

Abstract Submitted
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High-Intensity Continuous Wave Slow Positron Source at Jefferson Lab SERKAN GOLGE, BRANISLAV VLAHOVIC, North Carolina Central University, BOGDAN WOJTSEKHOWSKI, Jefferson Lab — We present a novel concept of an electron linac-based slow positron source with projected intensity on the order of 10^{10} slow e^+ /s. The key components of this concept are a Continuous Wave (CW) electron beam, a rotating positron-production target, a synchronized raster/anti-raster, a transport channel, and extraction of positrons into a field-free area through a magnetic field terminator plug for moderation in a solid Neon moderator. The feasibility calculations were completed in the framework of GEANT4 simulation and OPERA-3D magnetic field calculation code.

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