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Marx prototype pulse generator design and initial results

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Fast-switching, high voltage, pulse generator topologies, such as the semiconductor based Marx generator, are being actively pursued for possible replacement of thyratrons and PFLs in existing kicker systems. Such topologies are required for the FCC injection kicker system. In this talk the design of a prototype solid state Marx generator, using new SiC MOSFET devices, is presented. The layout of the laboratory prototype Marx generator is presented together with initial measurements of output pulses. Future challenges and perspectives will also be discussed.

Authors: DOS SANTOS REDONDO, Luis Manuel (ISEL Instituto Superior de Engenharia (PT)); BARNES, Mike (CERN)

Co-author: KANDRATSYEU, Aleh (Energy Pulse Systems (PT))

Presenter: BARNES, Mike (CERN)

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