Saha Inst of Nucl Phys

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