New START Treaty and Telemetry

Bureau of Verification, Compliance, and Implementation
Fact Sheet
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Key Point: Telemetry is not needed to verify compliance with the New START Treaty. Nevertheless, the U.S. and Russia will exchange telemetric information periodically on ICBM and SLBM launches.

What is Telemetry?:

When flight testing ICBMs and SLBMs, the United States and Russia routinely make on-board measurements of certain technical parameters of the missiles, such as missile acceleration, temperatures, and stage separation times. The data obtained from these measurements are broadcast from the missile during flight for collection by ground- or sea-based receivers. The collected data is then analyzed to assess the performance characteristics of the missile system. The broadcast data is referred to as telemetric information, or "telemetry."

Telemetry under the START Treaty: To monitor the central limits, prohibitions, and restrictions of the START Treaty, which expired on December 5, 2009, it was necessary for the Parties to be able to assess missile parameters such as throw-weight, number of reentry vehicle releases, and accelerations. These parameters could be more effectively monitored by analyzing telemetric information obtained during missile flight tests. Therefore, the requirement to share telemetry was a critical element of START's verification regime. Both sides agreed, with limited and specified exceptions, that they would not engage in deliberate denial of telemetric information. The Parties to START also agreed to exchange recordings of telemetric information collected during all ICBM and SLBM flight tests, along with equipment and information needed to interpret and analyze the recorded data.

Telemetry under the New START Treaty: The obligations in the New START Treaty are different from those in START. None of the new Treaty's specific obligations, prohibitions, or limitations requires analysis of telemetric information to verify a Party's compliance. For instance, the Treaty does not limit the development of new types of missiles, so there is no requirement to determine the technical characteristics of new missiles such as their launch weight or throw-weight in order to distinguish them from existing types. Nevertheless, to promote openness and transparency, the Parties have agreed to exchange telemetric information on an agreed equal number (up to five annually) of launches of ICBMs and SLBMs, as well as space launch vehicles that utilize ICBMs or SLBMs, or their first stages. Early each year in the Bilateral Consultative Commission, the Treaty's implementation body, the Parties will discuss the issue of the exchange of telemetric information on launches of ICBMs and SLBMs, focusing on the launches conducted in the previous calendar year, and agree on the number of those launches for which telemetric information will be exchanged. Then, the Party conducting the launches will determine the specific ICBM and SLBM launches from the previous year for which it will provide telemetric recordings. Recordings of telemetric information collected during the flight of those missiles will be provided along with interpretive data to allow the monitoring Party to extract useful information regarding the performance parameters measured onboard the missile during its flight test.