

STRATEGIC STABILITY IN A STATE OF FLUX

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- The concept of “strategic stability” was born in 1990 in the context of START-I negotiations to serve as a foundation of deep strategic arms reductions.
- Definition of “Stability”: a state of strategic relations that is “removing incentives for a nuclear first strike”. To be achieved through:
 - a mutually acceptable “relationship between strategic offensive and defensive arms”;
 - by “reducing the concentration of warheads on strategic delivery vehicles”;
 - and “giving priority to highly survivable systems”.

(“Soviet-United States Joint Statement on Future Negotiations on Nuclear and Space Arms and Further Enhancing Strategic Stability,” June 1, 1990, <http://www.presidency.ucsb.edu/ws/?pid=18541>.)

Topol ICBM (SS-25)



This norm remains the first and, deplorably, the last joint formal legal US-Russian definition of the concept for the elapsed 27 years.

In the meantime US and Russian understanding of this notion has diverged far apart and presently has virtually no common ground left. (Examples: Russian Sarmat missile system and US ballistic missile defense (BMD) program.)

- The three present paradoxes of nuclear deterrence:
- In 1991-2017 U.S. and Russian aggregate nuclear arsenals have been reduced by 6 times in warhead numbers and by 34 times in megatons - but now the probability of nuclear war is higher than any time since the early 1980s.
- Classic strategic balance of assured-mutual-second-strike-capability is more stable than ever – but it gave birth to the concepts of limited nuclear strikes allegedly not leading to imminent escalation.
- After deep cuts of 1991-2017 further nuclear arms reductions are lacking clear goal and look neither necessary nor feasible in Moscow and Washington.

REVOLUTION IN MILITARY TECHNOLOGIES

- Continuous innovations in C3I systems
- Development and deployment of strategic defense systems by the U.S., Russia, and other nations;
- Development by the U.S., Russia and other nations of long-range (stand-off) precision-guided non-nuclear cruise missiles and hypersonic systems;
- The growing nuclear forces of the third states;
- The potential effect of space warfare systems;
- The potential effect of cyber warfare technologies.

