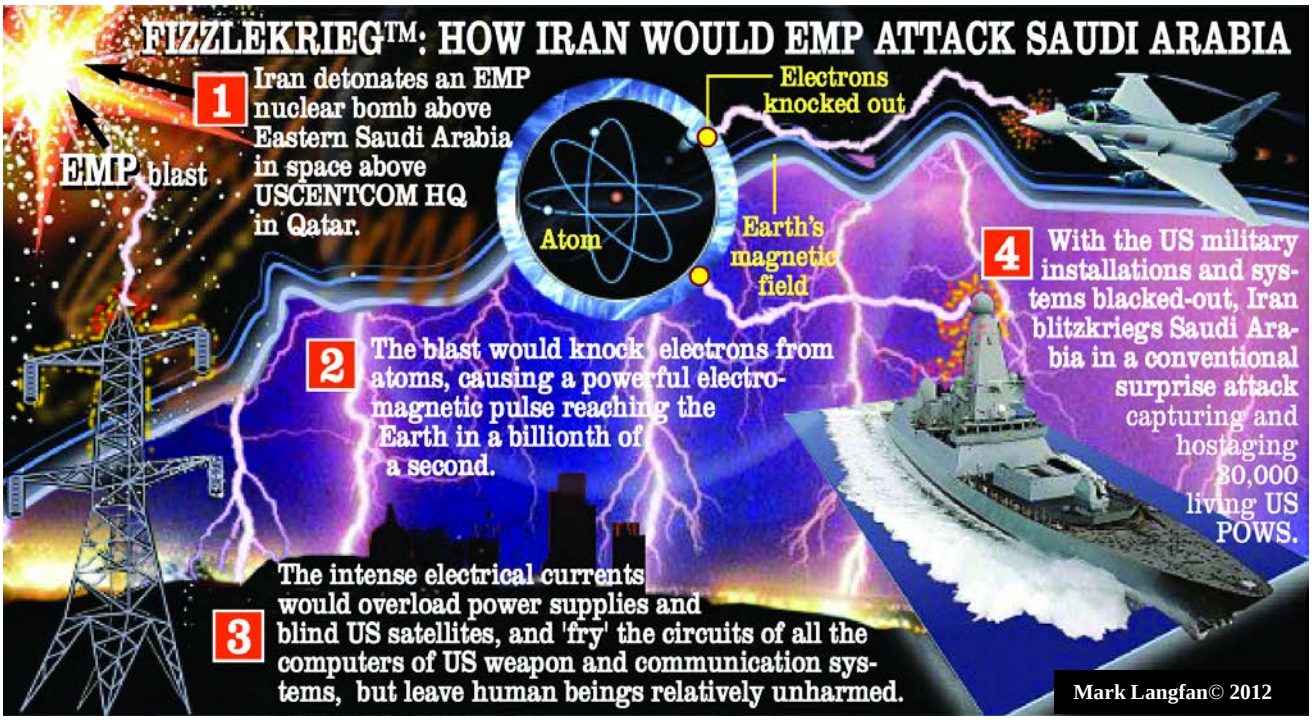
Fizzlekrieg™: James Bond's EMP defeats Dr. Strangelove's MAD

By Mark Langfan

April 13, 2012



Download: www.marklangfan.com/fizzlekriegfirstdraft.pdf

www.marklangfan.com/prefatorygraphics.html

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FIRST DRAFT

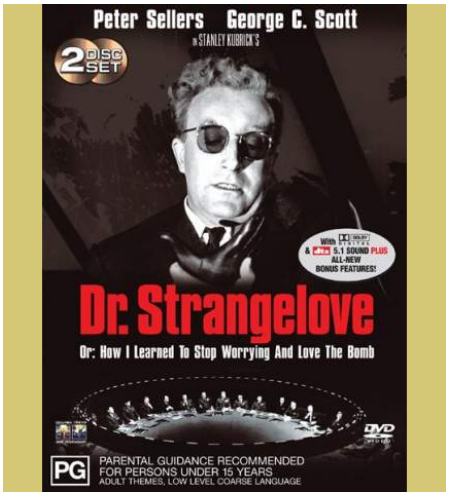
***Fizzlekrieg*™: James Bond's EMP defeats Dr. Strangelove's MAD**
By Mark Langfan

April 6, 2012

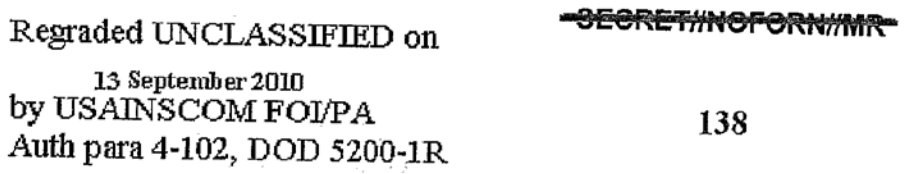
I. Modern Bond *Goldeneye* nuclear EMP weapons render MAD insane

Republican Presidential candidate Ron Paul, M.D. has clearly enunciated a strategic nuclear containment 'thesis' that there is ""No need to attack Iran" because "If you look at a map of Iran, we have 45 bases around their country, plus our submarines. The Iranians can't possibly attack anybody and we are worrying about the possibility of one nuclear weapon."" Paul isn't alone. Dr. Zbigniew Brzezinski, President Carter's famed National Security Advisor, and other very well-respected analysts such as Fareed Zakaria, have aggressively advocated for President Obama to adopt a similar Cold War-*Dr. Strangelove* style 'containment' type of US strategy regarding a potentially nuclear-armed Iran. *Dr. Strangelove* was a satirical 1964 Cold War movie that featured the MAD 'theory' of Cold War Nuclear Gaming which supposes that two nuclear-armed "rational actors" would, in theory, never ever start a nuclear war with each other because both parties would be **M**utually **A**ssured of nuclear **D**estruction (or MAD), except that the movie ends with the US and the USSR "rationally" mutually blowing each other up with nuclear weapons. However in 2012, there is a new catastrophic problem with MAD: recently-declassified Modern James Bondish game-changer EMP nuclear weapons like were used in the 1995 James Bond movie *Goldeneye* have made the MAD 'containment' theory obsolete, if not, downright catastrophically dangerous.

Versus



What Messrs. Paul and Brzezinski don't understand is the modern-type *Goldeneye*, asymmetrical nuclear EMP threat posed by Iran's "one nuclear weapon" is fundamentally different from the historical *Dr. Strangelove*, symmetrical nuclear Cold-War threat posed 40 years ago when "(t)he Soviets had 30,000 of them." In specific, Messrs. Paul and Brzezinski don't understand the new, tactical battlefield capabilities of a radically different, newly-developed modern game-changer *Goldeneye*-type of asymmetrical nuclear EMP weapon which was disclosed in a 2005 Assessment (declassified on September 13, 2010, see below) by the super-secret US Army intelligence organization called the **N**ational **G**round **I**ntelligence **C**enter ("NGIC").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Auth para 4-102, DOD 5200-1R

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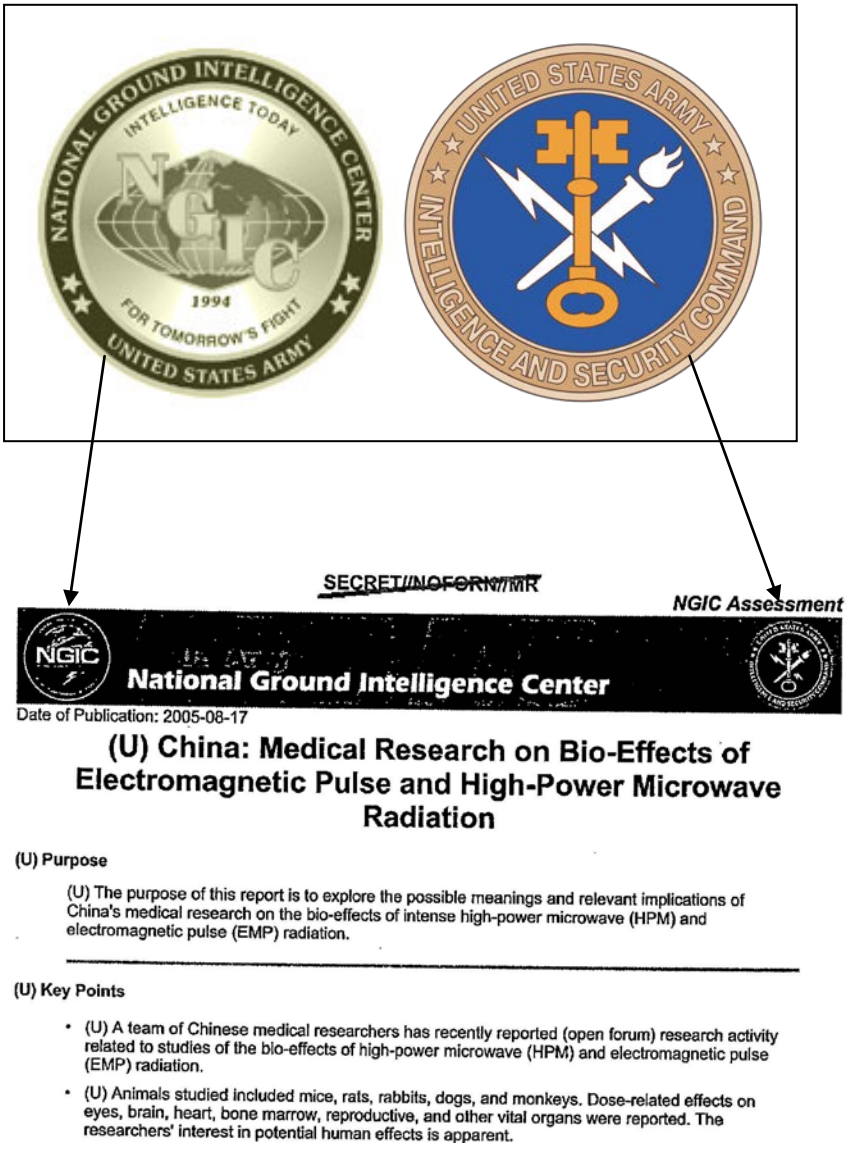
With the recently-declassified *NGIC Assessment Goldeneye*-type of nuclear EMP weapon, Iran could asymmetrically attack Saudi Arabia and "prevail over U.S. high-technology forces in a localized conflict," and successfully occupy the oil-rich eastern quarter of the Saudi Arabian Peninsula. In such an Iranian asymmetric nuclear attack on the Sunni Persian Gulf Kingdoms, Iran could take 30,000 **living** US soldiers prisoners of war as a "super-trumping" human shield against any possible US military response. With such an *NGIC Assessment-Goldeneye*-type, modern nuclear EMP weapon, within 72 hours of its detonation, Iran could perfect a total, irreversible, catastrophic Saudi Peninsula military defeat of the United States and the free world. In a letter to Defense Secretary Gates in 2009 specifically describing just such an Iranian EMP attack against Saudi Arabia, I coined this new type asymmetric *Goldeneye* nuclear EMP warfare: *FizzleKrieg* ™.

Inside of 72 hours, 30,000 **living** US soldiers (including US generals and US admirals) taken as prisoners of war and held hostage, Gilad Shalit-style, by Iran; and Iran occupying the all the Sunni Kingdoms' oil fields containing 45% of the world's oil??!!?? Crazy, you scoff! Lang-sanity, you guffaw!!! Well, before one laughs too-too hard, one should carefully read the 2011-declassified super-duper-wuper-secret 2005 US Army Intelligence "*NGIC Assessment*"

(http://media.washtimes.com/media/misc/2011/07/22/ngic-emp.pdf) on exactly this kind of *Goldeneye-type* nuclear EMP asymmetric attack. The *NGIC Assessment* was reported on by the Washington Times on July 21, 2011 entitled: "Report: China building electromagnetic pulse weapons for use against U.S. carriers." (http://www.washingtontimes.com/news/2011/jul/21/beijing-develops-radiation-weapons/?page=all). In essence, the *NGIC Assessment* theorizes that China's new EMP nuclear weapon "trumps" MAD theory, and defeats the United States in a "localized conflict."



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NGIC Assessment

National Ground Intelligence Center

Date of Publication: 2005-08-17

(U) China: Medical Research on Bio-Effects of Electromagnetic Pulse and High-Power Microwave Radiation

(U) Purpose

(U) The purpose of this report is to explore the possible meanings and relevant implications of China's medical research on the bio-effects of intense high-power microwave (HPM) and electromagnetic pulse (EMP) radiation.

(U) Key Points

- (U) A team of Chinese medical researchers has recently reported (open forum) research activity related to studies of the bio-effects of high-power microwave (HPM) and electromagnetic pulse (EMP) radiation.
- (U) Animals studied included mice, rats, rabbits, dogs, and monkeys. Dose-related effects on eyes, brain, heart, bone marrow, reproductive, and other vital organs were reported. The researchers' interest in potential human effects is apparent.

NGIC Assessment, 8/17/05, Page 1
http://media.washtimes.com/media/misc/2011/07/22/ngic-emp.pdf

NGIC is part of the US Army **IN**telligence and **S**ecurity **COM**mand (INSCOM) the actual intelligence corps of the US Army. NGIC's mission is described as "to ensure that U.S. forces have a decisive edge in current and future military operations" . . . "10 and 20 years into the future." NGIC is not a "think tank," but the actual US Army intelligence corps itself. "NGIC produces scientific and technical analysis" that are the gold standard of military intelligence and its conclusions are apolitical and authoritative. The 2005 actual *NGIC Assessment* goes to state in pertinent part:

United States Army Intelligence and Security Command

(C) Several Chinese authors (both on Taiwan and the mainland) have specifically discussed HEMP as a Trump Card or Assassin's Mace weapon (Trump Card would be applicable if the Chinese have developed new low-yield, possibly enhanced, EMP warheads, while Assassin's Mace would apply if older warheads are employed). Within this context, b1 b1 The medical research contribution would help insure that China's use of HEMP against Taiwan and any vulnerable U.S. CVBG assets would not push the U.S. across the nuclear-response threshold. China's HEMP capability could be used in two different ways: as a surprise measure after China's initial strike against Taiwan and after U.S. CVBG assets have moved into a vulnerable position, and as a bluff intended to dissuade the United States from defending Taiwan with the CVBG. One article describing the bluff scenario suggests that China might announce a resumption of atmospheric nuclear testing and warn of tests during a specified time period, then strike Taiwan with the conventional infrastructure attack during the specified period. They would then wait to see whether the United States would call their bluff by moving the CVBG to defend Taiwan. This bluff scenario would be accompanied by prior announcements/leaks of their intentions (which seems to be the case as sources for this article confirm).

(U) Conclusions

(C) b1 suggests that China may consider (as an option) the employment of HEMP as a Trump Card or Assassin's Mace weapon against the Taiwan electronic infrastructure or against a U.S. CVBG (or at least to threaten such actions), should a conflict break out in the Taiwan Strait. The minimization of military casualties on CVBG assets is calculated to lessen the likelihood of a U.S. nuclear response to a Taiwan strike employing nuclear EMP. The minimization of casualties on Taiwan is calculated to lessen the animosity among Taiwan's populace over forced reunification.

NGIC Assessment, 8/17/05, Page 6
http://media.washtimes.com/media/misc/2011/07/22/ngic-emp.pdf

II. The Persian *Goldeneye* Trajectory: Connecting the Iranian EMP Dots

How does 2001 Chinese "bio-effects" testing of "EMP radiation" on mammals connect up the dots with a 2015 Iranian EMP nuclear weapon attack upon Saudi Arabia?

The Federation of American Scientist (FAS) posted a US Department of Defense Declassified guide which stated:

~~OFFICIAL USE ONLY~~

CHAPTER 8

HIGH-ALTITUDE NUCLEAR WEAPONS EFFECTS INFORMATION

. . .

purposes of this guide, the weapon effect phenomena definition from *The Effects of Nuclear Weapons* is used to identify high-altitude tests. However, the HA and Yucca shorts, although conducted below this altitude, are also included.

When a nuclear weapon is detonated at high altitude, there is little or no air present in which to deposit the radiative output of the weapon. Therefore, a radiation opaque fireball does not form, other attenuation effects are minimized, and the radiation can travel great distances while remaining at significant energy levels. One result of such detonations can be widespread radio and radar blackout.

The United States has performed a limited number of high-altitude nuclear weapon effects tests to gather data about these phenomena. These tests are identified in section D of this chapter.

D. Previously Declassified High-Altitude Test Information

1. A total of 12 (10 rocket, 1 airdrop, 1 balloon) nuclear weapons effects tests were conducted to study the effect of air density (altitude) on weapon output (i.e., thermal/blast energy partition). Although the HA and Yucca shots (see list below) do not meet the 100,000 ft minimum burst height for onset of high-altitude effects, it is appropriate they be included herein as they were instrumental in determining this lower altitude limit. Officially announced unclassified information about these tests is provided in DOE/NV 209 (Rev. 15), *United States Nuclear Tests, July 1945 through September 1992*, December 2000. Unclassified information about high-altitude test results can also be found in *The Effects of Nuclear Weapons* by Glasstone and Dolan (1977).

