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2P03 - Effects of the Mesh Anode Transparency on the Operation Characteristics of the Virtual Cathode Oscillator

Tuesday 25 June 2019 13:00 (1h 30m)

An axial virtual cathode oscillator is experimentally analyzed depending on the transparency of the mesh anode. The axial virtual cathode oscillator is operated using a 140J/170kV Marx generator. A stainless steel cathode and stainless steel mesh anodes with different transparency are used as a high power microwave generating diode. The gap distance of the virtual cathode diode is 4 mm. To analyze the operation characteristics depending on the mesh anode transparency, the output power, voltage, and current are measured.

Authors: Mr KIM, Se-Hoon (Hanyang University); Mr LEE, Chang-Jin (Hanyang Univ.); Prof. KO, Kwang-Cheol (Hanyang University)

Presenter: Mr KIM, Se-Hoon (Hanyang University)

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