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Compact, Battery Powered Supply and Control Integration for HPRF Systems

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The Naval Surface Warfare Center, Dahlgren Division (NSWCDD) is developing a low duty factor High Voltage Power Supply (HVPS) optimized for power density and specific power. This HVPS employs state-of-the-art components and topologies that are highly optimized to the “burst mode” operation typical of high power directed energy systems. The reduced duty factor, thermal, and lifetime requirements allow for significant Size, Weight and Power (SWaP) optimization over traditional, continuous HVPSs. The presented material will outline the design, implementation, testing, and incremental improvement in the HPVS and its associated control systems. This work is supported by the Air Force Research Laboratory (AFRL).

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