Test	Operation (DOE/DOD)	Type	Date	Yield Range	Altitude[a]
HA	Teapot	Airdrop	04/06/55	3 kt	40,000 ft
Yucca	Hardtack I/Newsreel	Balloon	04/28/58	1.7 kt	86,000 ft
Teak	Hardtack I/Newsreel	Rocket	08/01/58	3.8 Mt	252,000 ft
Orange	Hardtack I/Newsreel	Rocket	08/12/58	3.8 Mt	141,000 ft
Argus I	Argus	Rocket	08/27/58	1-2 kt	~300 miles
Argus II	Argus	Rocket	08/30/58	1-2 kt	~300 miles
Argus III	Argus	Rocket	09/06/58	1-2 kt	~300 miles
Starfish Prime	Storax/Dominic I (Fishbowl)	Rocket	07/09/62	1.4 Mt	250 miles
Checkmate	Storax/Dominic I (Fishbowl)	Rocket	10/20/62	low	10s of miles
Bluegill 3 Prime	Storax/Dominic I (Fishbowl)	Rocket	10/26/62	sub-megaton	10s of miles
Kingfish	Storax/Dominic I (Fishbowl)	Rocket	11/01/62	sub-megaton	10s of miles
Tightrope	Storax/Dominic I (Fishbowl)	Rocket	11/04/62	low	10s of miles

[a] Altitude is expressed in feet/miles. Historical documents would most likely contain measurements expressed in these units.

2. For all NSI documents discussing high-altitude tests (at an altitude in excess of 100,000 feet), initially consult DOE/NV 209 or consult *The Effects of Nuclear Weapons*. If the only information in the document(s) is also in those publications, then the information is unclassified. Any elaboration beyond the information in those publications should be referred to DTRA under topics 8.1 and 8.2 above (for weapons effects) or will generally be RD if device design is revealed.

3. For the tests conducted during Operation Argus, **any** description of yield other than what is specifically given in DOE/NV 209 (i.e., other than "1-2 kt") is FRD and is not subject to release under E.O. 12958.

http://www.fas.org/sgp/othergov/doe/cg-hr-3/chap8.pdf

The NRI Memorandum Report dated October 1, 1980-Sept. 30, 1981 stated:

NRL Memorandum Report 4734

Electromagnetic Pulse (EMP) Handbook Development for the Defense Nuclear Agency (DNA)

Annual Report for the
Period October 1, 1980 - September 30, 1981

J. M. PIERRE

Plasma Radiation Group
Plasma Physics Division

February 22, 1982

This research was sponsored by the Defense Nuclear Agency under Subtask 099QAXQE, work unit 00001 and work unit title "Handbook Integration."

NAVAL RESEARCH LABORATORY
Washington, D.C.

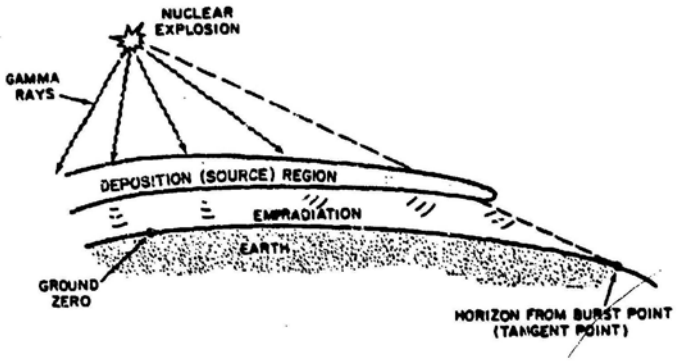


Exhibit 1. Generation and extent of EMP effects.

http://www.dtic.mil/dtic/tr/fulltext/u2/a111419.pdf

On January 25, 1995, the Norwegian rocket incident took place:

A *Black Brant XII* like this one caused the Norwegian rocket incident.

Norwegian rocket incident
From Wikipedia, the free encyclopedia

The **Norwegian rocket incident** (or **Black Brant scare**) refers to a few minutes of post-Cold War nuclear tension that took place on January 25, 1995, more than four years after the end of the Cold War. The incident started when a team of Norwegian and American scientists launched a Black Brant XII four-stage sounding rocket from the Andøya Rocket Range off the northwest coast of Norway. The rocket, which carried equipment to study the aurora borealis over Svalbard, flew on a high northbound trajectory, which included an air corridor that stretches from the North Dakota Minuteman-III silos all the way to Moscow, eventually reaching an altitude of 1453 kilometers (**903** mi). Nuclear forces in Russia were put on alert, and the nuclear-command suitcase was brought to President Boris Yeltsin, who then had to decide whether to launch a nuclear barrage against the United States. Notably, there is still no clear and direct confirmation that the trajectory of the rocket was taken by mistake, caused by computer or other technical failure.

. . .

EMP rocket scenario
One possibility was that the rocket had been a solitary radar-blocking electromagnetic pulse (EMP) rocket launched from a Trident missile

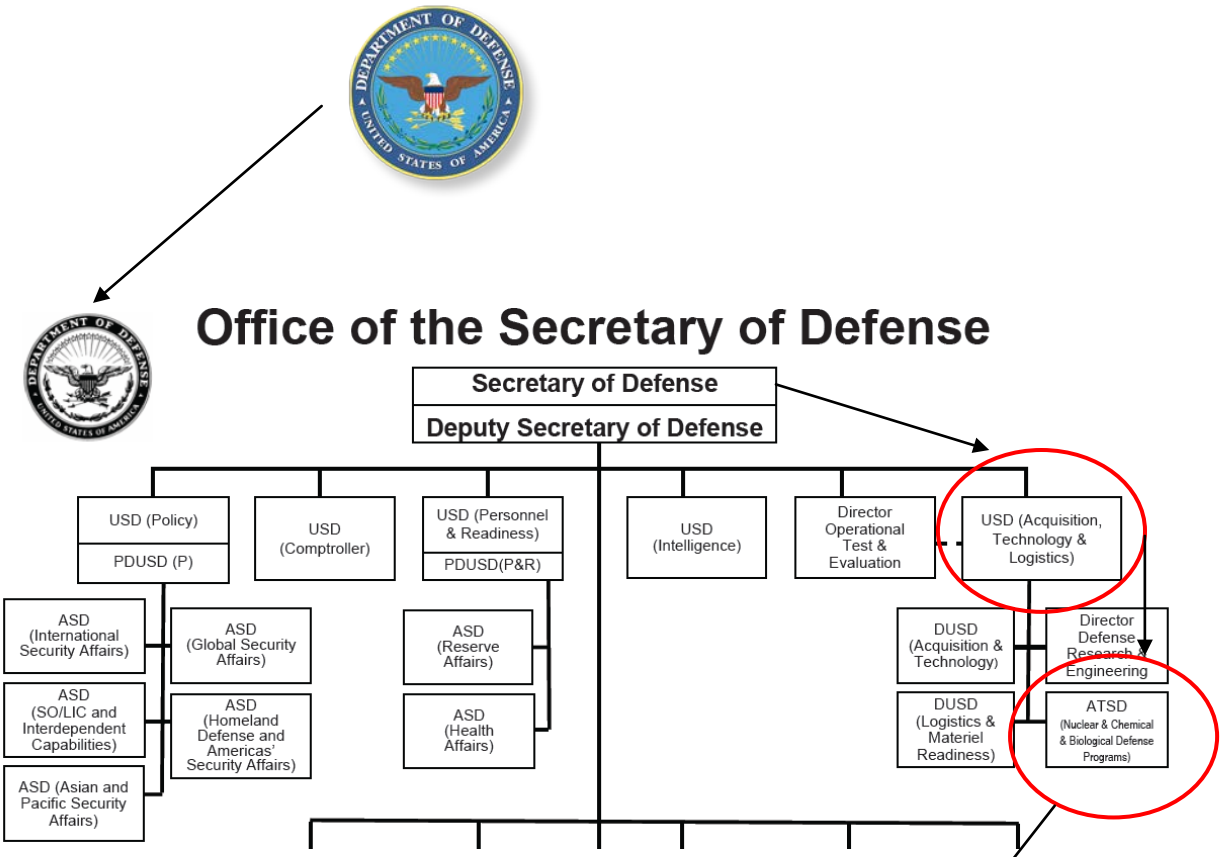
at sea in order to blind Russian radars in the first stage of a surprise attack. In this scenario, gamma rays from a high-altitude nuclear detonation could create an EMP wave that would confuse radars and incapacitate electronic equipment. After that, according to the scenario, the real attack would start.

. . .

References

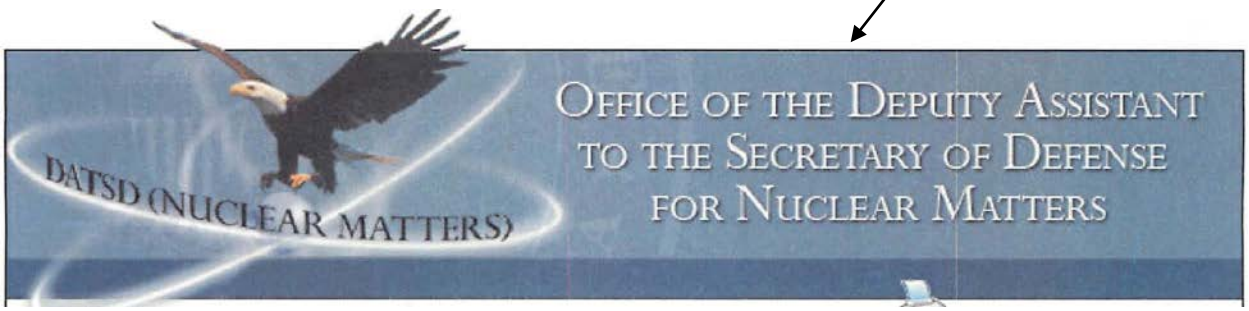
- Pry, Peter (1999). *War scare: Russia and America on the nuclear brink*. New York: Praeger. ISBN 0-275-96643-7.

(See Wikipedia, *Norwegian rocket incident*, http://en.wikipedia.org/wiki/Norwegian_rocket_incident)



http://www.defense.gov/pubs/pdfs/2010_CMPR_Final.pdf

In 1996-2002:



Office of The Deputy Assistant to the Secretary of Defense for Nuclear Matters
http://www.acq.osd.mil/ncbdp/nm/disclaimer.html

NM History - http://www.acq.osd.mil/ncbdp/nm/nmhistory.html

ML Acronym Notes:

- OSD means Office of the Security of Defense
- DoD means Department of Defense
- COTS means commercial-off-the-shelf
- NCB means Nuclear Chemical Biology Defense Program

History of DoD Nuclear Survivability (cont)

- **The rise of COTS: 1996-2002**
  - All references to nuclear survivability were deleted in the 1996 5000-series revision
    - *"Unless waived by the Milestone Decision Authority, mission critical systems shall be survivable to the threat levels anticipated in their operational environment."*
    - With survivability no longer emphasized, U.S.-Russian détente and the push for rapid acquisition through COTS, survivability was quickly dumped by program managers, the Services, etc.

  - The 2000 revisions did not address how to acquire nuclear survivable systems nor did they assign OSD responsibility for oversight

ASSISTANT SECRETARY OF DEFENSE FOR NUCLEAR, CHEMICAL AND BIOLOGICAL DEFENSE PROGRAMS 4

(See DoD Nuclear Survivability Program report dated May 20, 2011 http://www.dtic.mil/ndia/2011CBRN/Kuspa.pdf)

In 2005 US House testimony, Dr. Pry stated:

> The most complicated, costly, controversial and critically important elements of [nuclear] weaponisation are the C3I systems....Saving on a C3I system could be suicidal. With a no-first-use policy, the Indian communications systems have to be hardened to withstand the electromagnetic pulses generated by an adversarial nuclear first strike. Otherwise, no one will be fooled by the Indian nuclear deterrent." (C. Rammonohar Reddy, **The Hindu**, 1 September 1998)

(See March 8, 2005 Dr. Peter Pry statement before US Senate Subcommittee on Terrorism, Technology and Homeland Security, *Foreign Views of EMP Attack*, p.1 http://kyl.senate.gov/legis_center/subdocs/030805_pry.pdf)

In 2005 US House testimony, Dr. Pry stated:

> Such an attack will not cause any blast or thermal effects on the ground below but it can produce a massive breakdown in the communications system....It is certain that most of the land communication networks and military command control links will be affected and it will undermine our capability to retaliate. This, in fact, is the most powerful incentive for a preemptive attack. And a high-altitude exo-atmospheric explosion may not even kill a bird on the ground." (**The Indian Express**, 17 September 1999)

(See March 8, 2005 Dr. Peter Pry statement before US Senate Subcommittee on Terrorism, Technology and Homeland Security, *Foreign Views of EMP Attack*, p.2 http://kyl.senate.gov/legis_center/subdocs/030805_pry.pdf)

In 2005 US House testimony, Dr. Pry stated:

> The object of the meeting was to reduce U.S. -Russia tensions and seek Russian help in resolving the Balkans crisis. During the meeting, Chairman Lukin and Deputy Chairman Alexander Shaponov chastised the United States for military aggression in the Balkans, and warned that Russia was not helpless to oppose Operation ALLIED FORCE: "Hypothetically, if Russia really wanted to hurt the United States in retaliation for NATO's bombing of Yugoslavia, Russia could fire a

> submarine launched ballistic missile and detonate a single nuclear warhead at high-altitude over the United States. The resulting electromagnetic pulse would massively disrupt U.S. communications and computer systems, shutting down everything." (HASC Transcript On Vienna Conference, 2 May 1999)

(See March 8, 2005 Dr. Peter Pry statement before US Senate Subcommittee on Terrorism, Technology and Homeland Security, *Foreign Views of EMP Attack*, p.4 http://kyl.senate.gov/legis_center/subdocs/030805_pry.pdf)

At the October 7, 1999 U.S. Congressional hearing, Dr. Lowell Wood, Member of the Director's Technical Staff, Lawrence Livermore National Laboratory stated:

> **Dr. Wood:** . . . My colleague Dr. Graham has said that the EMP yield of a warhead is very weakly dependent on its energy yield. That is true, but it is true in spades. Special purpose nuclear warheads, on a kiloton scale, can have much more of EMP effect than ordinary nuclear warheads on the megaton scale. **Less than ten kilotons properly employed in the type of warheads which have actually been examined, both in the Soviet Union and in the United States experimentally, warheads of less than 10-kiloton yields can put out very large EMP signals. So it is necessary to understand that it doesn't take a megaton to do an awful lot of damage. You can do an awful lot of damage in ten kilotons or less.**
> [pg. 48, **Bold added**]

ELECTROMAGNETIC PULSE THREATS TO U.S. MILITARY AND CIVILIAN INFRASTRUCTURE HEARING - US Congressional Hearing Transcript H.A.S.C.No. 106-31, P.48, Testimony by Dr. Lowell Wood, Member of the Director's Technical Staff, Lawrence Livermore National Laboratory, http://commdocs.house.gov/committees/security/has280010.000/has280010_0f.htm

At the October 7, 1999 U.S. Congressional hearing, Dr. Michael P. Bernardin, Provost for the Theoretical Institute for Thermonuclear and Nuclear Studies, Los Alamos National Laboratory stated:

ELECTROMAGNETIC PULSE THREATS TO U.S. MILITARY AND CIVILIAN INFRASTRUCTURE

HEARING BEFORE THE MILITARY RESEARCH AND DEVELOPMENT SUBCOMMITTEE OF THE COMMITTEE ON ARMED SERVICES HOUSE OF REPRESENTATIVES

ONE HUNDRED SIXTH CONGRESS
FIRST SESSION
HEARING HELD
OCTOBER 7, 1999

MILITARY RESEARCH AND DEVELOPMENT SUBCOMMITTEE

Written Statement by Dr. Michael P. Bernardin
Provost for the Theoretical Institute for Thermonuclear and Nuclear Studies
Applied Theoretical and Computational Physics Division
Los Alamos National Laboratory

EMP Environments

The EMP produced by these weapons is also a topic delegated largely to closed session. However, it is possible to discuss in an open forum the process by which high-altitude EMP is produced in the atmosphere, its propagation down to the earth's surface, and some of the generic features of the resultant EMP.

The Defense Threat Reduction Agency (DTRA), through contractors that it employs, is the principal DoD organization for EMP assessment. Los Alamos also has a capability for assessing the large-amplitude portion of the EMP, and has provided the Joint Staff with independent EMP threat assessments since 1987.

The production and characterization of EMP is a highly technical subject. To assist the discussion of this subject, I have brought some graphics for illustration. Graphic 1 illustrates the area coverage of direct EMP exposure from a 200-km height of burst over the United States. The area coverage varies with the height of burst. For a 200-km height of burst, which might be appropriate for a hypothetical multi-Mt weapon, the horizon is located at about 1600 km (or 1000 miles) from the point on the ground directly beneath the burst. For a 50-km height of burst, which might be appropriate for a 10-kt fission weapon, the horizon is located at about 800 km from the ground point beneath the burst.

. . .

Conclusions

The conclusions to be drawn are dependent on the validity of the EMP environments imposed on military and commercial systems of interest. These are to be examined in closed session. It is clear that EMP is a real effect and that damage is virtually certain.

To establish that the problem is well understood, one must begin with a model of, say, Starfish, and demonstrate that the predicted EMP environments, EMP coupling, and effects match observation. Then, one must be able to establish that

> the model retains its fidelity when the warhead model is changed, when the burst location is moved over land and changed in elevation, when the electromagnetic coupling paths change, when the vintage of electronics changes, and with the incorporation of EMP test simulator data, that the results are reliable. While it is conceivable for a model to achieve all of this, any such model should be peer-reviewed by a high-level review group (e.g., National Academy of Science or Defense Science Board) before predictions of catastrophic damage are to be believed.

