

DISTRIBUTION STATEMENT A



The Department of Defense (DoD) Directed Energy Weapon development effort, High Power Joint Electromagnetic Non-Kinetic Strike (HIJENKS), successfully completed testing and live-fire demonstration of an advanced high power microwave (HPM) weapon system.

The HIJENKS program is a joint effort between the Office of Naval Research (ONR) and the Air Force Research Laboratory (AFRL), which has developed an Innovative prototype High Power Microwave (HPM) weapon system for use in Airborne Electronic Attack (AEA) missions.

HPM weapons can provide combatant commanders with a unique capability to engage multiple targets with a scalable effects weapon applicable to a variety of warfighting missions. While enhancing the use of kinetic weapons, HIJENKS will provide additional capability by creating options to engage targets limited by collateral kinetic damage concerns with a novel HPM payload integrated on an advanced airborne platform. The HIJENKS program leverages state-of-the-art components and technologies and represents the most advanced HPM system within the Department of Defense (DoD).

HPM weapons create invisible beams of electromagnetic energy within a specific spectrum of radio and microwave frequencies that can cause a range of temporary or permanent effects on electronic targets. Examples include non-kinetic disabling of computer systems, damaging targeted electronics, disrupting security and industrial control systems, etc. Electromagnetic energy from an HPM weapon can couple to an electronic target directly through a transmit or receive element (like an antenna), or indirectly, through an aperture or cable points of entry (e.g., cracks, seams, external wires). Currents and voltages can be induced in target circuitry, resulting in erroneous signals, system lock-up, system failure, and/or physical damage.

The HIJENKS Joint team successfully completed performance validation and live-fire engagement testing at Naval Air Warfare Center Weapons Division (NAWCWD) China Lake Test Range in August 2022.



HPM TEST FACILITIES AT NAVAL AIR WARFARE CENTER WEAPONS DIVISION (NAWCWD) CHINA LAKE TEST RANGE

The HIJENKS Program provides non-kinetic strike options for missions where electronic target disruption or defeat is advantageous to mission objectives. The program includes advancements in lethality modeling, power electronics, HPM source, conformal antennas, and energy storage.

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