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Refurbishment of the ORION System at NSWC Dahlgren

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Under the sponsorship of the Joint Non-Lethal Weapons Directorate (JNLWD), the Directed Energy Warfare Office (DEWO) at the Naval Surface Warfare Center (NSWC) Dahlgren Division has completed refurbishment of the Orion high-power radio-frequency (HPRF) system to support RF vulnerability testing. Orion is a flexible HPM source allowing for frequency agility from 1.07 GHz up to 3.3 GHz with output powers over 300MW across this operating band. The system provides repetition rates from single shot up to 100Hz with up to 1000 shots per burst, and is capable of variable pulse durations of 50 ns up to 500 ns. Orion is currently in operation at NSWC Dahlgren's outdoor test range and is proving a versatile resource for many HPM projects including vulnerability testing against vehicles, vessels and electronics. This brief will provide an overview of the refurbishment process, the system's capabilities, and future plans for this versatile asset.

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