10/7/99 US Congressional Hearing Transcript, Testimony by Dr. Michael P. Bernardin, http://www.fas.org/spp/starwars/congress/1999_h/99-10-07bernardin.htm, http://www.fas.org/spp/starwars/congress/1999_h/has280010_0.htm

In June 2000, from Dr. Pry's 2005 U.S. House Testimony:

ML Acronym Notes:

- PLA means People's Liberation Army (Red Chinese Army)

> A Japanese article in a scholarly journal, citing senior political and military officials, appear to regard EMP attack as a legitimate use of nuclear weapons:
>
> . . .
>
> > If they [nuclear EMP bombs] were detonated in the sky in the vicinity of Ilan, the effects would also extend to the waters near Yanakuni, so it would be necessary for Japan, too, to take care. Those in Taiwan, having lost their advanced technology capabilities, would end up fighting with tactics and technology going back to the 19th century. They would inevitably be at a disadvantage with the PLA and its overwhelming military force superiority." (Su Tzu-yun, Jadi, 1 June 2000) [ ] added for clarity

(pg. 6-7 Hearing before Subcommittee on Terrorism, Technology and Homeland Security of the Committee on the Judiciary U.S. Senate, March 8, 2005 ("Dr. Pry's 3/8/05 Testimony")
http://www.gpo.gov/fdsys/pkg/CHRG-109shrg21324/pdf/CHRG-109shrg21324.pdf)

In 2005 US House testimony, Dr. Pry stated:

> Iran, though not yet a nuclear weapon state, has produced some analysis weighing the use of nuclear weapons to destroy cities, as "against Japan in World War II," compared to "information warfare" that includes "electromagnetic pulse...for the destruction of unprotected circuits." An Iranian analyst describes "terrorist information warfare" as involving not just computer viruses but attacks using "electromagnetic pulse (EMP)." (Tehran, **Siyasat-e Defa-I**, 1 March 2001)

(See March 8, 2005 Dr. Peter Pry statement before US Senate Subcommittee on Terrorism, Technology and Homeland Security, *Foreign Views of EMP Attack*, p.4 http://kyl.senate.gov/legis_center/subdocs/030805_pry.pdf)

In March 2001, from Dr. Pry's 2005 U.S. House Testimony:

> An Iranian analyst describes terrorist information warfare as involving not just computer viruses, but attacks against using electromagnetic pulse. (Tehran, Siyasat-e Defa-I, 1 March 2001)
>
> (pg. 8, Dr. Pry's 3/8/05 Testimony, http://www.gpo.gov/fdsys/pkg/CHRG-109shrg21324/pdf/CHRG-109shrg21324.pdf)

The *NGIC Assessment* states that, in 2001, "these same researchers published the results . . .":

(U) Exposure Levels

(S//NF) Exposures ranged up to 16 W/cm^2 (HPM) and 60 kV/m (EMP) for whole body single-pulse irradiation with 20 ns rise-time and 30 µs duration. (This rise-time is too slow and the duration is too short for a real nuclear EMP, but these parameters may be as close as these researchers could come to simulating a real EMP.) These levels of exposure could only have resulted from close-range irradiation with powerful radiation sources. b1 b1 From the nature of the reported organ injuries, it is likely that the frequencies for these sources ranged from the tens of MHz to the low GHz range (EMP falls primarily in the lower range while HPM occupies the upper range). This sensitivity is a recent phenomenon because these same researchers published the results of related experiments in 2001 in which full details of sources and radiation parameters were provided. An EMP simulator developed jointly by the Academy of Military Medical Sciences and the National University of Defense Technology was the source for the 2001 publication b1

NGIC Assessment, 8/17/05, Page 2
http://media.washtimes.com/media/misc/2011/07/22/ngic-emp.pdf

The *NGIC Assessment* states that, in 2004, "a single, specially-designed low-yield . . . may not necessarily evoke a large nuclear retaliatory. . .":

(U) In 2001, the U.S. Congress commissioned a study of the U.S. vulnerability to an HEMP attack. In 2004, a threat assessment and a final commission report were released. Quoting from the threat assessment:

> (U) "The threat of an attack against the United States involving EMP is hard to assess, but some observers indicate that it is growing along with worldwide access to newer technologies and the proliferation of nuclear weapons. In the past, the threat of mutually assured destruction provided a lasting deterrent against the exchange of multiple high-yield nuclear warheads. However, now a single, specially-designed low-yield nuclear explosion high above the United States, or over a battlefield, can produce an EMP effect that results in a widespread loss of electronics, but no direct fatalities, and may not necessarily evoke a large nuclear retaliatory strike by the U.S. military."

NGIC Assessment, 8/17/05, Page 5
http://media.washtimes.com/media/misc/2011/07/22/ngic-emp.pdf

The *NGIC Assessment* states that, in 2005, "all three briefings made it clear that the real purpose was to investigate potential human. . .":

~~SECRET//NOFORN//MR~~

(U) Chinese medical researchers presented three briefings at the Asia-Pacific Electromagnetic Fields, Research, Health Effects, and Standards Harmonization Conference in Bangkok, Thailand (26 to 30 January 2004), on the bio-effects of intense HPM and EMP radiation. Although the data presented related only to animal experiments (mice, rats, rabbits, dogs, and monkeys), all three briefings made it clear that the real purpose was to investigate potential human effects of exposure to these specific radiations. One briefing, "Effects and Mechanisms of EMF and HPM on Optical Systems in Monkey, Dog, and Rabbit," dealt mostly with eye injury. "Bio-effects of S-Frequency High Power Microwave Exposure on Rat Hippocampus" dealt mostly with brain injury. The third and final briefing, "The Species Specificity and Sensitive Target Organs of Injury Induced by Electromagnetic Radiation (BIO-EFFECTS OF EMP AND HPM)," dealt with species-related injury thresholds for all affected organs. Dose-effects relationships were established in all three studies. Abstracts for these presentations are available on the Internet.[b] Members of the research team are affiliated with the Institute of Radiation Medicine of the Academy of Military Medical Sciences, Beijing. A senior member of the team is involved in organizing The Fourth International Seminar on Electromagnetic Fields and Biological Effects, scheduled to be held in Kunming, China, 12 to 16 September 2005.

NGIC Assessment, 8/17/05, Page 2
http://media.washtimes.com/media/misc/2011/07/22/ngic-emp.pdf

From 2000-2005, former CIA expert Dr. Pry stated, in 2005 US House testimony:

> Russian and Chinese military scientists in open source writings describe the basic principles of nuclear weapons designed specifically to generate an enhanced EMP effect that they term super- EMP weapons. Super-EMP weapons, according to these foreign open source writings, can destroy even the best protected U.S. military and civilian electronic systems.
>
> (pg. 7, Dr. Pry's 3/8/05 Testimony, http://www.gpo.gov/fdsys/pkg/CHRG-109shrg21324/pdf/CHRG-109shrg21324.pdf)

In March 8, 2005, Dr. Lowell Wood as acting Chairman of the Commission to Assess the Threat to the US from Electromagnetic Pulse Attack stated, in 2005 US Senate testimony:

> Single detonations of certain types of relatively low-yield nuclear weapons can be employed to generate potentially catastrophic EMP effects over wide geographic areas, and designs for variants of such weapons may have been illicitly trafficked for a quarter-century.
>
> China and Russia have considered limited nuclear attack options that, unlike their Cold War plans, employ EMP as the primary or sole means of attack. Indeed, as recently as May 1999, during the NATO bombing of the former Yugoslavia, high-ranking members of the Russian Duma, meeting with a U.S. Congressional delegation to discuss the ongoing Balkans Conflict, raised the specter of a Russian EMP attack that would paralyze the United States. Open-source Chinese military writings have described, in the event of a conflict over Taiwan, using EMP as a means of defeating the U.S. (pg. 3)

[Opening Statement of Opening Statement by Dr. Lowell Wood, Commission to Assess the Threat to the US from Electromagnetic Pulse Attack , US Senate Committee on the Judiciary,
http://www.kyl.senate.gov/legis_center/subdocs/030805_wood.pdf]

In November 2005 (before N. Korea's 2006 and 2009 nuclear tests), Major Colin R. Miller, in the US Air Force published an open-source analysis "*Electromagnetic Pulse Threats in 2010*" for the Center for Strategy and Technology of United States Air War College (http://www.au.af.mil/au/awc/awcgate/cst/bugs_ch12.pdf) ("*EMP 2010 Threats*")

In his Air War College 2005 thesis, Col. Miller directly raised the threat of a North Korean asymmetrical offensive EMP *Fizzlekrieg* nuclear bomb attack on South Korea and US military forces, entitled "Scenario #2: North Korea Levels the Playing Field." *EMP 2010 Threats* (Col. Miller is now the current Commander of the 46th Test Wing, Eglin Air Force Base, Fla.).

Center for Strategy and Technology
Air War College, Air University

325 Chennault Circle
Maxwell AFB Alabama 36112-6427

In the November 2005 Report, *Electromagnetic Pulse Threats in 2010*, Col. Miller, stated that:

> While it is extremely difficult to calculate the minimum field strength required to induce signals of this magnitude for all cases and systems, testing has shown that pulses of 10 kV/m are sufficient to cause widespread damage.[11] Ten kV/m could induce electrical charges a billion times more powerful than systems were designed for, not just burning them out, but in some cases melting critical components.[12] **As a result, unhardened computers used in data processing systems, communications systems, displays, industrial controls, military systems (including signal processors and electronic engine and flight control systems), telecommunications equipment, radar, satellites, UHF, VHF, HF, and television equipment are all vulnerable to the EMP at and above this level.**[13] (pg. 388)
>
> . . .

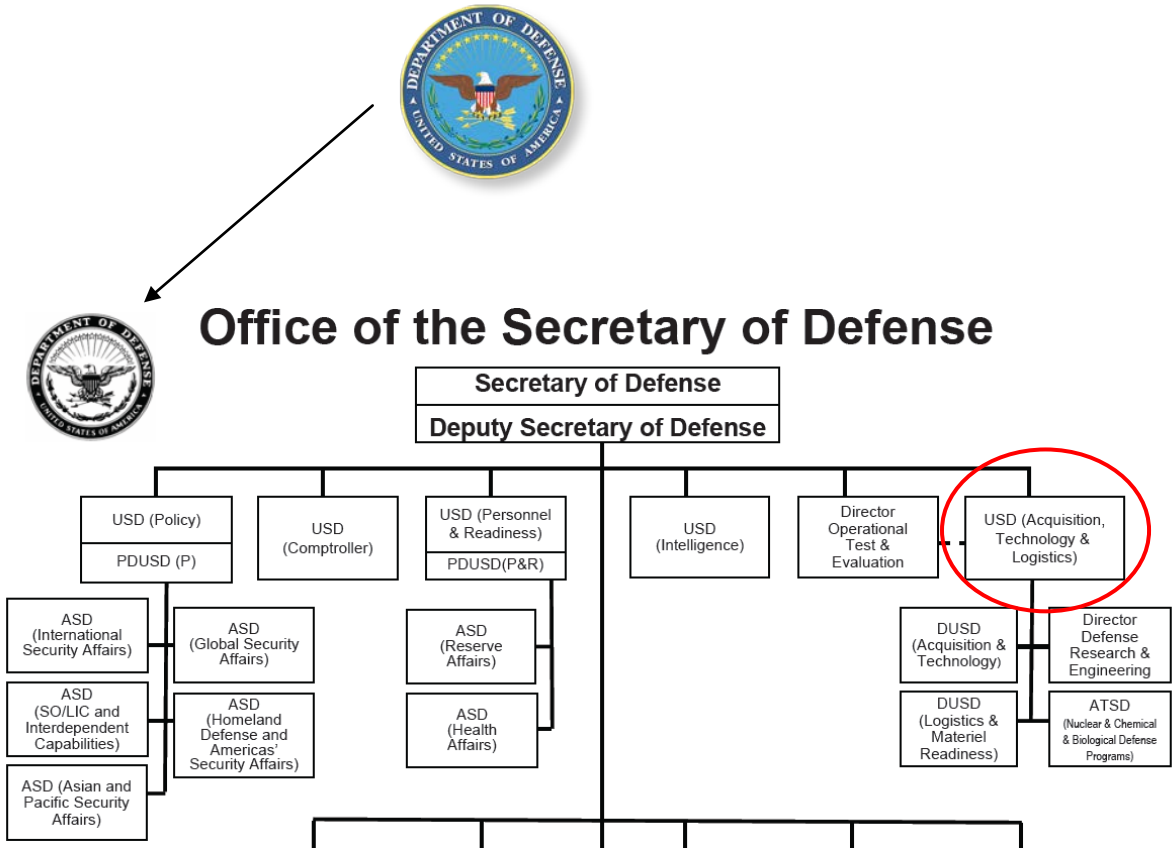
Even a small, relatively crude nuclear device detonated above the Korean peninsula would generate an EMP with field strength well above 10 kV/m, ensuring wholesale destruction of unprotected electronic systems.[53] **The first-order effect** on coalition forces would be a command, control, and communications (C3) blackout. The EMP would permanently destroy most computers and displays at the joint task force headquarters and combined air operations center and would wipe clean critical magnetically stored data. Radio, satellite, and cell phone communications would be permanently shut down, as well as wireline telephone systems relying on microprocessor control.[54]

The second order effect would be damage or destruction of major combat systems. Fielded forces would probably realize that something bad was happening but would have no way to access information and command systems to develop situational awareness and execute a response. The EMP would severely degrade the South Korean air defense system, if it did not destroy it all together. It would also immobilize unprotected vehicles (commercial and military) due to failures in electronic ignition systems and/or computerized engine controls. State-of-the-art aircraft such as the F-16, F-117, and F/A-22 would crash due to failure of fly-by-wire flight control systems and full-authority digital engine controls, and those on the ground would be inoperative. The EMP would also affect ships at sea, destroying or debilitating critical early warning radars as well as self-protection and offensive combat systems.

Third order effects would impact every soldier, sailor, airman, and Marine. This deadly shock to the network-centric and digitally magnified Western combat force would give North Korea a massive advantage for at least three reasons. First, North Korea would have achieved both tactical surprise and information dominance. Second, North Korean forces would likely be less reliant on modern electronics for success, allowing them to withstand the EMP. Third, having foreknowledge of the attack, North Korea would be able to ensure their critical electronic systems were protected via sheltering, shielding, and positioning of the nuclear detonation. (pg. 397-398)
[Bold added]

(November 2005 Report, *Electromagnetic Pulse Threats in 2010*, http://www.au.af.mil/au/awc/awcgate/cst/bugs_ch12.pdf)

In April 2005, the U.S. Office of the Under Secretary of Defense for Acquisition, Technology, and Logistics put out a Report of the Defense Science Board Task Force on *Nuclear Weapon Effects Test, Evaluation, and Simulation*, (http://www.fas.org/irp/agency/dod/dsb/nweffects.pdf) which stated:



http://www.defense.gov/pubs/pdfs/2010_CMPR_Final.pdf

Office of the Under Secretary of Defense for Acquisition, Technology, and Logistics (OUSD(AT&L)) http://www.acq.osd.mil/

Non-Strategic Exchanges

Many nuclear nations, including major players and aspirants, particularly those with limitations in their conventional forces, view nuclear weapons as an equalizer to overwhelming conventional superiority. Public statements, military writing and field exercises in Russia, for example, underscore the operational value of nuclear weapons to the Russian military in a range of non-strategic conflicts. In fact,

"…nuclear weapons are now the main and a relatively cheap means of deterrence, and during an emergency period the main weapon for conducting combat operations to ensure the territorial integrity of Russia and it allies."[13]

The potential exists for the U.S. to be drawn into such a conflict in which its troops and systems would be exposed to a nuclear environment including both ionizing and electromagnetic radiation. Within this context, U.S. forces would be particularly vulnerable at times when forces are massed, e.g., a Navy Carrier Battle Group, a deployed Air Force Wing of aircraft, and/or Army or Marine divisions during debarkation and forward-movement operations. Adversaries would seek to gain significantly in terms of anti-access and overall asymmetric advantage. (pg. 12-13)

13 Moscow Nezavisimoye Voyennoye Obozreniye, 2004 (weekly independent military newspaper published by boris Berezovskiy- financed Nezavisimaya Gaeseta).

. . .

High-Altitude EMP Attacks

An intense pulse of electromagnetic energy is produced (as is an enhanced space-radiation environment) when a nuclear weapon is detonated above approximately 40 km altitude. The scope of this phenomena and its potential use by a number of nuclear players, as well as its consequences for electronics systems were the subject of a Congressional Commission that recently finished a two-year effort to characterize this effect and its implications, particularly on the U.S. infrastructure. Refer to the Commission's report,[18] which is partially quoted below:

. . .

China and Russia have also considered limited nuclear attack options that, unlike their Cold War plan, employ EMP as the

primary or sole means of attack. Indeed, as recently as May 1999, during the NATO bombing of the former Yugoslavia, high-ranking members of the Russian Duma, meeting with a U.S. congressional delegation to discuss the Balkans conflict, raised the specter of a Russian EMP attack that would paralyze the United States. This emphasis on non-strategic use of nuclear weapons is in addition to the more traditional strategic employments, which, although reduced in priority, have certainly not been eradicated.

This type of detonation is likely to damage key weapon systems and support capabilities, including satellite navigation systems, intelligence and targeting systems, and many other militarily significant platforms. Battlefield impacts will be significant, particularly if our small, technically superior but electronically dependent force is transformed into a small, impaired and vulnerable force." (pg. 15-16)

[18] *Report of the Commission to Assess the Threat to the United States from Electromagnetic Pulse (EMP) Attack*, Volume 1: Executive Summary, July 22, 2004

. . .

Both acquisition policy and strategy during the past decade have encouraged commercial best practices as the key principle of evolutionary acquisition. This has lead to a proliferation of commercial-of-the-shelf (COTS) technology mixed with non-COTS technologies in military systems. Little to no attention has been given to performance of these systems in nuclear environments.

Moreover, the digital electronics industry, particularly the telecommunication industry, has revolutionized the way the world lives. Most classes of emerging digital technologies are being designed to respond to increasingly lower signal levels. These trends result in greater challenges for the radiation hardening community in attempting to assure the nuclear survivability of such sensitive components.

