

Written by John Hallam  
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### TAKING THE APOCALYPSE OFF THE MENU

For well over a decade now, the issue of the operating status of nuclear weapon systems, (otherwise known as 'operational readiness' or nuclear 'posture'), has been an arcane-sounding item on the global nuclear disarmament agenda: An arcane item that just happens to be about the end of the world.

Since before the turn of the century, it has been a regular component of disarmament initiatives at NPT review conferences: It was part of the Year2000 NPT Review Conferences '13 points', and once again figured (a bit more prominently this time), in the Final Declaration of the 2010 NPT Review Conference. It features in a number of regular UN resolutions, notably India's Reducing Nuclear Dangers, the NAM resolution, the Japan-Australia Renewed Determination resolution, and of course in the Chile-Malaysia-New Zealand-Nigeria-Switzerland resolution on Operational Readiness of Nuclear Weapons Systems.

So why is an 'obscure' concern about 'arcane' aspects of US and Russian nuclear 'posture', of such literally apocalyptic importance?

The US and Russia have, since the early 60's, maintained their nuclear forces in a 'ready-to-launch' posture. Back in the 60s, this still meant that once a decision had been taken to launch, the actual process might still take up to 24 hours. Colonel Yarynich credits this with a positive outcome to the Cuban Missile crisis – Much shorter launch times, he suggests, might, possibly, have been fatal.

Ever since the '70s or maybe even the late 60's however, it has been possible to launch missiles at literally minutes, and finally seconds, notice. (Russian ICBM launch times are now, according to Col Valery Yarynich, specified in seconds).

Together with the computerization of the entire nuclear command and control system that has taken place since the 60's, the emphasis by cold-warriors on both sides (and now by post-cold-warriors), on the need to launch in seconds if your early warning systems tell you that the other fellow has launched, had led to the terrifying possibility of nuclear war by computer error. Indeed, I would argue that it has created a situation in which:

- 'deliberate' nuclear war is hardly credible at all
- INADVERTENT nuclear war via malfunction and miscalculation is all too credible.

Via the large-scale destruction of cities, cities being the 'default' target of nuclear weapons, and the 150 million or so tonnes of very

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black soot injected into the stratosphere by their incineration, this would in turn bring about the destruction of both civilization and much else besides. Given large enough arsenals and the destruction of enough cities it could possibly be (human)species-ending.

And it has come awfully close to taking place on a number of occasions, not all of them during the cold war.

An examination of some of the exact details of some of these events may lead the more theologically inclined of us to ponder divine providence. However, I seem to remember writing somewhere that while looking at these events MAY lead some of us to believe in miracles, (or just that we have been most improbably lucky and that we really shouldn't be here), even if we do decide to believe in miracles, maybe we ought not to rely on there being an infinite supply of said miracles.

Let's look at a couple of examples of what I mean. Both these events took place in Russia. However, there is an ample supply of equally terrifying near-misses from the USA, and data on these from 1985 onwards is now classified.

At half-past-midnight Moscow time, Colonel Stanislav Petrov, a young, bright, rapidly rising designer of nuclear command and control systems, was starting his regular 'hands-on-experience' monthly shift at the Serpukhov-15 early warning station near Moscow. He shouldn't really have been on duty at that particular time – He'd swapped his shift with someone junior to him who inevitably would have 'gone by the book', and we wouldn't be here to talk about it.

Suddenly, lights flashed, sirens wailed, and a large map of the USA on the wall of the station lit up showing that the US had launched from North Dakota.

It was the height – or depth – of the cold war at the time. Reagan had just given the 'we've outlawed the Soviet Union, we start bombing in five minutes' quip over a radio show. The Kremlin was utterly paranoid that the US and NATO would mount a first strike. KAL-007 had just been shot down over Kamchatka. The apocalypse was most definitely on the agenda.

Colonel Petrov had a big decision to make – and some very short minutes to make it in.

He said later 'I had a feeling in my gut that there was a mistake somewhere'.

So, contrary to the standing orders he'd helped to write, he did not take the steps that would have initiated a nuclear response from between 5000 and 15000 warheads, and turn the US and its allies to rubble and dust roughly 60 times over. Instead, Colonel Stan reported a 'glitch' and sat down to wait the longest 20 minutes a human could wait. As he waited he felt his commanders chair to be 'on fire'. As the last seconds ticked out and nothing happened he felt his body turn to rubber.

A highly unusual formation of exactly vertical clouds directly over the US launch sites in North Dakota had looked to the then state of the art Soviet satellite surveillance system, exactly like a series of US launches.

