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Preparing for nuclear electronic pulse attacks

China, Russia, North Korea, and Iran are preparing nuclear electronic pulse attacks from space in a future conflict to cripple the U.S. military and plunge the United States into darkness, according to a declassified study. "The United States critical national infrastructure faces a present and continuing existential threat from combined-arms warfare, including cyber and manmade electromagnetic pulse (EMP) attack, and natural EMP from a solar superstorm," says a recently published report from the congressional Commission to Assess the Threat to the United States from Electromagnetic Pulse (EMP) Attack." Once largely a concern of a Cold War surprise attack from Russia to shut down American nuclear forces communications, the spread of nuclear weapons has increased the danger of disruptive EMP attack from a nuclear burst in the upper atmosphere.

"Within the last decade, newly nuclear-armed adversaries, including North Korea, have been developing the ability and threatening to carry out an EMP attack against the U.S.," the report said.

"Such an attack would give countries that have only a small number of nuclear weapons the ability to cause widespread, long-lasting damage to U.S. critical national infrastructures, to the United States itself as a viable country, and to the survival of a majority of its population." The report, containing redactions requested by the Pentagon, was written by William R. Graham, EMP commission chairman who is regarded as one of the foremost experts on EMP. Graham helped discover the phenomenon after a 1962 U.S. atmospheric nuclear test near Hawaii. EMP is a burst of electromagnetic energy from a solar storm or nuclear blast capable of disabling or destroying electronic devices over wide areas.

The report is based on information up to June 2017 and reveals that both Russia and China are well advanced in developing plans for using EMP as part of advanced warfighting concepts that combine the use of nuclear and non-nuclear EMP with cyber and other electronic warfare capabilities. The report also warns of vulnerabilities to the U.S. electric grid from both a nuclear blast EMP and a devastating solar storm, like the 1859 Carrington event that generated a widespread natural EMP that if it occurred today would have caused massive blackouts to electric grids and other life-sustaining critical infrastructures. A massive solar storm narrowly missed hitting the planet in July 2012 that the report said would have caused a long-term electrical blackout worldwide with potentially catastrophic consequences. "Recurrence of another Carrington Event is inevitable," the report said.

Regarding nuclear EMP, the report states that China, Russia, and Iran consider the use of high-altitude nuclear blasts as "sixth generation warfare" that could cripple the ability of U.S. military to wage war using advanced electronic systems for intelligence, navigation, and precision weapons guidance. "Nuclear EMP attack is part of the military doctrines, plans, and exercises of Russia, China, North Korea, and Iran for a revolutionary new way of warfare against military forces and civilian critical infrastructures by cyber, sabotage, and EMP," the report says. Because damage is limited to electronic components and systems, enemy leaders do not consider an EMP attack as an act of nuclear warfare that would bring U.S. nuclear retaliation. "Potential adversaries understand that millions could die from the long-term collateral effects of EMP and cyber-attacks that cause protracted black-out of national electric grids and other life-sustaining critical infrastructures," the report states. "At least some regard this relatively easy, potentially anonymous, method of inflicting mass destruction as an attractive feature of what they describe as a Revolution in Military Affairs."

The report urges the Pentagon to develop its own EMP weapons that can be developed from relatively low-yield nuclear arms and precision guided missiles. The president should direct that a limited nuclear option for EMP attack be included in U.S. nuclear strike plans to deter foreign states developing EMP arms. Of particular concern, according to the report, are two North Korean satellites currently in polar orbit over the United States. The two satellites, launched in 2012 and 2016, currently travel in trajectories that are "consistent with practice or preparation for a surprise nuclear EMP attack," the report says.

The satellites' polar orbits allow them to evade detection by U.S. missile defense satellites and sensors – a sign they could be used during the first stage of a North Korean long-range nuclear attack to disrupt U.S. missile defenses in Alaska and California. The satellites, KMS-3 and KMS-4, appear to be similar to a secret Soviet-era weapon called the Fractional Orbital Bombardment System (FOBS) that Moscow planned for a surprise nuclear attack on the United States over the poles.