Finally, and as a counterpoint to the above issue, a significant number of in-place military systems are decades old. **Little is known about the way hardened technologies, systems, and protocols change with age, both with and without an aggressive hardness assurance program.**

Moreover, the past decade or more has seen erosion in attention to these programs in general. (pg. 16-17)

. . .

3.4 Nuclear Survivability for In-Place Forces

From 1990 to the present, widespread avoidance of nuclear survivability issues put many in-place systems and platforms in high-risk (possibly vulnerable) categories.

Some, fielded with hardened components, are in question because of little or no surveillance and/or testing. Others were simply built and fielded with COTS-based electronics in an era of inattention or lack of concern about hardening requirements.

Added to the current situation is a low-level of understanding of the impact on operations of unhardened platforms and supporting systems. Wargames and exercises do not routinely include the use of a nuclear weapon such that operational workarounds and/or mitigation actions are not being developed in parallel with conventional concepts of operation.

Consider the example of an adversary EMP attack. Any potential for U.S. units in a large geographical area to experience significantly degraded electronics would be unacceptable. A series of questions puts the issue in perspective. What would be the impact on a U.S. Marine Corps (USMC) or an Army division debarking at a Middle Eastern or Korean port and/or airfield (C2, computer-driven equipment, weapons systems, etc.)? What impacts would a carrier battle group (weapons platforms, avionics, ship systems, etc.) experience in the Straits of Taiwan? What vulnerabilities does a forward-deployed Air Force wing have with regard to EMP (platforms, C2, avionics, ground and test equipment, etc.)? **The crucial issue here is that commanders and planners cannot be assured that current weapons platforms, C2, ISR and associated support systems will be available should a nuclear detonation occur. We simply do not know!** (pg. 25-26)

. . .

Under current DoD procurement philosophy, nuclear hardening is part of the trade space allowed to the program

> office (as discussed in Chapter 3, Section 3.3). Nuclear survivability or the level of nuclear survivability may be traded away to maintain program cost or schedule, even if it compromises the ability of the system to operate if there is a nuclear event. Moreover, systems are never audited to see if they will operate in a battlefield after a nuclear event. (pg. 47) [**Bold added**]

(Report of the Defense Science Board Task Force on *Nuclear Weapon Effects Test, Evaluation, and Simulation*, http://www.fas.org/irp/agency/dod/dsb/nweffects.pdf)

In October 9, 2006: North Korea first plutonium nuclear test explosion.

In 2007:

ML Acronym Notes:
- MIL-STDs means Military Standards
- US STRATCOM means U.S. Strategic Command
- DTRA means Defense Threat Reduction Agency
- HEMP means High Altitude Electromagnetic Pulse

Focus Example: Resurrecting Standards

- **MIL-STDs were largely weakened or ignored**
  - Many nuclear survivability standards now provide only general guidance:
    - *"Compliance shall be verified by system, subsystem, and equipment-level tests, analyses, or a combination thereof."*
  - In 2007, USSTRATCOM requested DTRA develop an upgraded and extended HEMP survivability standard
    - Goal was to provide quantifiable mission assurance
  - MIL-STD 3023 "HEMP Protection for Military Aircraft" provides a set core of requirements/metrics for hardening and testing aircraft to a fixed design margin
    - Contention on fixed vs. tailorable design margins

- Other standards on the way: maritime and space

ASSISTANT SECRETARY OF DEFENSE FOR NUCLEAR, CHEMICAL AND BIOLOGICAL DEFENSE PROGRAMS

(See DoD Nuclear Survivability Program report dated May 20, 2011 http://www.dtic.mil/ndia/2011CBRN/Kuspa.pdf)

On June 14, 2008, a letter to Iranian Foreign Minister, HE Manuchehr Mottaki stated that:

> LETTER FROM E3+3 FOREIGN MINISTERS AND JAVIER SOLANA TO IRANIAN FOREIGN MINISTER, DELIVERED IN TEHRAN ON 14 JUNE 2008
>
> HE Manuchehr Mottaki
> Minister of Foreign Affairs of the Islamic Republic of Iran
> Tehran
> 12 June 2008

Iran is one of the oldest civilisations in the world. Its people are justifiably proud of their history, culture and heritage. It sits at a geographical crossroads. It has vast natural resources and great economic potential, which its people should be reaping to the full.

But in recent years, Iran's relationship with the international community has been overshadowed by growing tension and mistrust, since there remains a lack of confidence in Iran's nuclear programme. We have supported the IAEA's efforts to address this with Iran but successive IAEA reports have concluded that it is not able to provide credible assurances about the absence of undeclared nuclear material and activities in Iran. Two years ago, the IAEA referred the matter to the UN Security Council, which has now passed four Resolutions calling on Iran to comply with its obligations.

We, the Foreign Ministers of China, France, Germany, Russia, the United Kingdom and the United States of America, joined in this endeavour by the European Union High Representative for the Common Foreign and Security Policy, are convinced that it is possible to change the present state of affairs. We hope that Iran's leaders share the same ambition.

[**Bold added]**

(See *Iran's Nuclear Programme: A Collection of Documents*, *Volume 2* at pg. 258, http://www.official-documents.gov.uk/document/cm74/7421/7421.pdf)

On November 6, 2008, the Washington Post reported that:

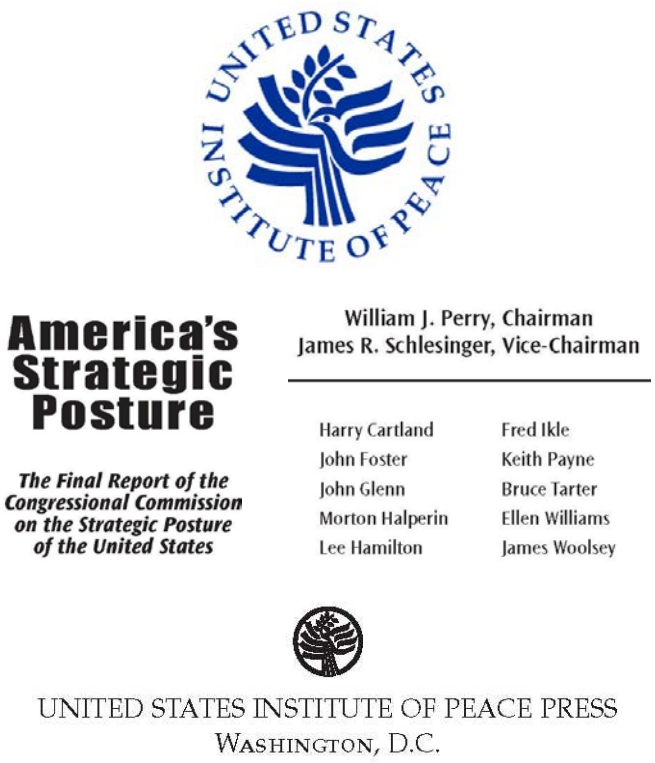
The Washington Post

Russia Gives Obama Brisk Warning

In a wide-ranging speech in which he sharply criticized the United States but also offered to repair relations with its incoming president, Medvedev accused Washington of using Russia's recent war with Georgia as an excuse to accelerate development of the missile defense system. He said he would respond by deploying Iskander missiles "to neutralize, when necessary," the U.S. shield.

> He said the missiles would be supplemented by "radioelectronic equipment" to jam the U.S. system and by naval forces, presumably missile-armed warships in the Baltic Sea. He also said he had canceled plans to dismantle three missile regiments south of Kaliningrad in the western town of Kozelsk.

(See 11/6/08 Washington Post, *Russia Gives Obama Brisk Warning*, http://www.washingtonpost.com/wp-dyn/content/article/2008/11/05/AR2008110502987.html



In May 2009, Excerpts from 'America's Strategic Posture: The Final Report of the Congressional Commission on the Strategic Posture of the United States' (2009) – Chaired by William J. Perry, Secretary of Defense for President William J. Clinton:

> … the United States has done little to reduce its vulnerability to attack with electromagnetic pulse weapons and recommend that current investments in modernizing the national power grid take account of this risk. [pg 82]

On visions of the future: The Threat from Electromagnetic Pulse Weapons

… the United States should take steps to reduce the vulnerability of the nation and the military to attacks with weapons designed to produce electromagnetic pulse (EMP) effects. We make this recommendation although the Commission is divided over how imminent a threat this is. Some commissioners believe it to be a high priority threat, given foreign activities and terrorist intentions. Others see it as a serious potential threat, given the high level of vulnerability. **Those vulnerabilities are of many kinds. U.S. power projection forces might be subjected to an EMP attack by an enemy calculating — mistakenly — that such an attack would not involve risks of U.S. nuclear retaliation.** The homeland might be attacked by terrorists or even state actors with an eye to crippling the U.S. economy and American society. From a technical perspective, it is possible that such attacks could have catastrophic consequences. For example, successful attacks could shut down the electrical system, disable the internet and computers and the economic activity on which they depend, incapacitate transportation systems (and thus the delivery of food and other goods), etc.

Prior commissions have investigated U.S. vulnerabilities and found little activity under way to address them. Some limited defensive measures have been ordered by the Department of Defense to give some protection to important operational communications. But EMP vulnerabilities have not yet been addressed effectively by the Department of Homeland Security. Doing so could take several years. The EMP commission has recommended numerous measures that would mitigate the damage that might be wrought by an EMP attack. The Stimulus Bill of February 9, 2009, allocates $11 billion to DOE for "for smart grid activities, including to modernize the electric grid." Unless such improvements in the electric grid are focused in part on reducing EMP vulnerabilities, vulnerability might well increase.

Findings

…. The United States is highly vulnerable to attack with weapons designed to produce electromagnetic pulse effects.

Recommendations

…. EMP vulnerabilities should be reduced as the United States modernizes its electric power grid. [pg 90-91]

[**Bold added**]

May 2009, America's Strategic Posture - http://www.usip.org/files/America%27s_Strategic_Posture_Auth_Ed.pdf

In May 25, 2009, North Korea explodes second plutonium nuclear explosion.

On June 12, 2009, Kim Myong Chol wrote an essay published by the Asia Times entitled "Nuclear war is Kim Jong-il's game plan" that stated that:

Asia Times Online
www.atimes.com

Korea

Jun 12, 2009

Nuclear war is Kim Jong-il's game plan

By Kim Myong Chol

"Our military first policy calls for an eye for an eye, a tooth for a tooth, retaliation for retaliation, ultra-hardline for hardline, war for war, total war for total war, nuclear war for nuclear war." ***- Kim Jong-il***

Kim Myong Chol *is author of a number of books and papers in Korean, Japanese and English on North Korea, including* Kim Jong-

il's Strategy for Reunification. *He has a PhD from the Democratic People's Republic of Korea's Academy of Social Sciences and is often called an "unofficial" spokesman of Kim Jong-il and North Korea.*

. . .

Four types of hydrogen bomb raids

The game plan for nuclear war specifies four types of thermonuclear assault: (1) the bombing of operating nuclear power stations; (2) detonations of a hydrogen bombs in seas off the US, Japan and South Korea; (3) detonations of H-bombs in space far above their heartlands; and (4) thermonuclear attacks on their urban centers.

. . .

The third possible attack, a high-altitude detonation of hydrogen bombs that would create a powerful electromagnetic pulse (EMP), would disrupt the communications and electrical infrastructure of the US, the whole of Japan, and South Korea.

Many of the essential systems needed to survive war would be knocked out, as computers are instantly rendered malfunctioning or unusable. Military and communications systems such as radars, antennas, and missiles, government offices, would be put out of use, as would energy sources such as nuclear power stations and transport and communications systems including airports, airplanes, railways, cars and cell phones.

Ironically the ubiquity of high-tech computing gadgets in the US, Japan and South Korea has made them most vulnerable to EMP attacks.

(See 6/12/09 Asia Times, *Nuclear war is Kim Jong-il's game plan*, http://www.atimes.com/atimes/Korea/KF12Dg01.html)

North Korea's Nuclear Weapons: Technical Issues

Mary Beth Nikitin
Analyst in Nonproliferation

December 16, 2009

On December 16, 2009, in a CRS Report for Congress, Mary Beth Nikitin, Analyst in Nonproliferation stated, in a report that:

In all, estimates of North Korea's separated plutonium range between 30 and 50 kg, with an approximate 5 to 6 kg of this figure having been used for the October 2006 test and an additional amount probably used in the May 2009 test. [17] This amounts to enough plutonium for approximately five to eight nuclear weapons, assuming 6 kg per weapon. Taking the nuclear tests into account, North Korean could possess plutonium for four to seven nuclear weapons. A 2007 unclassified intelligence report to Congress says that "prior to the test North Korea could have produced up to 50 kg of plutonium, enough for at least a half dozen nuclear weapons" and points out that additional plutonium is in the fuel of the Yongbyon reactor.[18] North Korea claimed to have reprocessed that fuel in the summer of 2009 (see below). (pg. 4, footnotes omitted)

. . .

The October 9, 2006, Nuclear Test[50]

The U.S. Director of National Intelligence confirmed that North Korea conducted an underground nuclear explosion on October 9, 2006, in the vicinity of P'unggye.[51] However, the sub-kiloton yield of the test suggests that the weapon design or manufacturing process likely needs improvement.[52] North Korea reportedly told China before the test that it expected a yield of 4 kilotons (KT), but seismic data confirmed that the yield was less than 1 KT.53 Radioactive debris indicates that the explosion was a nuclear test, and that a plutonium device was used.[54] It is widely believed that the warhead design was an implosion device.[55] Uncertainties remain about when the plutonium used for the test was produced and how much plutonium was in the device, although a prominent U.S. nuclear scientist has estimated that North Korea likely used approximately 6 kg of plutonium for the test.[56]

The test's low yield may not have been a failure. Another possibility is that the test's low yield was intentional—a sophisticated device designed for a Nodong medium range missile. Alternatively, a low yield could have been intended to avoid radioactive leakage from the test site or to limit the amount of plutonium used.[57] (pg. 10, footnotes omitted)
[Bold added]

(See 12/16/09 CRS Report for Congress, *North Korea's Nuclear Weapons: Technical Issues*, http://www.fas.org/sgp/crs/nuke/RL34256.pdf)


ANNUAL REPORT TO CONGRESS

Military and Security Developments
Involving the People's Republic of China
2010

Office of the Secretary of Defense

In 2010, Office of the Under Sectary of Defense of US Department of Defense (DoD) issued a report that stated:

> Beijing has consistently asserted that it adheres to a "no first use" (NFU) policy, stating it would use nuclear forces only in response to a nuclear strike against China. China's NFU pledge consists of two parts—China will never use nuclear weapons first against any nuclear weapon state and China will never use or threaten to use nuclear weapons against any non-nuclear-weapon state or nuclear-weapon-free zone. **However, there is some ambiguity over the conditions under which China's NFU policy would or would not apply, including for example, whether strikes on what China considers its own territory, demonstration strikes, or high altitude bursts would constitute a first use. Moreover, some PLA officers have written publicly of the need to spell out conditions under which China might need to use nuclear weapons—for example, if an enemy's conventional attack threatened the survival of China's nuclear force, or of the regime itself.** However, there has been no indication that national leaders are willing to attach such nuances and caveats to China's "no first use" doctrine. (pg. 34-35, **Bold added**)

(See *Annual Report of Congress, Military and Security Developments Involving the People's Republic of China 2010*, http://www.defense.gov/pubs/pdfs/2010_CMPR_Final.pdf)

> The Naval Sea Systems Command (NAVSEA) Force Electromagnetic Effects and Spectrum Management Office revived the program – dormant for over a decade – on October 2008 to focus on four core elements: testing, assessment, guidance and surveys/standards.

NAVSEA "Navy EMP Experts Develop New Strategies to Protect Fleet Electronic Systems" http://www.navsea.navy.mil/nswc/dahlgren/NEWS/EMP/EMP.aspx

On March 27, 2010, it was reported that the US Navy first announced it was first reconstituting in 2008 a study group to analyze the US Navy's EMP weaknesses after it had been disbanded a decade earlier. At the event, Blaise Corbett, the Naval Surface Warfare Center (NSWC) Dahlgren *EMP* Assessment Group Leader in a NavSeal announcement stated:

> "The consequences of failing to take appropriate precautions to protect fleet mission-critical systems can ultimately prove catastrophic to the Navy's mission."

(See NavyTimes article dated 3/27/10 *Electromagnetic pulse threat to be analyzed*, http://www.navytimes.com/news/2010/03/navy_emp_032710w/)

In 2010, Yousaf M. Butt wrote an essay entitled "The EMP Threat: Fact, Fiction, and Response":

> Dr. Butt:
> *...the "sweet spot" for maximizing the EMP lethality of such weapons would be a detonation altitude of about 40 kilometers--significantly higher, or lower, and the peak fields at ground level will*

decrease....For 40 kilometers altitude, the maximum extent of the induced EMP E1-fields is within a 725 kilometer radius.

(See "*Rebuttal to Yousaf M. Butt's "The EMP Threat: Fact, Fiction, and Response*" by Dr. Willaim Radasky and Dr. Peter Vincent Pry http://www.survive-emp.com/fileadmin/White-Papers/EMP-Resources/articlebuttrebuttal.pdf)

On March 30, 2010, the Korea Herald issued an article stating:

The Korea Herald
The Nation's No.1 English Newspaper

Seoul to enhance defense against nuclear attacks

South Korea plans to build up defenses by 2014 against nuclear electromagnetic pulse attacks that could devastate power grids and electronic systems.

. . .

The ministry announced a 178 trillion won ($141 billion) mid-term defense plan for 2010-14, aimed to bolster response to North Korean nuclear and missile threats.