In 1995, the Norwegians decided to launch a weather research rocket to study the Aurora Borealis. It just happened to be the first stage of a cast-off US ICBM. The Norwegian Ministry of Science DID send a letter to the Russian defense ministry – evidently it did not reach the right people.

Russian perimeter radar picked up the rocket, as it was trained to do, seconds after launch.

And, as it was trained to do, it assumed it was a US submarine-launched missile that would either

- (a) 'Take out' (vaporize) the Kremlin and much of Moscow
- (b) Explode in space over European Russia and take things back to pre-electrical days with electromagnetic pulse.

The alarm this time went right up to the top, and Boris Yeltsin and his aides opened the nuclear briefcase, and, panic-stricken, debated what to do.

Finally somebody suggested waiting an extra minute, and in that extra minute, the rocket plunged back into the arctic ocean just like the letter from the Norwegian ministry of science said it was going to do.

Everybody exhale.

This incident in fact led to the negotiation of an agreement between the US and Russia to establish a 'Joint Data Exchange Center'(JDEC), in which, as it was originally envisaged, Russian officers would watch US radar screens, and US officers would watch Russian radar screens.

The agreement is such a wonderful idea that the US and Russian

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governments have reaffirmed it in various forms four times, most recently between Obama and Medvedev. There is just one problem.

It has not actually been done, even now. JDEC, agreed by everyone to be a great idea, does not actually exist.

By now, in 2012, the last time the Operational Readiness resolution went through, 152 governments put their names on the side of those who want US and Russian nuclear weapons taken off high alert and only three (US, France and the UK), voted 'NO' (and with France and the UK having already changed the 'notice to fire' from 'minutes' to 'days'). With such a nearly unanimous call for de-alerting, in which even two out of three naysayers have in fact de-alerted, it is reasonable to ask what is it that prevents progress on this truly existential issue.

Why, in 2012, with the cold war supposedly 23 years in the past, do the US and Russia 'need' to keep just under 1000 warheads each (yes, the numbers have gone down and that is good) – on the same high alert that they did in the 1980s – in a nuclear posture that but for Colonel Stan and maybe other unknown heroes, could have ended the human species? Do the US and Russia STILL need to launch silo-based ICBMs in 'a few dozens of seconds'?

The reason that is usually given – and that was cited in the 2010 Nuclear Posture review as the reason for not lowering nuclear posture – is that during a crisis, there might be a 're-alerting race'.

It is generally not asked what kind of crisis between the US and Russia might now involve threats of mutual incineration over timescales measured in minutes, or what might be the credible political or security context for such a crisis. Indeed, there isn't one.

There are two powerful responses to this 're-alerting race' crisis argument.

One is that in any case during such a crisis, even forces that are NOT routinely kept on high alert would be 'generated'. Submarines would put to sea. Mobile Topol-M's would rumble out into the Taiga. These would send exactly the same 'signals' to the other side as a 're-alerting race' would. There really is no difference, except that with missiles off high alert, fatal errors are much much less likely. In this sense, the 're-alerting race' argument is a 'straw man'. The other response is to war-game it, with missiles off alert. A real nuclear war, as Colonel Yarnich remarks, can take place only once,

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But we can do computer simulations as often as we like.

This shows decisively, and with quantitative rigor, by means of a computer-generated '100 nuclear wars', that even if one side remained de-alerted, and the other side launched a surprise attack completely 'out of the blue', (A 'splendid first strike'), (again we must ask where could such an event sequence credibly come from, even with a Romney presidency – from perhaps, a latter-day Jesse Helms, wanting to speed up the second coming ???) - always, the response from the de-alerted side, even without re-alerting at all, and completely excluding any contribution from submarine launched missiles or mobile Topol-M's – will be utterly devastating to the cities of the attacking side.

There is thus no DELIBERATE way this would ever take place, while the fact that nuclear weapons are off alert would exclude INADVERTENT apocalypses. In effect, the apocalypse would be off the menu of nuclear briefcases.

A furious rearguard action has been fought by conservative forces and some military leaders to prevent de-alerting.

However a number of retired military leaders embrace it. Former STRATCOM commander General Eugene Habiger, and General Cartwright, as well as Bruce Blair, and in Russia, Generals Esin, Zolotarev, and Dvyorkin favor taking US and Russian land-based ICBMs off alert.. Cartwright is-along with Blair- (I believe quite rightly)- in favor of getting rid of land-based ICBMs altogether.

The arguments made in favor of retaining current nuclear postures for US and Russian land-based ICBMs are, I believe, quite without substance. Taking those vulnerable and de-stabilizing silo-based ICBMs off high alert (or as Cartwright suggests getting rid of them completely), would be a giant leap toward nuclear zero that would take the apocalypse off the global menu.

It should have been done decades ago.

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