

AMATEUR RADIO FACT SHEET / DISCUSSION POINTS

TOPIC: U.S. EMP DEFENSES

E1 Defenses (nanosecond 25kV/meter pulse)

- MIL-STD-188-125-1, High-Altitude EMP Protection for Fixed Ground-Based Facilities
https://works.bepress.com/george_h_baker/26/
- MIL-STD-461 <http://www.dtbtest.com/emp-testing.aspx>
- MIL-STD-188 <http://www.futurescience.com/emp/MIL-STD-188-125-1.pdf>
- NORAD moved back inside a mountain (at a cost of almost \$1B) for EMP protection
- Civilian community is largely unprotected
- NTIS information published in 1988 on how to protect radio equipment.
- Local ARES equipment is generally “hardened” per those techniques, but of course untested.

E3 Defenses (Similar to CME protection)

- Federal – 2 Commission Reports released, 2004, 2008, no significant legislation
- Legislation filed in 5 states
- Maine – familiar with the recent CME event! – passed protective legislation.
<http://www.pressherald.com/2015/01/25/cmp-fortifies-maines-electric-grid-against-new-threats/>
- Arizona EM agency to provide civic guidance for EMP/CME response
- Louisiana commissioned study
- Kentucky established interagency working group
- <http://www.pewtrusts.org/en/research-and-analysis/blogs/stateline/2015/2/27/states-work-to-protect-electric-grid>
- 1300 U.S. Electric distribution companies cannot agree to work on this.

Tough to Stop An EMP Missile

- Must hit it in outer space; missile does not need to re-enter to launch EMP attack
- By definition, using a nuke would be counter-productive (would CAUSE an EMP)
- Ground-Based MidCourse Defense system developed at \$40 B --- batting 1 for 2 in only realistic tests so far.... (May, June 2017)
- Rising concern: NK possessing >dozen fission bombs and now an intermediate range ballistic missile. Additional concern: Iran