The military will spend about 100 billion won to ready measures to shield strategic assets from a possible EMP strike from North Korea. About 6 billion won has been earmarked to fund the project design in next year`s budget.

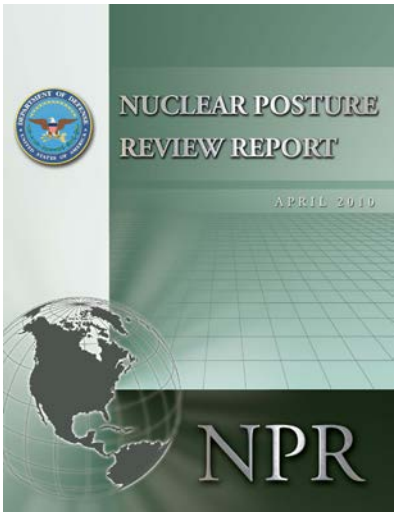
An EMP is unleashed from a nuclear blast and disrupts electric and electronic devices.

A nuclear weapon with a yield of 30 kilotons detonated 100 kilometers above the Earth`s surface could have devastating effects on up to 70 percent of electrical systems up to 1600 kilometers in every direction, according to a 2007 report by an Alaska emergency response commission.

South Korea, one of the world`s most wired countries, is seen as especially vulnerable to such a threat, which a U.S. report said could instantly regress a country dependent on 21st century technology by more than 100 years.

(See 3/30/10, The Korea Herald, *Seoul to enhance defense against nuclear attacks*, http://www.koreaherald.com/national/Detail.jsp?newsMLId=20090704000014)

The US April 6, 2010 *Nuclear Posture Review Report* states:



Nuclear Posture Review
Report

April 2010

SECRETARY OF DEFENSE
1000 DEFENSE PENTAGON
WASHINGTON, DC 20301-1000

REDUCING THE ROLE OF U.S. NUCLEAR WEAPONS

. . .

Second, U.S., allied, and partner conventional military capabilities now provide a wide range of effective conventional response options to deter and if necessary defeat conventional threats from regional actors. Major improvements in missile defenses and counter-weapons of mass destruction (WMD) capabilities have strengthened deterrence and defense against CBW attack.

Given these developments, the role of U.S. nuclear weapons to deter and respond to non-nuclear attacks—conventional, biological, or chemical—has declined significantly. The United States will continue to reduce the role of nuclear weapons in deterring non nuclear attack.

To that end, the United States is now prepared to strengthen its long-standing "negative security assurance" by declaring that the United States will not use or threaten to use

nuclear weapons against non-nuclear weapons states that are party to the Nuclear Non-Proliferation Treaty (NPT) and in compliance with their nuclear non-proliferation obligations.

This revised assurance is intended to underscore the security benefits of adhering to and fully complying with the NPT and persuade non-nuclear weapon states party to the Treaty to work with the United States and other interested parties to adopt effective measures to strengthen the non-proliferation regime.

In making this strengthened assurance, the United States affirms that any state eligible for the assurance that uses CBW against the United States or its allies and partners would face the prospect of a devastating conventional military response—and that any individuals responsible for the attack, whether national leaders or military commanders, would be held fully accountable. Given the catastrophic potential of biological weapons and the rapid pace of bio-technology development, the United States reserves the right to make any adjustment in the assurance that may be warranted by the evolution and proliferation of the biological weapons threat and U.S. capacities to counter that threat.

In the case of countries not covered by this assurance – states that possess nuclear weapons and states not in compliance with their nuclear non-proliferation obligations – there remains a narrow range of contingencies in which U.S. nuclear weapons may still play a role in deterring a conventional or CBW attack against the United States or its allies and partners. The United States is therefore not prepared at the present time to adopt a universal policy that the "sole purpose" of U.S. nuclear weapons is to deter nuclear attack on the United States and our allies and partners, but will work to establish conditions under which such a policy could be safely adopted.

Yet this does not mean that our willingness to use nuclear weapons against countries not covered by the new assurance has in any way increased. Indeed, the United States wishes to stress that it would only consider the use of nuclear weapons in extreme circumstances to defend the vital interests of the United States or its allies and partners.

. . .

In summary, the following principles will guide U.S. nuclear policies:

. . .

- **The United States will not use or threaten to use nuclear weapons against non-nuclear weapons states that are party to the NPT and in compliance with their nuclear nonproliferation obligations.**

[pg. 15-17, **Bold added**]

(See April 6, 2010 US *Nuclear Posture Review Report*, http://www.defense.gov/npr/docs/2010%20Nuclear%20Posture%20Review%20Report.pdf)

On April 8, 2010 the preamble of the U.S. START Treaty stated:

TREATY BETWEEN THE UNITED STATES OF AMERICA AND THE RUSSIAN FEDERATION ON MEASURES FOR THE FURTHER REDUCTION AND LIMITATION OF STRATEGIC OFFENSIVE ARMS

Believing that global challenges and threats require new approaches to interaction across the whole range of their strategic relations,

Working therefore to forge a new strategic relationship based on mutual trust, openness, predictability, and cooperation,

Desiring to bring their respective nuclear postures into alignment with this new relationship, and endeavoring to reduce further the role and importance of nuclear weapons. (pg. 1)
[Bold added]

4/8/10 - US START Treaty, http://www.state.gov/documents/organization/140035.pdf

In the Official US Transcript translated and issued by the White House on April 8, 2010, President Medvedev of the Russian Federation stated:

Remarks by President Obama and President Medvedev of Russia at New START Treaty Signing Ceremony and Press Conference dated 4/8/10, as translated by the United States

President Medvedev: (In Russian, then translation begins) -- on that basis we will implement the newly signed treaty. It matters to us what will happen to missile defense. It is related to

the configuration of our potential and our capacities, and we will watch how these processes develop. **And the preamble has a language that, to a certain extent, replicates a legal principle of the unchangeability of circumstances that were basis for the treaty**. But this is a flexible process, and we are interested in close cooperation over it with our American partners.

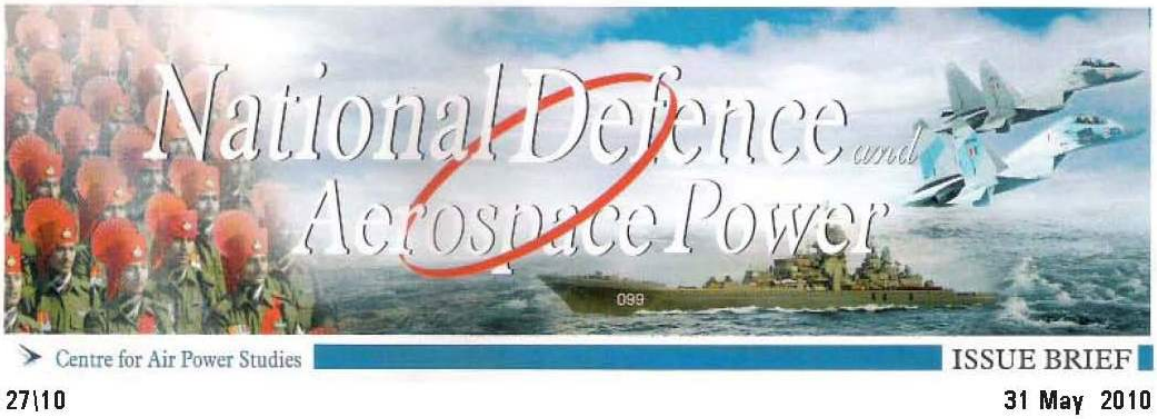
We have appreciated the steps by the current U.S. administration in terms of the decisions in the area of anti-missile defense of the present administration, and this has led to progress. It doesn't mean that we'll have no digressions in understanding, but it means that we'll have will and wish to address these issues.

We offered to the United States that we help them establish a global anti-missile defense system, and we should think about this, given the vulnerability of our world, the terrorist challenges and the possibility of using nuclear arms by terrorists existing in this world.

And I am an optimist, as well as my American colleague, and I believe that we will be able to reach compromise on these issues. [**Bold added**]

http://www.whitehouse.gov/the-press-office/remarks-president-obama-and-president-medvedev-russia-new-start-treaty-signing-cere

On May 31, 2010, The Centre for Air Power Studies Issued a report, *EMP: The next weapon of electronic mass destruction are we prepared?*, which stated:



EMP: THE NEXT WEAPON OF ELECTRONIC MASS DESTRUCTION ARE WE PREPARED?

Aditi Malhotra
Research Assistant, Centre for Land Warfare Studies (CLAWS), New Delhi

Interestingly, military networking in India would employ fibre optic cables which are not susceptible to EMP. But it is important to note that switches and controls that depend on microelectronics combined with fibre optic cables would remain defenceless.

[10] Dr. Ullrich "Threats Posed by Electromagnetic Pulse to U.S. Military Systems and Civilian Infrastructure", p. 23 at, http://commdocs.house.gov/committees/security/has197010.000/has197010_1.HTM#18

(See Centre for Air Power Studies, May 31, 2010 Issue Brief "EMP The next weapon of electronic mass destruction are we prepared?" http://www.aerospaceindia.org/Issue%20Briefs/2010/31%20May%202010%20-%20EMP%20THE%20NEXT%20WEAPON%20OF%20ELECTRONIC%20MASS%20DESTRUCTION.pdf)

On Nov. 20, 2010, DailyMail Online issued an article stating:

American scientist Siegfried Hecker said he had been shown 'more than 1,000 centrifuges' for enriching uranium, which can be used for making nuclear weapons, at the Yongbyon plant last week.

Construction at the North Korea's Yongbyon Nuclear complex in North Korea earlier this month

Dr Hecker, a former director of the U.S. Los Alamos Nuclear Laboratory, is regularly given glimpses of North Korea's secretive nuclear programme.

He described his first glimpse of the new centrifuges as 'stunning'.

. . .

The North told Hecker it began construction on the centrifuges in April 2009 and finished only a few days before the scientist's November 12 visit.

'Instead of seeing a few small cascades of centrifuges, which I believed to exist in North Korea, we saw a modern, clean centrifuge plant of more than a thousand centrifuges, all neatly aligned and plumbed below us,' Hecker, a Stanford University professor, wrote.

Hecker described the control room as 'astonishingly modern,' writing that, unlike other North Korean facilities, it 'would fit into any modern American processing facility.'

. . .

The facilities appeared to be primarily for civilian nuclear power, not for North Korea's nuclear arsenal, Hecker said.

He saw no evidence of continued plutonium production at Yongbyon. But the uranium enrichment facilities 'could be readily converted to produce highly enriched uranium bomb fuel', he added.

Uranium enrichment would give the North a second way to make atomic bombs, in addition to its known plutonium-based programme.

. . .

Uranium-based bombs may also work without requiring test explosions like the two carried out by North Korea in 2006 and 2009 for plutonium-based weapons.

Hecker said the North Koreans emphasized that the centrifuge facility was operating; although he couldn't verify that statement, he said 'it was not inconsistent with what we saw.'

'The only hope' for dealing with the North's nuclear programme 'appears to be engagement,' he wrote, calling a military attack 'out of the question' and more sanctions 'likewise a dead end.' [**Bold added**]

(See 11/20/10, DailyMail Online, *North Korea shows off its 'stunning new nuclear plant' to American scientist,* http://www.dailymail.co.uk/news/article-1331735/North-Korea-shows-stunning-new-nuclear-plant-American-scientist.html)

On Nov. 21, 2010, Sky News Online issued an article stating:

> In both 2006 and 2009, Pyongyong tested plutonium-based weapons and experts have determined the country has enough of the element to produce at least six bombs.
>
> The discovery of the new uranium enrichment plant has also prompted fears the state may look to bolster its atomic arsenal.

(See 11/21/10, Sky News Online, *North Korea's 'Stunning' Secret Nuclear Plant,* http://news.sky.com/home/world-news/article/15820911)

On Dec. 7, 2010, Christian Science Monitor issued an article stating:

The Christian Science Monitor

> Heydari said that from 2002 to 2007, when he headed the Iranian Foreign Ministry's office for airports, he saw many technicians from North Korea travel to Iran.
>
> **"I witnessed repeated roundtrips of North Korean specialists and technicians — given that I was right there at the border — who came to collaborate on the Iranian nuclear program," he said through a translator.**
>
> Heydari said their visits were handled "in a very discreet way, so they could come through unnoticed."
>
> Heydari said he also had contacts then with officials from Iran's Revolutionary Guards, and "it was clearly said that Iran was concentrating on two objectives ... the first was to build the range of surface-to-surface missiles, the second was to get a nuclear weapon with North Korea's help."
>
> [**Bold added**]

(See 12/7/10, Christian Science Monitor, *North Korea and Iran cooperated on nuclear weapon development: Defector*, http://www.csmonitor.com/USA/Latest-News-Wires/2010/1207/North-Korea-and-Iran-cooperated-on-nuclear-weapon-development-Defector)

Further, in 2011, a former CIA nuclear weapons' expert, Dr. Peter Vincent Pry, stated with regards to 2006 and 2009 North Korean nuclear tests that he had been told that "Russian scientists had gone to North Korea to work on building the super-EMP weapon," and that "The North Koreans appear to have tested it in 2006 and 2009." And, not only is North Korean/Iran nuclear weapon/ballistic missile cooperation a known fact, but Dr. William Graham, Chairman of the EMP Commission, foremost EMP expert in the World, former Science Advisor to President Reagan, and Administrator of NASA, stated in US congressional testimony that "Iranian military writings explicitly discuss a nuclear EMP attack that could gravely harm the United States."

(See 6/16/11 Newsmax article, *North Korea Tests 'Super-EMP' Nuke*, http://www.newsmax.com/KenTimmerman/super-emp-emp-northkorea-nuke/2011/06/16/id/400260)


ANNUAL REPORT TO CONGRESS

Military and Security Developments
Involving the People's Republic of China
2011

Office of the Secretary of Defense

In 2011, Office of the Under Sectary of Defense of US Department of Defense (DoD) issued a report that stated:

> Beijing has consistently asserted that it adheres to a "no first use" (NFU) policy, stating it would use nuclear forces only in response to a nuclear strike against China. China's NFU pledge consists of two stated commitments: China will never use nuclear weapons first against any nuclear-weapon state, and China will never use or threaten to use nuclear weapons against any non-nuclear-weapon state or nuclear-weapon-free zone. **However, there is some ambiguity over the conditions under which China's NFU policy would apply, including whether strikes on what China considers its own territory, demonstration strikes, or high altitude bursts would constitute a first use. Moreover, some PLA officers have written publicly of the need to spell out conditions under which China might need to use nuclear weapons first; for example, if an enemy's conventional attack threatened the survival of China's nuclear force, or of the regime itself.** However, there has been no indication that national leaders are willing to attach such nuances and caveats to China's "no first use" doctrine. (pg. 34, **Bold added**)

(See *Annual Report of Congress, Military and Security Developments Involving the People's Republic of China 2011*, http://www.defense.gov/pubs/pdfs/2011_cmpr_final.pdf)

On March 9, 2011, ABC News issued an article stating:

> The North is believed to be nearing completion of an electromagnetic pulse bomb that, if exploded 25 miles above ground would cause irreversible damage to electrical and electronic devices such as mobile phones, computers, radio and radar, experts say.
>
> "We assume they are at a considerably substantial level of development," Park Chang-kyu of the Agency for Defense Development said at a briefing to the parliament Monday.

Agency for Defense Development (ADD) was established in August 1970 under the banner of the self-reliable defense. ADD is the one and only South Korean national agency for R&D in defense technology contributing to enforcing the national defense, to improving the national R&D capacity. and to fostering the domestic industry.

(3/9/11ABC News, *North Korea Nears Completion of Electromagnetic Pulse Bomb*, http://abcnews.go.com/International/electronic-warfare-north-korea-nears-completion-electromagnetic-pulse/story?id=13081667#.T3RY69kU6Sp)

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In addition, on March 10, 2011, US Defense Intelligence Agency ("USDIA") Director Lt. Gen. Ronald L. Burgess, Jr. testified to the Senate Armed Services Committee("SASC"), and stated, in unclassified written testimony, that **"The North may now have several plutonium-based nuclear warheads that it can deliver by ballistic missiles and aircraft as well as by unconventional means."** (http://armed-services.senate.gov/statemnt/2011/03%20March/Burgess%2003-10-11.pdf) (It is outside the ambit of this essay, but "plutonium-based nuclear warheads" is a intelligence confirmation of a significant scientific sign of a North Korean gun-type plutonium *Fizzlekrieg* EMP type of nuclear weapon and not an implosion plutonium Nagasaki type of weapon.)

On their website as of March 30, 2011, the DTRA stated:

> One of the dangers of a nuclear weapon – even one too small or too far away to kill or harm anyone – is the electromagnetic pulse, or EMP. While a blast of radiation might not do anything to properly protected troops, it would "fry" anything electronic: laptops, sensors, our highly computerized planes, even a simple cell phone. **A weapon that doesn't kill a single person could still destroy our technology**.
>
> [**Bold added**]

http://dtra.mil/Missions/NuclearDeterrenceDefense/RadiationHardenedTechnology.aspx

On June 23, 2011, Olli Heinonen, a Finnish, Belfer Center Senior Fellow at Harvard and a former Director of Operations B in the Department of Safeguards in the IAEA stated in congressional testimony:

> In spite of economical, technological and political difficulties faced, it appears that Iran is determined to, at the very least, achieve a "virtual nuclear weapon state" capability, or in other words be in a position to build a nuclear device, if it so decides. (pg. 34)

(See 6/23/11 *Iran and Syria: Next Steps, Hearing before the Committee on Foreign Affairs House of Representatives*, http://foreignaffairs.house.gov/112/67051.pdf)

On August 10, 2011, the Department of Defense issued a report that stated:

Interim *Report of the*
Defense Science Board (DSB) Task Force on the Survivability of Systems and Assets to Electromagnetic Pulse (EMP) and other Nuclear Weapon Effects (NWE)

Summary Report No. 1

OFFICE OF THE SECRETARY OF DEFENSE
3140 DEFENSE PENTAGON
WASHINGTON, DC 20301–3140

DEFENSE SCIENCE BOARD

10 August 2011

MEMORANDUM FOR UNDER SECRETARY OF DEFENSE FOR ACQUISITION, TECHNOLOGY AND LOGISTICS

SUBJECT: Summary Report Number One of the Permanent Task Force on the Survivability of DoD Systems and Assets to Electromagnetic Pulse (EMP) and other Nuclear Weapon Effects

I endorse the study's findings and encourage you to review them.

