



ELECTROMAGNETIC ENVIRONMENTAL EFFECTS LABORATORY

LABORATORY INFORMATION FACT SHEET

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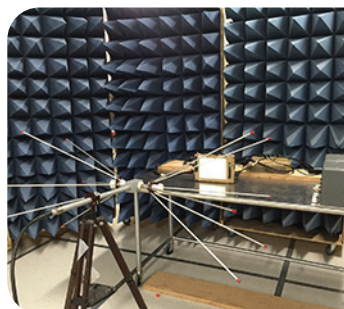


The Electromagnetic Environmental Effects (E3) Lab exposes systems to a wide range of severe electromagnetic environments, both man-made and natural.

TECHNOLOGY/FACILITY DESCRIPTION:

The E3 Lab's man-made environments include Hazards of Electromagnetic Radiation to Ordnance (HERO), Electromagnetic Interference and Compatibility (EMI/EMC) and Electromagnetic Pulse (EMP). HERO ensures the safety and reliability of electrically initiated explosives in high electromagnetic radiation

environments. The natural environments include Personnel Electrostatic Discharge (ESD), Helicopter ESD, High Voltage Corona (HVC) and Lightning Effects (LE). The response to these environments is measured utilizing custom instrumentation designed and fabricated by E3 team personnel. E3 team engineers provide design guidance to ensure developmental systems will not be susceptible to electromagnetic environments to be encountered during their life cycle: Electromagnetic Radiation Operational (EMRO) evaluation ensures the safe, reliable operation of electronic systems in their anticipated electromagnetic radiation environment. This type of system evaluation is similar to the MIL-STD-461 radiated susceptibility test for subsystems. Additionally, the E3 team serves as technical liaison between DEVCOM AC elements and the Army Nuclear Survivability requirements community and test facilities.



EQUIPMENT AND EXPERTISE AVAILABLE:

- Fiber Optic Instrumentation of Weapons
- Marx Generator Discharge
- Horn Antennas
- Shielded Room
- Instrumentation Vehicle
- 30,000 sq ft Facility
- 300,000 Volts, 49 Joule Marx Generator
- Network Analyzer
- Spectrum Analyzer
- E field and B field sensors
- Power Meters
- High Power Amplifiers, 100 KHz - 45 GHz
- Fiber Optic Instrumentation
- Shielded Room, 26' L x 36' W x 14' H
- Energetic Testing - 1.4s