

## AGA 4: North Korea

Time: Thursday 14:00–16:15

Location: H-HS XVII

**Invited Talk** AGA 4.1 Thu 14:00 H-HS XVII  
**Denuclearization of the Korean Peninsula** — ●TARIQ RAUF — Vienna

Tariq Rauf (former Head of Verification and Security Policy, International Atomic Energy Agency, responsible for the Director General's report on Application of Safeguards in the Democratic People's Republic of Korea). Nuclear weapons were first introduced into the Korean Peninsula in January 1958 by the US through its defence alliance with South Korea. During the inter-Korean war, the US threatened three times to use nuclear weapons against DPRK. There was no DPRK nuclear weapon programme until decades later. South Korea's nuclear weapons research programme was wound up in 1975 with its ratification of the Non-Proliferation Treaty (NPT). In August 2004, the IAEA cited South Korea for previously undeclared nuclear activities involving the reprocessing of nuclear material. Between 9 October 2006 and 3 September 2017, the DPRK carried out six nuclear weapon tests and more than 100 missile tests. Until very recently, annual US-South Korea military exercises had been expanding both in their scope and numbers of troops, including decapitation strikes, and invasion and occupation of major military and other strategic locations in North Korea. After early mutual threats and insults, DPRK leader Kim Jong Un and US President Donald Trump have held three bilateral summits but as yet no agreement has been possible on denuclearization of the Korean peninsula. This presentation will cover developments regarding the DPRK's nuclear and missile programmes, and assess the prospects and possible measures for achieving the denuclearization of the Korean Peninsula.

**Invited Talk** AGA 4.2 Thu 14:45 H-HS XVII  
**Analysis of two controversial putative nuclear tests: North Korea 12 May 2010 and South Indian Ocean 22 September 1979** — ●LARS ERIK DE GEER — Stockholm

In mid-May 2010 CTBT stations at Okinawa, Japan and Ussuriysk, Russia detected very clear radionuclide signals. The nuclides were all daughters of very short-lived xenon isotopes that are abundantly produced in fission. With no other products seen it indicated a very rapid fission event that forcefully pushed the xenon atoms out through a filtering medium that stopped everything non-noble. Later there were corroborating seismic and infrasound evidence published and by using the famous duck test one could say that if it smelled like a nuclear test, shook like a nuclear test and sounded like a nuclear test then it probably was a nuclear test. Forty years ago there was a similar occasion in South Indian Ocean. A satellite saw a double-humped light flash, hydrophones heard a strong signal and iodine-131 was found in Australian sheep thyroids. Applying the duck test again with the three verbs exchanged to "looked, sounded and tasted" we get the same conclusion: it probably was a nuclear test

**Invited Talk** AGA 4.3 Thu 15:30 H-HS XVII  
**The DPRK's SLBMs and SRBMs - A Brief Update on North Korea's Missile Activities** — ●MARKUS SCHILLER — ST Analytics GmbH, München, Germany

After having successfully launched the Hwasong-15 road-mobile ICBM in November 2017, the Democratic People's Republic of Korea (DPRK) apparently adhered to a self-imposed missile launch moratorium for almost 18 months. In May 2019, though, North Korea started to launch missiles again; about two dozen were fired over the summer months of 2019. However, contrary to 2017, these launches were limited to Short Range Ballistic Missiles (SRBMs) and a Submarine-Launched Ballistic Missile (SLBM), and relied on technologies that had nothing in common with the previous ICBM activities.

This presentation will give an update on the observed North Korean missile activities since 2018, including an attempt to distill some possible strategic motives for these activities.