Paul G. Kaminski

Dr. Paul G. Kaminski
Chairman

Many areas of concern remain

• Operational

- Non-concurrence by the Air Force for the new aircraft EMP standard with potential impacts on survivability requirements for new aircraft (F-35, tanker, next generation bomber, White House platforms)
- Limitations of Service assessments that identify mission critical equipment instead of mission critical capabilities
- Fragmentation of responsibilities and lack of priority for survivability of communications networks and command and control (C2) systems
- **Lack of engagement of Combatant Commands (COCOMs) except USSTRATCOM and very recently, European Command (EUCOM)**
- Limited understanding of survivability of infrastructure critical to DoD missions
- Missile Defense Agency (MDA) has different criteria for hardening critical elements of the system

• Technical

- Overall fragmentation of efforts - little movement to a national enterprise as recommended by two previous DSB task forces
- The Defense Threat Reduction Agency (DTRA) lack of priority coupled with little progress toward a "21st century approach" augmenting above-ground simulators with advanced modeling/simulation
- DTRA-NNSA Memorandum of Understanding (MOU) implementation diverted from original intent to focus on NEW
- Technical enterprise continuing to atrophy

State of Forces and Their Battle Command

. . .

U.S. general purpose forces (GPF) and their theater nuclear survivability capabilities are another matter. On the positive side, GPF capabilities advanced dramatically in recent years as a result of leveraging the information and electronic device revolutions in all aspects of operational concepts and their DOTMLPF underpinnings. The affordability of networked information systems and improved persistence of surveillance technologies enabled previously unachievable collaboration and OPTEMPO between and among force components – small and large, Service and Joint – to great effect.

However, the ubiquitous dependence on Commercial-Off-The-Shelf (COTS) in almost all military and commercial systems that support military operations, while a natural evolution based on

cost effectiveness, creates a twofold downside when considering nuclear survivability. First, the unknown response of virtually any basic COTS device to NWE leads to further uncertainties when inserting such devices in military systems. Second relates to the testability of the commercial long distance networks that enable long range reach-back. The network response to NWE is unknown and at that, scale is not testable.

In addition, understanding of the operational impacts of NWE and planning for mission success in nuclear environments have decayed. The principal source of this knowledge previously resided with approximately 15 personnel specialties across the Military Departments associated with theater nuclear forces (TNF) during the Cold War, but the elimination of TNF components was also accompanied by elimination of most of the specialties, including those aspects which supported conventional force operational planning for determining how to fight through.

. . .

In summary, the survivability, effectiveness, and adaptation of GPF to NWE is at best unknown. If GPF were subjected to a nuclear event in the foreseeable future, mission execution would depend upon combinations of luck and ingenuity in workarounds for failed equipment. There would almost certainly be an unnecessarily high human cost. **The Task Force is not arguing for hardening GPF, but we do see the gap in knowledge of how vulnerable we might be and how to adapt operations through force architecture, Tactics, Techniques and Procedures (TTPs), redundancy, workarounds, etc., as a serious and potentially show-stopping issue.** (pgs. 7-9)

. . .

Technical Community

Little has happened to create the national enterprise recommended in prior DSB and Threat Reduction Advisory Committee (TRAC) studies. Technical expertise and budgets continue to decline. The Task Force was extremely disappointed to learn that the MOU between DTRA and NNSA emphasized other areas when the original intent was to shore up NWE expertise to support both Departments. In the meantime, there are opportunities being lost. For example, the technical community should be exploiting tests and/or upgrades planned for operational hardware as vehicles to help rebuild and enhance the supporting technology base. The Task Force urged DTRA to engage in the

planning for the March 2011 B-2 stealth bomber HEMP test to ensure that collected data supported code validation and development. Unfortunately that did not occur. (pg. 11)
[**Bold added**]

(See Aug. 10, 2011, DoD, *Interim Report of the Defense Science Board (DSB) Task Force on the Survivability of Systems and Assets to Electromagnetic Pulse (EMP) and other Nuclear Weapon Effects (NWE)*, Summary Report No. 1, http://www.acq.osd.mil/dsb/reports/ADA550250.pdf)

On Sept. 17, 2011, Reuters issued an article stating:

REUTERS

Analysis: West fears possible Iran-North Korea nuclear links

Iran's nuclear program is based on uranium enrichment, activity which can have both civilian and military purposes.

North Korea has twice tested plutonium-based nuclear devices, drawing international condemnation, although it last year revealed the existence also of a uranium enrichment site, potentially giving it a second pathway to bombs.

"They complement each other so well (in terms of their expertise). There is just a lot of synergy in how they would be able to exchange capabilities," Hecker said at a seminar for diplomats in Vienna, the IAEA's headquarters, this month.

Citing Western intelligence sources, the Munich newspaper Sueddeutsche Zeitung said in August that North Korea had this year delivered software, originally developed in the United States, that could simulate neutron flows.

Such calculations, which can help scientists identify self-sustaining chain reactions, are vital in the construction of reactors and also in the development of nuclear explosives.

With the help of the program, Iran could gain important knowledge of how to assemble nuclear weapons, the paper said.
[**Bold added**]

(See 9/17/11 Reuters *Analysis: West fears possible Iran-North Korea nuclear links* http://www.reuters.com/article/2011/09/17/us-nuclear-iran-northkorea-idUSTRE78G2HD20110917)

On Sept. 20, 2011, YONHAP News Agency issued an article stating:

YONHAP NEWS AGENCY

S. Korea defenseless against N. Korean electronic attack

> **SEOUL, Sept. 20, 2011 (Yonhap) -- Major military facilities in South Korea, including the defense ministry, are defenseless against potential North Korean electronic attacks, reports showed Tuesday.**
>
> According to the Agency for Defense Development (ADD) and the Defense Acquisition Program Administration (DAPA), no technology exists in South Korea that can fend off electromagnetic pulse (EMP) bombs from North Korea. The two agencies submitted reports to Grand National Party (GNP) lawmaker Chung Mee-kyung during the annual parliamentary audit into defense agencies.
>
> . . .
>
> **"Major military facilities, which will be used as a wartime command center for the president, the defense minister and other key officials, will be helpless against North Korean electronic offensives," Chung said. "We have to prepare measures so that our defense against EMPs at the new JCS headquarters and other places can meet higher global standards."**
>
> [**Bold added**]

(See 9/20/11 YONHAP News Agency, *S. Korea defenseless against N. Korean electronic attack*, http://english.yonhapnews.co.kr/national/2011/09/20/95/0301000000AEN20110920001500315F.HTML)

On Nov. 13, 2011, YONHAP News Agency issued an article stating:

YONHAP NEWS AGENCY

Source: Hundreds of N. Korean nuclear and missile experts working in Iran

> **SEOUL, Nov. 13, 2011 (Yonhap) -- "Hundreds of North Korean nuclear and missile engineers and scientists have been working at more than 10 sites (in Iran), including Natanz and Qom," the**

> **source said, citing human intelligence he declined to identify for security reasons.**
>
> The source would not allow the specific number of North Koreans to be published, citing the sensitivity of the intelligence, and would not give further details on the extent of the collaboration. The source spoke on condition of anonymity because of the delicate nature of the issue.
>
> . . .
>
> A senior South Korean official said Seoul is keeping a close eye on developments.
>
> "It's not a matter that the government can officially confirm," another government official said. That official added that nuclear cooperation between North Korea and Iran has not been confirmed, though the countries have cooperated on missiles. The two officials asked not to be identified, citing office policy.
>
> [**Bold added**]

(See 11/13/11 YONHAP News Agency, *Source: Hundreds of N. Korean nuclear and missile experts working in Iran*, http://english.yonhapnews.co.kr/northkorea/2011/11/12/38/0401000000AEN20111112002600315F.HTML)

House of Commons
Defence Committee

On February 8, 2012, the United Kingdom House of Commons Defence Committee issued a report, *Developing Threats: Electro-Magnetic Pulses (EMP)* that stated:

> **42. On the basis of the evidence received, it seems likely that at present only those states with a known nuclear capability would be able to utilize an HEMP weapon. However, certain states such as Iran could potentially pose a realistic threat in the future, even if it does not currently do so, if nuclear non-proliferation efforts are not successful.** (pg. 18, Bold in original)

(See House of Commons Defence Committee, *Developing Threats: Electro-Magnetic Pulses (EMP)* www.publications.parliament.uk/pa/cm201012/cmselect/cmdfence/1552/1552.pdf)

On February 12, 2012, US Navy Vice Admiral Mark I. Fox stated, in a Jerusalem Post article, *US Navy: Iran's prepared suicide bomb boats in Gulf*:

> "They [The Iranians] have increased the number of submarines ... they increased the number of fast attack craft," Vice Admiral Mark Fox told reporters. **"Some of the small boats have been outfitted with a large warhead that could be used as a suicide explosive device. The Iranians have a large mine inventory."**
>
> . . .
>
> Iran now has 10 small submarines, Adm. Fox added.
> [**Bold added**]

(See Jerusalem Post – 2/13/12 *US Navy: Iran's prepared suicide bomb boats in Gulf*, www.jpost.com/IranianThreat/News/Article.aspx?id=257566)

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Finally, on February 16, 2012, USDIA Director, Lt. Gen. Burgess, again, testified that:

> Iranian ballistic missiles in development could range across the region and Central Europe. Iran's new space launch vehicle demonstrates progress toward a potential ICBM. **Iran today has the technical, scientific, and industrial capability to eventually produce nuclear weapons**. While international pressure against Iran has increased, including through sanctions, we assess that Tehran is not close to agreeing to abandoning its nuclear program.
> [**Bold added**]

(http://armed-services.senate.gov/Transcripts/2012/02%20February/12-03%20-%202-16-12.pdf at page 11)

On February 18, 2012, the Guardian issued an article stating:

theguardian

Iran's nuclear ambitions could lead to 'Middle East cold war', says Hague

Foreign secretary said the world would face most serious round of nuclear proliferation since invention of atomic bomb

Foreign secretary William Hague has warned of the dangers facing the world if Iran acquires nuclear weapons. Photograph: Gianluigi Guercia/AFP/Getty Images

> "[The Iranians] are clearly continuing their nuclear weapons programme," Hague told the Daily Telegraph. "If they obtain nuclear weapons capability, then I think other nations across the Middle East will want to develop nuclear weapons.

> "And so, the most serious round of nuclear proliferation since nuclear weapons were invented would have begun with all the destabilising effects in the Middle East. And the threat of a new cold war in the Middle East without necessarily all the safety mechanisms. That would be a disaster in world affairs."

(See 2/18/12, The Guardian, *Iran's nuclear ambitions could lead to 'Middle East cold war', says Hague*, http://www.guardian.co.uk/world/2012/feb/18/iran-nuclear-ambitions-middle-east)

Further, the sole issue that this essay explores is specifically not the issue of whether Iran could attack the continental US with an EMP nuclear weapon loaded on an Iranian ICBM, but, solely the issue of how and whether Iran could possibly use an *NGIC Asssessment*-Maj. Miller-type *Fizzler* EMP nuclear bomb in an offensive 'break-out' "localized" attack on the Saudi Peninsula.

Connect the dots graphic

III. "*Intelligence Today*" to win "*Tomorrow's Fight*"

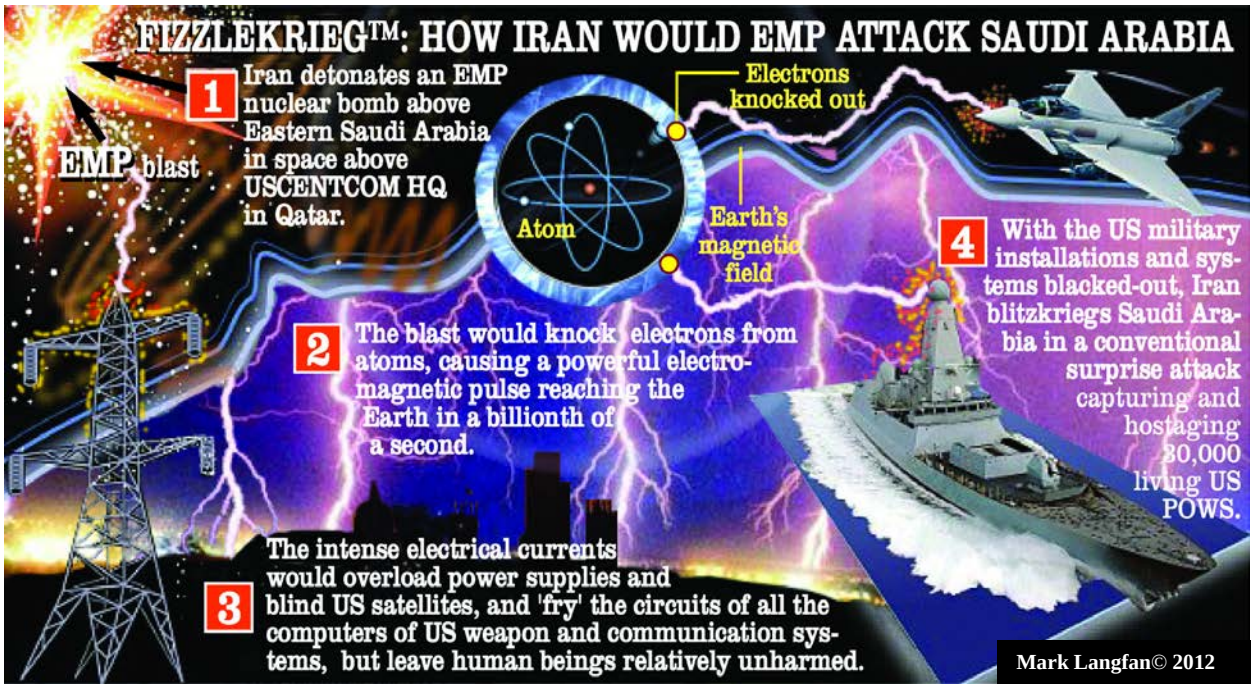
NGIC's motto is "Intelligence today, for tomorrow's fight." Firstly, NGIC assessed that China would trump MAD and defeat the United States by its defensive use of a Fizzler EMP nuclear bomb against US Aircraft Carrier Battle Groups ("U.S. CVBG" in the *NGIC Assessment*) as a critical tactical component of a Chinese attack plan to invade Taiwan. Then- USAF Maj. Miller, in 2005, predicted that North Korea would trump MAD and defeat the United States by its offensive use a Nuclear EMP bomb against US forces in South Korea. Then, in 2012 with respect to the issue whether the MAD doctrine will "contain" Iran, it is reasonable to hypothesize whether Iran would trump MAD and defeat the United States by its offensive and defensive use the same type of *Fizzler* EMP nuclear bomb against US Aircraft Carrier Battle Groups as a critical tactical component of an Iranian attack plan to invade the Saudi Arabian and all of the Persian Gulf oil-rich Kingdoms. In fact, in the "localized" Saudi Theater, with an EMP nuclear attack, Iran has an additional tactical military opportunity to capture over 30,000

living US POWs which neither the *NGIC Assessment* raised in its "China attacking Taiwan scenario." This is because there is upwards of 40,000 US soldiers now forward-deployed protecting the Saudi Peninsula, and zero US soldiers protecting Taiwan. Hence, Iran armed with an *NGIC Assessment*-type nuclear EMP weapon would have an additional infinite strategic military advantage of 30,000 **living** US POWs over even an EMP-armed China as outlined in the *NGIC Assessment*'s "Trump Card" scenario. In effect, with 'one nuclear EMP weapon," Iran would not be 'contained,' but have a super-perfect-trump nuclear 'break-out' weapon.

Jstars + NGIC EMP= 30,000 living US POWs

In essence, an NGIC-inspired Iranian *FizzleKrieg*™ EMP attack on the Saudi Arabian Peninsula theater of operations would allow Iran to leverage the *NGIC-Assessment*'s described "battlefield" EMP uses of wiping out all US and Saudi electronic weapons, intelligence and communications' systems. In layman's terms, what this means is Iran wouldn't necessarily even try to first build a historic "high yield" big-explosion Hiroshima-type of nuclear bomb that generates a huge TNT-type of explosion which produces the iconic nuclear mushroom-cloud. Instead, Iran would specifically seek to build a "low-yield" nuclear device that

generates almost no actual explosive TNT effect (3 kilotons)and little radioactive fall-out (hence "low yield" explosive yield compared to TNT equivalent), but instead emits, or fizzles, a relatively huge blast of electro-magnetic pulse(25 kilotons worth of gamma rays). In short, a Fizzler EMP nuclear weapon is a "clean" nuclear bomb that has a small physical explosion and little residual nuclear fallout, (which is perfectly consistent with the North Korean 2006 and 2009 nuclear tests) but generates a huge electro-magnetic tidal "waveform" that radiates out for hundreds of miles. A Fizzler EMP explosion would be like billions of bolts of snaking super-lightning bolts that would form a man-made X-Men *Magneto* tsunami wave of super-lightning bolts that would surge and burn every wire in its kill-radius of hundreds or thousands of kilometers depending on how high the Fizzler EMP was detonated.