Two retired Russian generals testified to the EMP commission in 2004 that a design for a Russian super-EMP weapon was transferred to North Korea by Russian scientists and engineers working on North Korea's missile and nuclear weapons program. The Russians asserted the North Koreans could test a super-EMP weapon in a few years. Last year, after North Korea conducted its sixth underground nuclear test, North Korean state media announced that the hydrogen bomb "can be detonated even at high altitudes for a super-powerful EMP attack according to strategic goals." China's EMP arms were discussed in Chinese military writings as recently as 2016. China's National Security Policy Committee, stated in January 2016 that "electromagnetic pulse bombs" will "change the 'rules of the game'" by disrupting U.S. military precision warfare capabilities.

A PLA air force publication in 2014 states that EMP blasts are a new type of weapon. "On a battlefield, this new-type weapon will cause devastating damage to electronic systems, including computers, communications and control systems, and radars, resulting in immeasurable losses," the report said. Russian military plans for using EMP attacks were traced in the report to Gen. Vladimir Slipchenko and his book *Non-Contact Wars* that calls for combining cyber-attacks, physical attacks, and EMP attacks against electric grids. A Russian General Staff journal in 2011 also stated that U.S. military forces are vulnerable to electronic and EMP attacks.

"A single low-yield nuclear weapon exploded for this purpose high above the area of combat operations can generate an electromagnetic pulse covering a large area and destroying electronic equipment without loss of life that is caused by the blast or radiation," the report said.

Iranian military writings follow Russia's approach to warfare and the use of EMP. A 2010 Iranian military textbook states that Iran, in a future conflict, is planning coordinated attacks by nuclear and non-nuclear EMP, cyber, and physical weapons to cause blackouts and the collapse entire nations. Iranian military doctrine sees nuclear EMP attacks as the ultimate cyber weapon. Iran also is building defenses against EMP attacks for its infrastructure. The report states that Iran may prefer to use the indirect method of causing mass casualties by using a nuclear EMP attack as a way to conduct nuclear war under Islamic law.

Non-nuclear EMP weapons, those that are limited to a range of a mile or less, also have been used to disrupt communications power grids, the report said. North Korea used a radio frequency weapon purchased from Russia to attack airliners and air traffic to Seoul, South Korea. The report also takes aim at critics who have sought to play down the danger of EMP attacks and solar superstorms as science fiction.

The report said the critics often are uninformed because they either lack knowledge of the effects of the Soviet and U.S. high altitude nuclear tests in the early 1960s, or do not know about the extensive body of testing and analysis carried out by the Pentagon over the last 55 years.

A popular myth spread by EMP skeptics is that the 1962 atmospheric nuclear test known as Starfish Prime – 900 miles from Hawaii caused only *minimal* disruption to Honolulu.

"In fact, the EMP *knocked-out thirty-six strings of street lights, caused a telecommunications microwave relay station to fail, burned out high-frequency radio links, set off burglar alarms, and caused other damage,*" the report said. The report also criticizes the Federal Energy Regulatory Commission and the North American Electric Reliability Corp. and the electric power industry for failing to address the EMP danger from either attack or solar storm. Private industry also has failed to understand the threat posed by EMP to high-voltage transformers.

Peter Pry, a former EMP commission member, said the Pentagon has not published any findings of the commission since the commission was reestablished by Congress in 2016.

As a result, the new report was produced by the private EMP Task Force on National and Homeland Security after a security review completed in July by the Pentagon's Office of Prepublication and Security Review, said Pry, executive director of the task force.

Bill Gertz

Bill Gertz is senior editor of the Washington Free Beacon. Prior to joining the Beacon he was a national security reporter, editor, and columnist for 27 years at the Washington Times. Bill is the author of seven books, four of which were national bestsellers. His most recent book was *iWar: War and Peace in the Information Age*, a look at information warfare in its many forms and the enemies that are waging it. Bill has an international reputation. Vyacheslav Trubnikov, head of the Russian Foreign Intelligence Service, once called him a “tool of the CIA” after he wrote an article exposing Russian intelligence operations in the Balkans. A senior CIA official once threatened to have a cruise missile fired at his desk after he wrote a column critical of the CIA’s analysis of China. And China’s communist government has criticized him for news reports exposing China’s weapons and missile sales to rogue states. The state-run Xinhua news agency in 2006 identified Bill as the No. 1 “anti-China expert” in the world. Bill insists he is very much pro-China—pro-Chinese people and opposed to the communist system. Former Defense Secretary Donald H. Rumsfeld once told him: “You are drilling holes in the Pentagon and sucking out information.” His Twitter handle is @BillGertz.