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DHS Needs to Take Threat of EMP Attack Seriously, Physicist Warns

By Matthew Harwood
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The Department of Homeland Security has not taken seriously the threat that high-altitude detonation of a nuclear weapon could fry the nation's power grid, a physicist told lawmakers yesterday.

Dr. Michael J. Frankel warned the Judiciary Subcommittee on Terrorism and Homeland Security [1] that a terrorist organization or a rogue state could detonate a nuclear weapon either above the United States or close to its shores, creating an electromagnetic pulse attack that could severely damage the country's electronic infrastructure. Frankel is executive director of the EMP Commission, which was created in 2001 to study the national security threat an EMP attack could pose to the United States. While most of its work is classified, the commission has released two unclassified reports: one in 2004 [2] (.pdf) and another in 2008 [3] (.pdf).

"The EMP generated on the ground from such a high altitude detonation will not immediately damage a human being, indeed a person will not even feel it," he said. "But it will affect all of the electronic circuitry which surrounds and sustains him."

The 2008 EMP Commission report, however, expressed the threat in much stronger language. "Because of the ubiquitous dependence of U.S. society on the electrical power system, its vulnerability to an EMP attack, coupled with the EMP's particular damage mechanisms, creates the possibility of long-term, catastrophic consequences," the report warns, noting "[s]hould significant parts of the electrical power infrastructure be lost for any substantial period of time, the Commission believes that the consequences are likely to be catastrophic, and many people may ultimately die for lack of the basic elements necessary to sustain life in dense urban and suburban communities."



The effects of an EMP event isn't theoretical, Frankel said. In 1962, the United States conducted a high-altitude nuclear test above Johnston Island [4], 825 miles southwest of Hawaii. Detonated 400 kilometers above the island, the resulting nuclear blast knocked out street lights across Hawaii and tripped circuit breakers, triggered burglar alarms, and damaged a telecommunications relay facility on the island of Kauai.

Some national security experts and analysts have used the commission's reports to argue Iran could use an EMP attack if it successfully acquires a nuclear bomb. "[I]f the Iranians were to detonate even a primitive nuclear warhead over the United States, it could send out an electromagnetic pulse (EMP) destroying the electric grid and electrical systems [5] across a wide swath of U.S. territory," wrote former CIA Director R. James Woolsey and Rebecca Heinrichs of the Foundation for the Defense of Democracies a few weeks ago in *The Wall Street Journal*.

Other scientists and journalists, however, have expressed strong skepticism [6] to the threat of an EMP attack carried out by terrorists or rogue states. "The vulnerability of some of our infrastructure to nuclear EMP is real; however, the threat is overblown [7]," argued Yousaf Butt, a staff scientist at the Center for Astrophysics at Harvard University, in a two-part series for *The Space Review* early this year. (The article elicited this rebuttal [8] from two staff members of the EMP Commission.)

Frankel believes DHS has the expertise in-house to tackle EMP preparedness but needs a Senate-confirmed leader to lead the charge. Already DHS has taken action against a nuclear terrorist attack scenarios but continues to ignore the threat of an EMP attack, he said, even though the commission provided the department with 75 unclassified recommendations to mitigate vulnerabilities and promote resiliency in U.S. critical infrastructures.

"It seems odd to us that a component of the nuclear problem is simply being ignored," Frankel said. "The EMP mode of attack doesn't require the smuggling in with all the dangers that is required. It doesn't require very accurate aim, you just need to toss the thing up there more or less."

In response to Frankel's testimony, Sen. Jon Kyl (R-AZ) challenged the White House's WMD preparedness efforts, stating "the depth of that commitment is highly questionable because there doesn't seem to be the commander's intent flowing down in sufficient robustness that everyone else gets the message."

"Protection of the nation's critical infrastructures from an EMP threat is both feasible and well within the nation's means and resources to accomplish," Frankel said.

But the most probable EMP event will not come from either terrorists or rogue states, but from the sun, noted Col. Randal Larsen, executive director of the Commission on the Prevention of Weapons of Mass Destruction Proliferation and Terrorism. Magnetic storms on the sun and the solar flares they generate episodically threaten astronauts and satellites, but in severe cases can affect electrical infrastructure on earth. An 1859 event shorted out telegraph wires and generated auroras seen as far south as Havana, according to NASA.

"The most likely EMP threat to America is from that thermo-nuclear weapon out there at 93 million miles," Larsen said, "we know that's going to happen."

On Sunday, NASA documented a coronal mass ejection—or massive solar flare (video below)—on the sun's surface, which shot "a wall of ionized atoms directly at Earth" [9] that hit earth on Tuesday, reported FOXNews.com. The solar eruption, however, was not strong enough to do any damage to electronics on earth.

Regardless of whether an high-altitude nuke attack is probable, Larsen noted, preparing the nation to withstand an EMP event will protect the country from either a man-made or a solar event.



◆ Photo by JustinLowery.com/Flickr [10]

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'One Second After' book based on 2008 EMP Report

Submitted by gp5548 on Mon, 08/09/2010 - 09:05.

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New York Times Best Seller by William Forstchen. The scary truth that our govt. and DHS are ignoring to our peril.

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