As the *NGIC Assessment* explains, a Fizzler EMP nuclear bomb was specifically invented to non-explosively kill the enemy's electronics and paralyze modern weapons' systems, and minimize human "causalities on CVBG assets (US aircraft carrier)." That's why the *NGIC Assessment* describes the Chinese studies on the mammalian "bio-effects of high-power . . . electromagnetic pulse (EMP) radiation." *NGIC Assessment* only then concludes the greater warfare "battlefield"

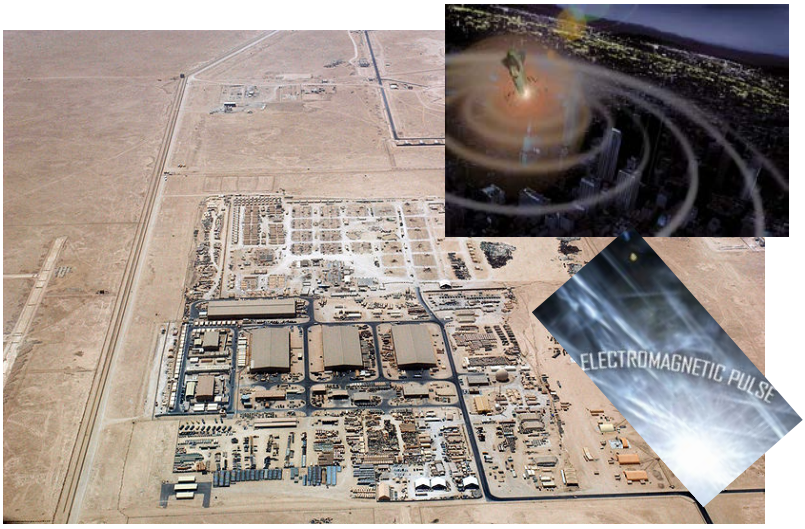
theater use of a Fizzler EMP from these Chinese biological EMP radiation tests on various mammals where the Chinese "researchers' interest in potential human effects is apparent." In other words, the Dr. Strangelove "high-yield bomb" causes a "big bang" and a ton a bad radiation, and kills a lot of people. Whereas, the modern Post-*Dr. Strangelove* NGIC "low-yield" Fizzler EMP bomb generates a huge gamma ray EMP tsunami, little bad persistent radioactive fall-out, and kills very few people.

Critically, a Fizzler EMP bomb **has no effect whatsoever** on simple non-electronic weapons like Kalashnikovs, M-16s, and World War 2 vintage non-electronic rocket launchers like Katyusha rockets. In short, after a Fizzler EMP detonation, an entire hundred billion-dollar US Aircraft Battle Group (the "U.S. CVBG" referred to in the NGIC report) becomes a bunch of floating flaming useless garbage scows, and whoever has the most men with the most Kalashnikovs and Katyushas in the theater the quickest, wins, period! To quote the *NGIC Assessment*, a Fizzler EMP bomb "will permit the "weak" to defeat the "strong" in certain limited scenarios." So, an Iranian Fizzler EMP weapon would wipe out the US' and Saudi's 21st century "strong" high-tech advantage in the "limited scenario" of the Saudi Theater, and infinitely empower the Iranian 19th century type of "weak" local numerically superior low-tech armed enemy's order of battle in an Iranian *NGIC Assessment*-style "localized conflict" against the Saudi Peninsula.

IV. At *H-Hour* plus 3 nanoseconds *Al Udeid*/CENTCOM HQ= Desert One

Al Udeid Air Base, Qatar
USCENTCOM HQ 2012

Al Udeid Air Base, Qatar
USCENTCOM HQ 2012

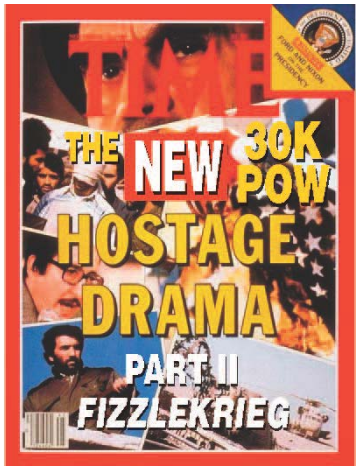


***** May G-d watch over and bless the precious 8 US servicemen who died here. ******

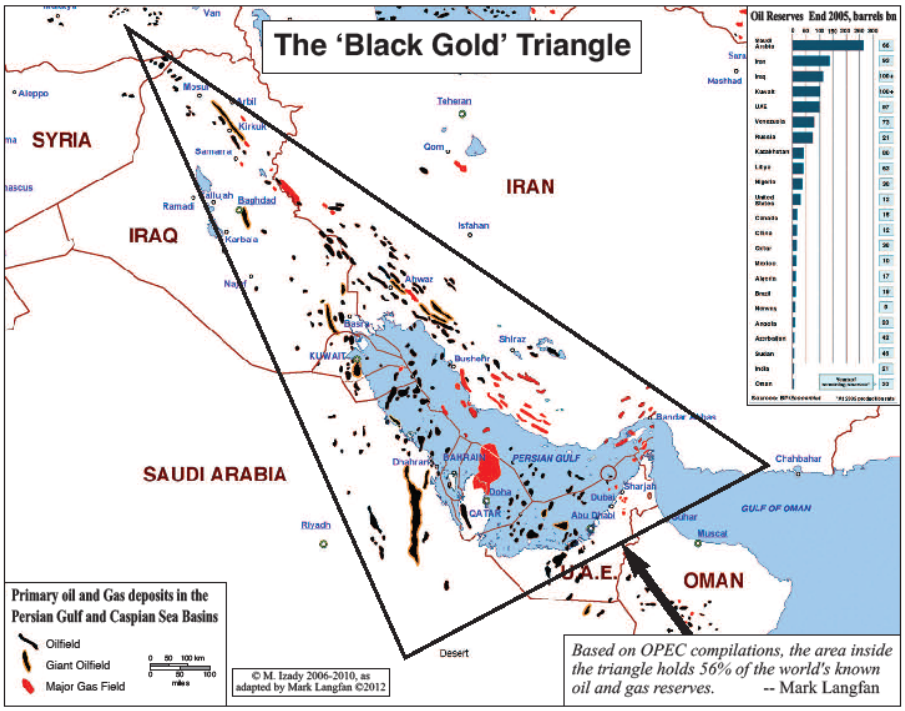
******

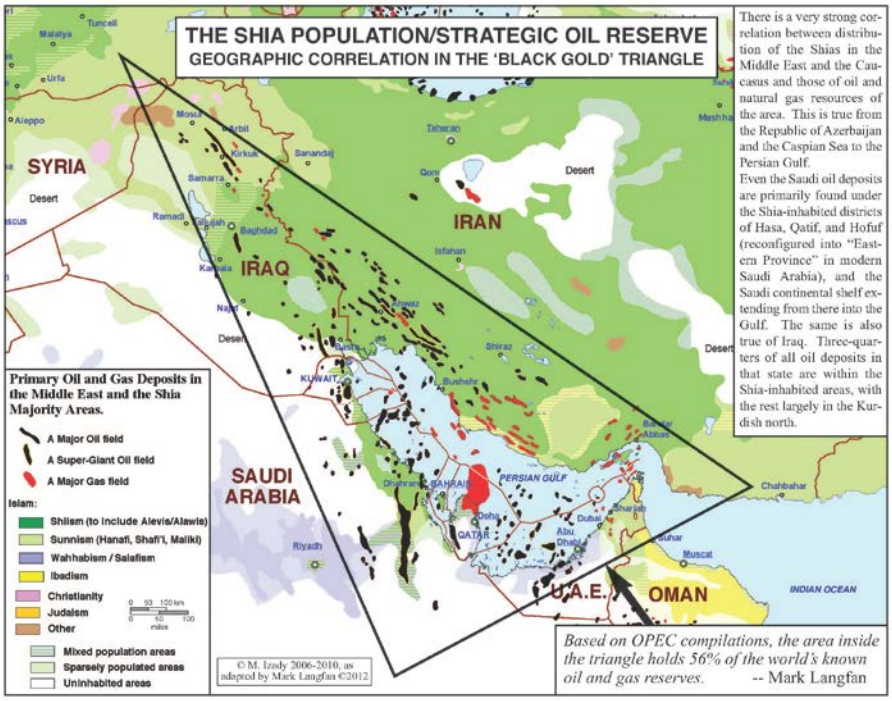
Iranian EMP *Fizzlekrieg*™: Target Saudi Arabia

Why is an Iranian low-yield EMP nuclear Fizzler EMP device so dangerous? Because, the last thing Iran would want from its Persian Gulf "NGIC-battlefield" use of a Fizzler EMP weapon would be to kill any of American soldiers based at any of the "45 bases around their country" and push the United States over the *NGIC Assessment*-described US "nuclear response threshold." Instead, as described in the *NGIC Assessment* relating to China's intended EMP nuclear bomb use, Iran would want the Fizzler EMP weapon to burn and to short out all of America and Saudi high-tech radars, satellites, submarine electronics (sub life-support circuitry will be burned out also turning US fizzled-subs into coffins unless a proper "crash air-bag ballast" EMP safety device is installed), and other electronic-based weaponry, and "equalize" the Saudi battlefield and not push the US over the NGIC-described "nuclear response threshold." Then, Iran can launch a "surprise" quick conventional *blitzkrieg* lightning swarming greatly numerically superior conventional land and amphibious attack across the Persian Gulf where Iran will capture both the Saudi oil fields, **and** tens of thousands of **living** American POWs without crossing the NGIC-described, US "nuclear response threshold." The fewer US soldiers killed by Iran's EMP *FizzleKrieg*™ attack, the more US soldiers Iran could capture and use as living POW human shields. The more **living** US soldiers Iran could capture as POWs, the exponentially higher and more impossible the, *NGIC Assessment*'s described, US "nuclear response threshold" would become. (*Nota bene*: While a North Korean nuclear EMP bomb would be a grave, and "clear and present" danger threat to the 40,000 US troops on the Korean Peninsula, North Korea does not sit astride of 56% of the world's known oil reserves.)



In fact, the Sunni Kingdoms on the Western shore of the Persian Gulf which are the "localized" military objective of the Iranian EMP attack are currently home to 4.5 million Shi'ites inhabitants (out of 9 million total Western Persian Gulf population-excluding Iraq) that numerically outnumber the Sunni populations in these specific areas immediately next to Iran. These 4.5 million Western Persian Gulf Shi'ites allege gross religious discrimination, and violations of human rights at the hands of their Sunni rulers. Clearly, this 4.5 million Persian Gulf Shi'ite population contains huge numbers of Iranian Shi'ite "sleepers," and other easily inspired Shi'ite irregular combatants who will easily wake to an Iranian *FizzleKrieg* attack. At H-Hour minus 6 hours, the Iranian sleepers will distribute simple EMP-proof Kalashnikovs and M-16s which are now, at this very moment, being quietly buried, by the thousands, in underground caches in the Gulf's Sunni Kingdoms. At H-Hour, armed with *NGIC Assessment*-described "element of surprise" and premeditated planning, pro-Iranian, *in situ*, sleepers will 'wake' and immediately seize control of key transportation intersection hubs. At H-Hour+12 hours, Iranian forces would irreversibly control huge bridgeheads of Saudi and other Sunni Kingdom Persian Gulf territory. To compound the problem, in the wake of a successful Iranian *Fizzlekrieg*™ attack, Iran would allege it has actually "liberated" the 4.5 million Shi'ite "oppressed" Persian Gulf co-religionists in the very name of US President Obama's "democracy." And, these specific Eastern Saudi Arabia Shi'ite highly populated areas form the "Black Gold Triangle" that holds 56% of the world's known oil reserves. One Iranian call to China promising 30 years of cheap oil will buy a UN Security Council veto. Checkmate to Iran. Game-over.





So, if, as Lt. Gen. Burgess testified that "Iranian ballistic missiles" could now "range across the region," then the Iranians could certainly deliver a "plutonium-based warhead" *FizzleKrieg*™ EMP weapon just next-door to the Western Persian Gulf by an Iranian short-range missile, or by an "unconventional"

(to quote DIA Director, Lt. Gen. Burgess, again) Iranian suicide nuclear EMP-armed suicide *Shahid* mini-submarine with a "large warhead" (To Quote Rear Adm. Allen). Such an Iranian "plutonium-based warhead" EMP nuclear bomb would electronically wipe out USCENTOM HQ at Qatar and US 5th FLEET HQ at Bahrain in the first 3 nanoseconds. See *EMP 2010 Threats*. But also, with the native local 4.5 million Persian Gulf Shi'ites of Kuwait, Eastern Saudi Arabia, Bahrain and Qatar in the millions, at H-Hour+3 nanoseconds, the US 5th Fleet HQ, the USCENTCOM HQ, and the 15,000 marines currently deployed to Kuwait will be 50 miles inside of Iranian enemy-occupied Saudi Arabian territory. Iran based troops would soon follow on with transport quickly driven and air-lifted into Eastern Saudi Arabia from distant rear-echelon unaffected areas with no one, and nothing, to stop them. The US and Saudi Forces will be confused, totally blacked-out, electronically cut-off from each other and their chain of command, with all of their electronic weapons, GPS, and communications equipment on fire, unusable, and un-repairable. The Persian Gulf-deployed US nuclear-powered Aircraft carrier(s) will be struggling to avert a melt-down of its EMP-susceptible atomic nuclear engine with no power while fighting numerous electrical fires.

In the *real-battle-time* of an Iranian *FizzleKrieg*™ attack, all of America's Persian Gulf-based intelligence systems would be totally blacked out. See *EMP 2010 Threats* So, the Pentagon and the White House, *in real-battle-time*, would have absolutely, positively, totally no idea whatsoever what was actually happening in the Saudi Arabian theater of operations until after Iran already had tens of thousands of **living** US soldiers hostage in hand. By capturing tens of thousands of **living** American soldiers, sailors and marines, Iran will have gained an absolute, super-perfect-trumping card, and it will still, in addition, have the NGIC-described nuclear-plated "Trump Card" counterattack against any American retaliatory nuclear counter-strike, or conventional type of re-invasion. Think: President Carter's Iranian "hostage crisis" times three orders of magnitude, or 30,000 US **living** servicemen held hostage, but with Iran having an NGIC "Trump Card" EMP nuclear-weapon defense. Any American president, let alone President Barack Obama with the Iran-adoring, Iranian-born and bred, Valerie Jarett as the "other side of Obama's brain," would be militarily paralyzed from even thinking of deploying any forces for any possible conventional, or un-conventional counter-attack against Iran.

V. What no live feed?? Just snow

An Iranian EMP nuclear weapon is an Incentive to launch Breakout attack

Up until now, during the Cold War, the world "comfortably" operated under a symmetric "high-yield" nuclear containment doctrine of the *Dr. Strangelove* MAD nuclear gaming theory. Under the general idea of the *Dr. Strangelove*-MAD doctrine, the United States (or alternatively the Soviet Union), as a supposed "rational actor," would not launch a first-strike barrage of high-yield nuclear long-range missiles at the Soviet Union (and/or vice versa) because the other attacked party could, and would, as a supposed "rational actor," launch a retaliatory second-strike barrage of high-yield nuclear long-range missiles against the first-striking party as occurred in the end of the actual *Dr. Strangelove* movie. In such a Cold War type of high-yield nuclear war, the general goal of the nuclear *first-striker* was not to gain a "localized" battlefield tactical military advantage, and acquire immediately adjacent territory in a "localized conflict," but to, strategically, annihilate the other nuclear party's ability to launch a retaliatory second-strike. During the Cold War age of Dr. Strangelove, there was no such thing as a low-yield nuclear Fizzler EMP bomb. So during the Cold War, the MAD containment doctrine 'worked' to a degree in that the world didn't blow itself up. But that didn't stop hundreds of conventional wars either direct or proxy from being waged. In the end, until now, nobody was crazy enough, confident enough, or desirous

enough, to try to completely obliterate the opposing sides' retaliatory second-strike capability in a first-strike. That's why having a robust United States nuclear triad deterrent (land, sea, and air based nuclear retaliatory aspects) force of second-strike nuclear retaliatory capability that could survive any possible *Goldeneye* or *Dr. Strangelove*-type of nuclear first-strike on the continental United States was, and still is, so critical to the existence of the United States.

However, under any Iranian, possible, *NGIC Assessment/Maj. Miller*-described use of asymmetric "low yield" *FizzleKrieg* attack, the tactical and strategic goal of Iran is really completely different than the remotely contemplated 'containment' goals in the symmetric "high yield" Cold War MAD scenario. Strategically and tactically, Iran doesn't remotely want to even touch the continental United States in its "EMP nuclear first-strike," or even physically impact the US' ability to launch a retaliatory nuclear second-strike. As a specifically *NGIC Assessment*-described type of "localized conflict," Iran, the nuclear aggressor, only wants to capture the immediately adjacent territory of the Eastern Saudi Arabian Peninsula (far from the US) so Iran would occupy and control a total of 50-60% of the world's known oil reserves without crossing the US "nuclear response threshold." Think: A nuclear EMP-armed North Vietnam overruns South Vietnam after the US retreats from South Vietnam.

Iran with One EMP is a Game Changer

Reductio ad absurdum MAD style, or

How if the IRI is a "rational actor" and learns to "love the bomb," then Hitler and Saddam were also "rational actors" and they would have really learned to love the bombs!