LONG-RANGE PRECISION-GUIDED CONVENTIONAL SYSTEMS

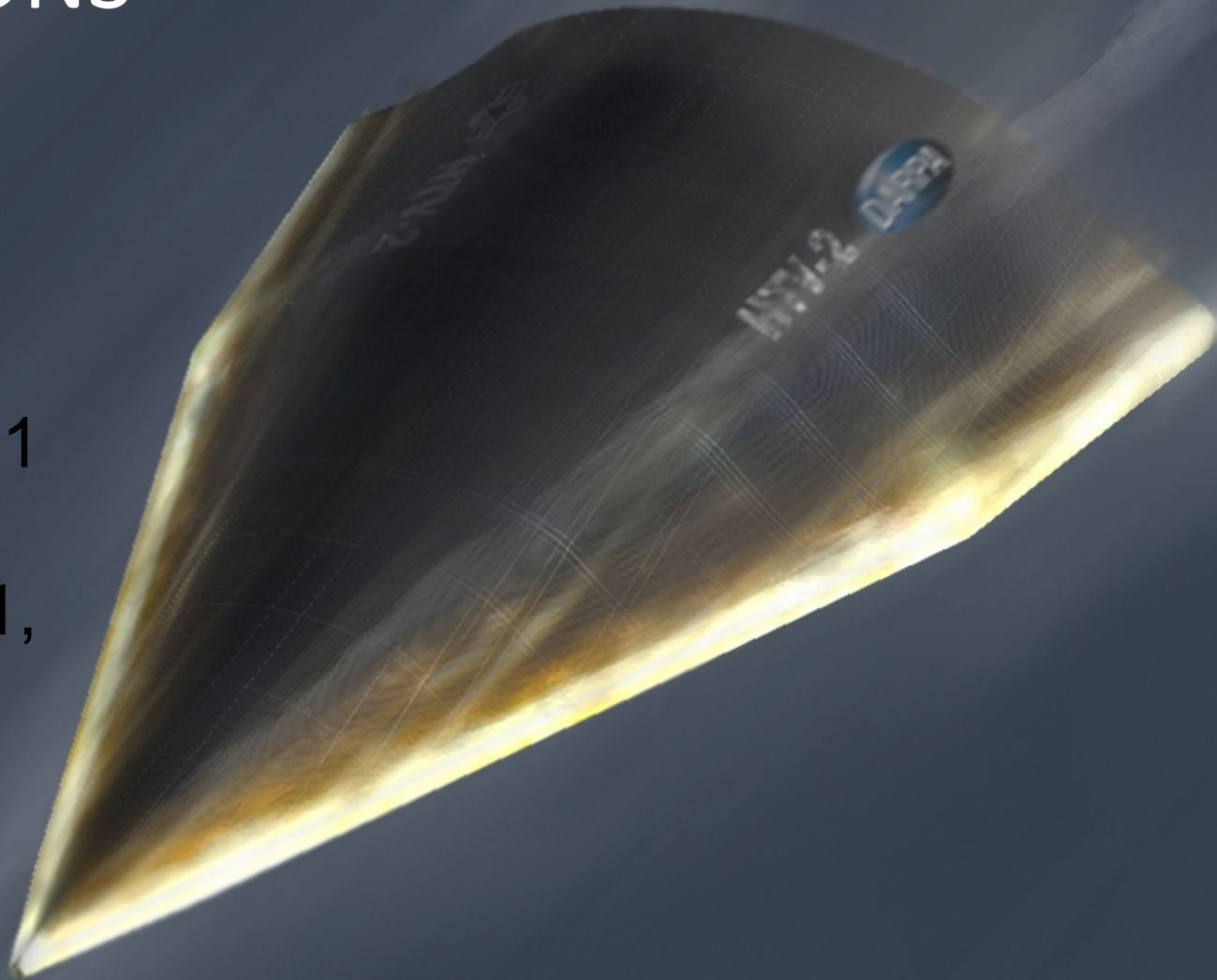
USA: Tomahawk SLCM

Russia: Kalibr SLCM



BOOST-GLIDE ADVANCED HYPERSONIC WEAPONS

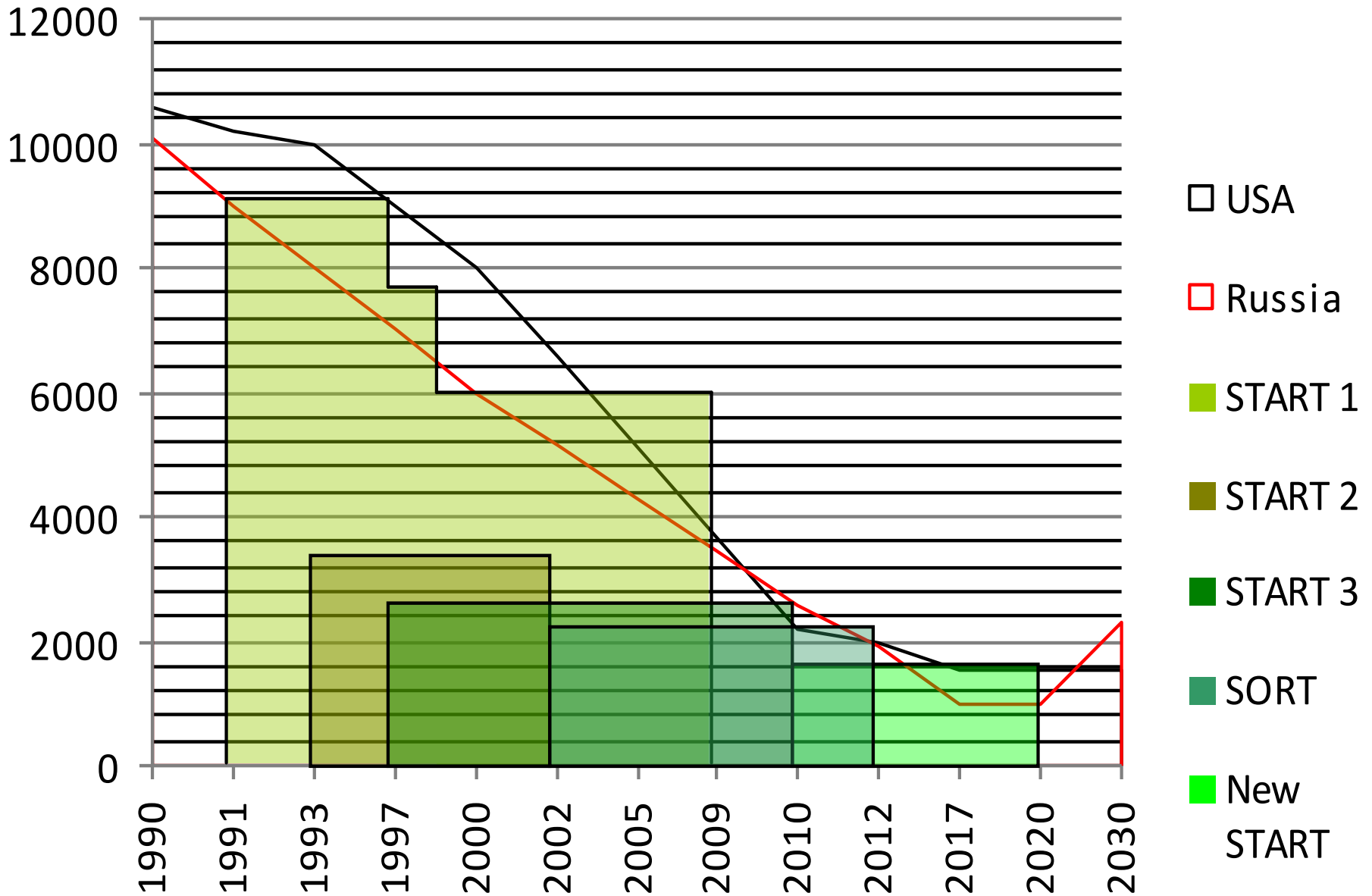
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CONCEPTUAL INNOVATIONS

- U.S. and recently Russian concepts of “conventional” or “pre-nuclear” deterrence;
- Russian strategy of “air-space war”;
- Concepts of “escalation for de-escalation” (Russia) and “escalation dominance” (U.S./NATO)
- Concepts of “selective/limited” strategic nuclear strikes and “tailored nuclear options”.
- Nuclear war may be fought and could be won.

Strategic nuclear warheads and treaties' ceilings (corresponding counting rules)



NCLEAR DESTRUCTIVE POTENTIALS

1989

U.S. 22,000 warheads – 20,000 MT

U.S.S.R 30,000 warheads - 35,000 MT

2017

U.S. 5,000 warheads – 900 MT

Russia 4,000 warheads - 700 MT

Winning nuclear war?

- Using 500 U.S. warheads (50 Mt) it is possible to wipe out 90% of Russian nuclear forces.
- Counterforce strike and retaliation in sum – 120 Mt.
- Krakatau volcano eruption in Indonesia in 1883 – 150 Mt.
- No global catastrophe, no nuclear winter...
- (But even 120 Mt = 8 000 “Hiroshimas”)

In 1989 the aggregate destructive power of U.S. and Soviet nuclear forces was equal to 3 700 000 Hiroshima bombs of August 6, 1945
In 2017 – “only” to 110 000



Limited nuclear strikes

- Russia's Military Doctrine reserves the right to use nuclear weapons in response to "aggression against the Russian Federation with the use of nonnuclear weapons, when the state's existence is put under threat," but it does not specify the scale of such nuclear weapons use. ("Voennaya doktrina Rossiiskoi Federatsii.")
- "The limited nature of the initial nuclear impact... is designed not to embitter, but to sober the aggressor, making it stop the attack and get down to negotiations. The opponent's reaction is calculated ... as a limited nuclear strike.... After all it was the United States where the concept of a limited nuclear war was born." (D. Akhmerov, Ye. Akhmerov, M. Valeev, "Aerostat – drug ' Sarmata' " [Balloon – a Friend of "Sarmat"], *Voenna-Promyshlennyi Kur'er*, Oct. 12, 2016, <http://vpk-news.ru/articles/32887>.)
- The U.S. concept of "tailored nuclear options for limited use." (Daryl G. Kimball, "World War III? Into Uncharted Territory, " *Global Research*, Feb. 4, 2017, <http://www.globalresearch.ca/world-war-iii-trumps-authority-to-use-nuclear-weapons-let-it-be-an-arms-race-we-will-outmatch-them-and-outlast-them-all/5572887>;))

Sarmat liquid-fueled silo-based heavy ICBM system



Long-Range Stand-OFF Weapon



Mead Course Ground Based
Interceptor (Alaska, California)



CHANGING MENTALITY

- Since early-1960s till mid-1980s nuclear first use was designed to stop or preempt a large-scale aggression, and considered a quantum jump over threshold to nuclear Armageddon.
- Presently it is perceived as consecutive phases of smooth continuum: local conventional conflict - large-scale conventional (air-space) war - limited/selective nuclear strikes and offensive/defensive operations (with possibility of de-escalation).
- “Nuclear threshold” together with “nuclear taboo” are increasingly blurred. Easy-going attitude and loose talk about nuclear weapons is the new fashion.

What should be done?

1. Salvage the INF Treaty by agreeing on new verification procedures.
2. Resume START talks after 7 years pause (the longest since 1969);
 - Boost-glide systems under ceilings;
 - ALCMs under new counting rules;
 - SLCMs under confidence –building measures.

Save strategic stability by updating it

- In the context of the talks on the follow-on START update the notion of strategic stability of 1990.
- As a start Russian and American leaders should reconfirm unequivocally the conviction of their predecessors of the 1970s and 1980s that “nuclear war cannot be won and must never be fought”.
- More to follow.

Thank you!