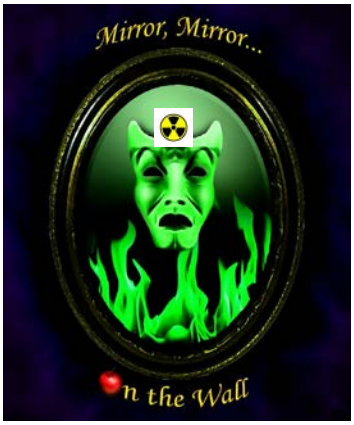
1. Assume the Islamic Republic of Iran (IRI) is a "rational actor" under MAD.
2. If the IRI is a "rational actor" under MAD, then surely both pre-Poland invasion Adolf Hitler and pre-Kuwait invasion Saddam Hussein are even more "rational actors" under MAD then the IRI which defines itself as an end-of-days messianic regime.
3. Therefore, Hitler and Saddam were also "Rational actors" under MAD before they launched their respective aggressive localized invasions. Chamberlain certainly

considered Hitler rational enough to sign the 1938 Munich Accords and give Hitler the mountainous, defendable half of Czechoslovakia. Saddam was a secular, non-messianic practical leader who the United States shook hands with and did business with and who was intent on the survival of his regime every bit as much as the IRI would be.

4. Therefore, both pre-Poland Hitler and pre-Kuwait Saddam would have been "rational actors" under a MAD rubric and hence both would have been nuclear-weapon eligible under the MAD rubric.
5. But, 1) would a nuclear-armed Hitler not have conventionally invaded Poland in a localized conflict. 2) Would a nuclear-armed Hitler not have conventionally invaded Belgium and France. 3) Would Vichy France have launched a nuclear attack in response to Hitler's conventional attack on France where Hitler would, under MAD, have incinerated Paris in the face of a French First Use of Nuclear weapons.
6. But, 1) would a nuclear-armed Saddam Hussein not have conventionally invaded Kuwait in a localized conflict. 2) Would a nuclear armed Saddam not have conventionally invaded Saudi Arabia after he had ingested Kuwait.
7. In the nuclear-armed Hitler conventional military occupation of France, would the United States have staged a D-Day invasion of France. How could the Allies have dislodged a nuclear-armed-Hitler from his conventional occupation of Europe. How could the United States have successfully defended Britain in the context of a nuclear-armed Hitler. How could the United States have technologically competed with a nuclear-armed Hitler in the race to build ballistic missiles, if the United States did not use the Nazi Rocket scientists to build its post-war ballistic missiles. Or where the United States did not even know there was a US-Nazi Germany "mineshaft---excuse me--missile gap" before the V-1 and V-2s started falling in England.
8. In the nuclear-armed Saddam conventional military occupation of Kuwait. How could the United States have forward-deployed conventional forces in *Desert*

Shield in effective offensive battle formations densities proximate to the Iraq border in *Desert Storm.*

9. Under the DOD annual Chinese review, if China may use nuclear weapons **first** to protect its regime either from an internal revolution or from a foreign conventional attack which threatens the current communist regime, would not Hitler and Saddam also use nuclear weapons **first** to have protected their respective regimes from either an internal revolution, or from a conventional foreign attack which threatened their respective regimes. Or, is the Chinese use of a high altitude EMP weapon even considered a first use of a nuclear weapon if it kills less people than a regular high explosive? If the DOD is not sure that a HEMP weapon is not considered to be a first use by China, why would it be a "first use" for Hitler, Saddam, or in the instant case the IRI? (See later discussion infra.)
10. Allowing either Hitler or Saddam to acquire nuclear weapons would have magnified their respective conventional military aggressions in "localized conflicts" and further more destabilized their respective battle theaters.
11. Therefore, allowing either Hitler or Saddam to have acquired nuclear weapons under a MAD rubric is ***absurd***, illogical and destabilizing to their local theaters and would have enabled these actors to use MAD to consolidate their local aggressions.
12. Therefore, neither Hitler nor Saddam should be or were eligible under MAD to have acquired any nuclear weapons-including even one nuclear weapon. Hence, Hitler and Saddam do not qualify as "rational actors" under the Mad rubric.
13. If Hitler and Saddam are more "rational" than the IRI, and Hitler and Saddam do not qualify as "rational actors" under MAD, see infra proof steps #1 and #2, then the IRI does not qualify as "rational actors" under MAD.

Mirror 

Mirror

On the Wall,

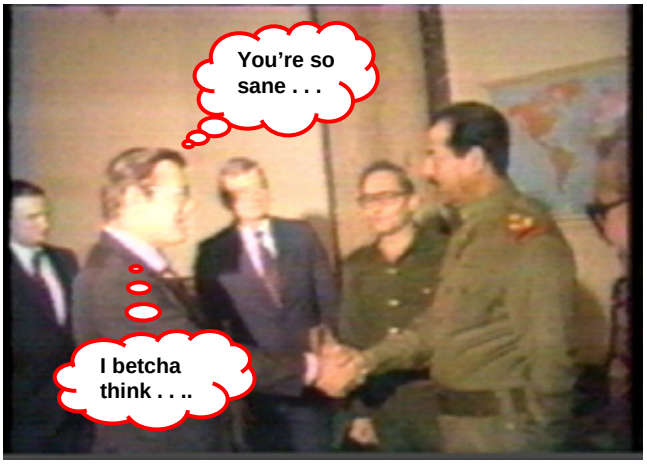
Who is the MADdest 'Rational Actor' of all?

1938 'Munich' Hitler

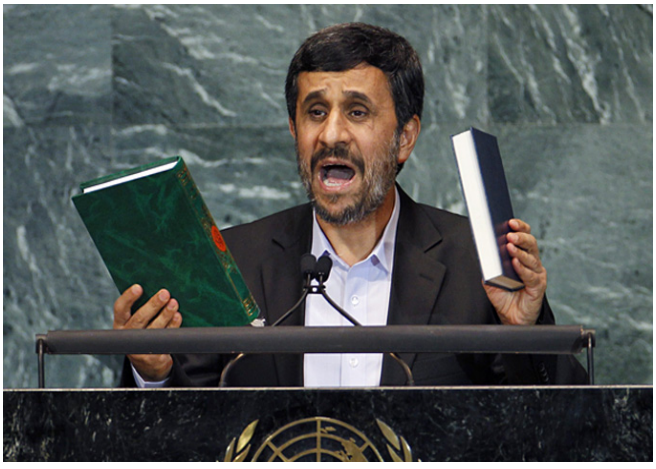
2012 Khomeini 'Khamenei'

OR

1983 'Rumsfeld' Saddam



2012 'UN' Ahmadinejad



Iran has learned from Saddam Hussein's mistake (and Qaddaffi's mistake too!) that Iran cannot hope to attack Saudi Arabia's and the Saudi Peninsula's oilfields (and survive) without some type of nuclear weapon. Also, Iran doesn't want to permanently irradiate the Persian Gulf oil Iran hopes to sell to the world at $1000 a barrel. (As a side-note, Iran's temporary "decommissioning for maintenance" of its Bushehr nuclear plant would be an intelligence tell for an Iranian EMP attack.) Iran only wants to burn and short-out all of the American "strong" high-tech weapon systems which can stop Iran's follow-on lightning "weak" conventional attack on just the "localized" Eastern fringe of Saudi Peninsula, or the western aspect of the Persian Gulf. As does China in the *NGIC Assessment*, **Iran has a strategic incentive, <u>not</u> a MAD deterrent, to attack Saudi Arabia with a 'breakout' Fizzler EMP nuclear weapon** because it will be assured of Super-Perfect-Trump Card to any possible US nuclear (or conventional) retaliation while gaining untold trillions of dollars of oil reserves. Any written US nuclear-umbrella defense promised to Saudi Arabia is worthless because 30,000 living US POWs will render it worthless. What's worse, under an Iranian breakout nuclear EMP attack with a nuclear umbrella, MAD acts not as a deterrent to Iran, but a deterrent to the US to attempt to save Saudi Arabia. The Perfect War for Iran!

Saddam plus nuclear bomb=Kuwait is still called *Kadhima*, the 19th province of Iraq

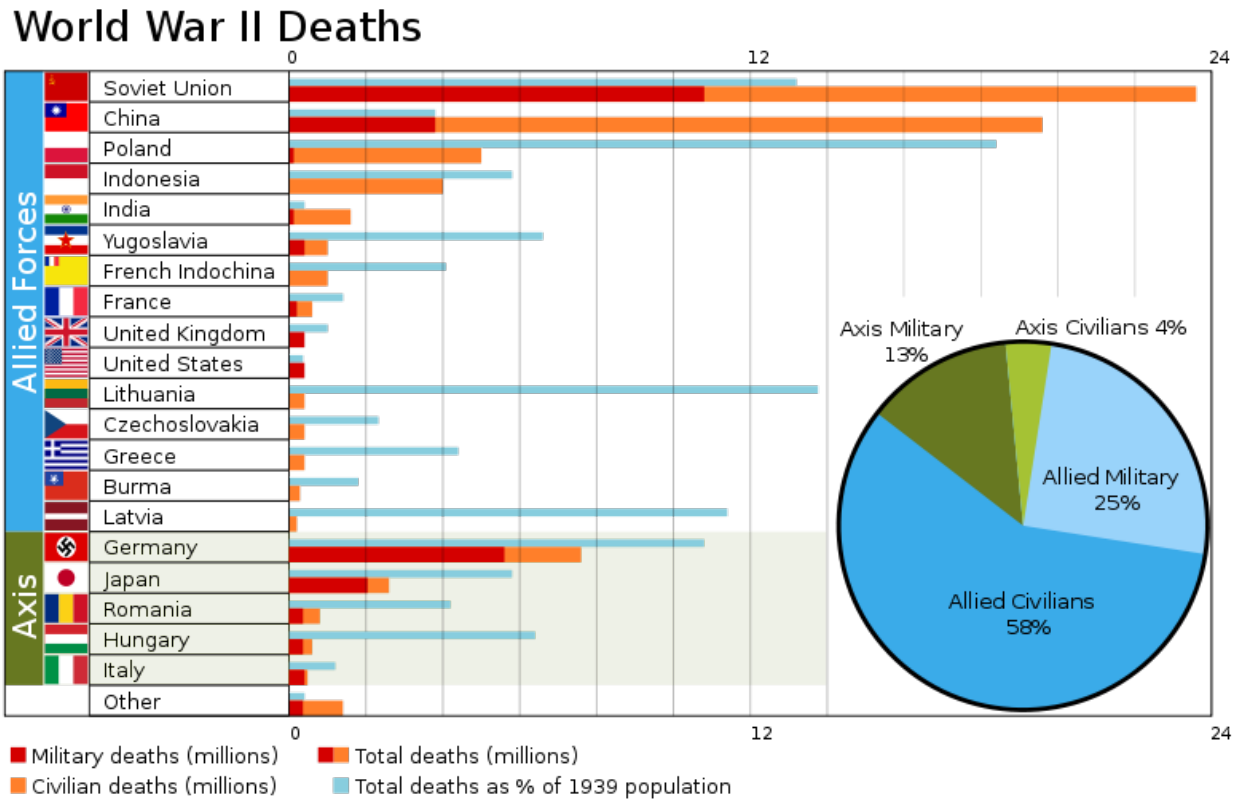
+

= Kuwait is still called *Kadhima*, the 19th province of Iraq

VI. One Iranian Nuclear EMP Bomb= Hundreds of millions dead

In conclusion, Brzezinski's Dr. Strangelove *Stone-Age* Nuclear game 'thinking' that "one nuclear weapon" in the hands of Iran can be 'contained' or 'isn't a big deal' typifies the gross *groupthink* fallacy of re-fighting the last war (i.e. the Cold War) while losing the next, likely, war (an Iranian NGIC-inspired

FizzleKrieg EMP attack on Saudi Arabia). Ron Paul is factually dead wrong: With "one nuclear weapon," Iran **CAN** very possibly attack somebody, and that very first somebody is Saudi Arabia. Iran's having even "one nuclear weapon" represents, not only an existential threat to Saudi Arabia, but also an existential threat to the entire free world (including Russia and China, very loosely speaking). The world sadly learned first-hand of the new German form of warfare called *blitzkrieg* in Poland and France only after it was too late to stop it. Hopefully, by ossified Dr. Strangeloves of the likes of Dr. Paul and Dr. Brzezinski better understanding NGIC's *Goldeneye* nuclear EMP "intelligence today," the world can avoid an Iranian *Fizzlekrieg*™ world of "tomorrow's fight" where millions of Saudis and hundreds of millions die, and where Iran armed with a 'breakout' Fizzler EMP "super-perfect-trumps" the West, and controls 56% of the world's oil supply.



http://en.wikipedia.org/wiki/World_War_II_casualties

Separated at Birth

Dr. Strangelove

Zbigniew Brzezinski

Who is MADer?

A 1964 Fictional Nazi mad nuclear game theorist or a 2012 real life virulent anti-Semitic nuclear mad nuclear game theorist?

Extra remaining sections to be written:

Prefatory Section

In 480 B.C., Themistocles convinced the Athenians to remain in the Straits of Salamis, invoking the lessons of Artemisium; “battle in close conditions works to our advantage.”

On 20 September, 480 B.C, Greece defeats Persia’s Xerxes I in the critical Battle of Salamis where, in a confined narrow battlespace of the Salamis Straits, the Grecian smaller more maneuverable triremes (ships) swarmed the larger and

numerous Persian Triremes, and inflicted a fatal military blow to the Persian fleet ultimately requiring a full Persian retreat from Greece and Asia Minor.

The furthest extent of the Persian Xerxes I Archa Empire is:

Alexander the Great of Macedonia (Greece), first defeated Darius III at Issus, after securing his southern flank and supply lines in occupying the Levant and Egypt (whose populations welcomed-for the most part- emancipation from the yolk of Persian Rule), ultimately attacked Persian Empire and critically defeated Darius III in 331 BC in the Battle of Gaugamela on Alexander's way to a temporary full occupation of Persia. At the Battle of Gaugamela Alexander had 50,000 troops to Darius III's 250,000 and suffered 700 dead to Darius III's 40,000 dead.

From 224-651 AD, under the last pre-Mohamed Sassanid Persian Empire, the Sassanids occupied the Western aspects of the Persian Gulf wrapping around the Saudi Peninsula up to the Western aspects of Yemen into what is now the Houti areas of Yemen. This empire resulted in the news term *Iranshahr* and *Iran*.

Seljuk EMPIRE

The post- Mohammed Safavid Empire forcibly converted most of the Sunni inhabitants of what now constitutes Iran to Shiism in the 1700's.

The Zagros Mountains Range topographically runs North by Northwest up along the inside of the entire current western border of Iran. The Zagros Range ranges as high as 4200meters which is on a par in altitude with the US Rockies and European Alps.

All of Iran's major nuclear facilities are to the East of the Zagros Mountains inside of Iran's topographical redoubt.

All of Iran's oil resources are to the West of the Zagros Mountains primarily located in the topographically flat areas of Iran straddling the Iraqi and Persian Gulf areas.

The Eastern aspect of the Saudi Peninsula is topographically unremarkable and flat. The Iran Saudi battlespace interface represents a total asymmetry in topographic aspects.

The Straits of Hormuz is a confined narrow battlespace that transits % of the world's oil or ___ million barrels of oil daily.

Iranian-Saudi peninsula Topographical asymmetry highly favors and advantages Iranian order of battle and disfavors US/Saudi-Gulf Council standing order of battle.

Persian represents a remarkable resilient civilization which has not avenged its loss in Battle of Salamis or Battle of Gaugamela. A great civilization does not allow its loss to go unavenged.

'Negative Security assurance' to Iran equals no security assurance for Saudi Arabia

US EMP survivability goes from 2005's we "simply do not know!" to a 2011 "stop-stopping issue."

If China's EMP NFU is "ambiguous," Iran's EMP FU is clear

Every "ambiguity" in DOD's annual Chinese NFU Nuclear Policy when imported into the Iranian paradigm becomes crystal clear that Iran armed with its religious messianic beliefs and nuclear bomb would use the bomb. In fact the very "rationality" of the regime's "interest in survivability" would depend on Iran's use of the bomb. Unlike Taiwan, the Sunni Kingdom Shiites want to be "reunified" to Iran and "protected" from the 'tyrannical" Sunni Kingdoms. Unlike the Chinese "Civil War" division of soveriegnty, Iran lays direct historical claim to the Gulf Sunni Kingdoms and the present-day fealty of its inhabitants dating from the Ara through Sassanid to the very present minute. If Iran occupied the Sunni Gulf Kingdoms, Iran would certainly use a nuke if the US threatened "conventional war" which "endangered" the Iranian Regime as defined by the Iranian Regime itself.

Historically and scientifically, the original American *Manhattan Project* scientists had to build the much more complex spherical-multi point implosion "*Fat Man*"

plutonium nuclear bomb (used at Nagasaki), in addition to the simple gun-type "*Little Boy*" uranium nuclear bomb (used at Hiroshima). The exact scientific reason they had to develop the very different second much more complicated "implosion" type of bomb was because the project scientists believed that Plutonium in a gun-type device would not produce a high-yield TNT type explosion, but rather would only produce an EMP "fizzle" with little explosive effect. Against Japan in 1945, America wanted and needed a "big bang," not a "fizzle."

Brzezinski isn't alone either. Even General Martin Dempsey, the current Chairman of the US Joint Chiefs of Staff, recently stated: "We are of the opinion that the Iranian regime is a rational actor." Despite Obama's glib AIPAC protestations of "not containment" to the contrary, the Obama Administration's incessantly repeated and pointed use of Iran as a "Rational actor" is the wonk code-word for, what is in essence, Obama's Cold War style "containment" Iran Nuclear Policy.