ID: Type: **Oral**

T3.2-O1. Emerging Small Satellite Constellations for Verification Support

Large, agile constellations of small Earth-imaging satellites are an emerging trend in the commercial earth observation industry. This trend has important potential for supporting nuclear test monitoring efforts due to the ability to rapidly and affordably collect imagery or HD video of a suspected nuclear test site. The capability could be useful both before and after an explosive event, due to the foreseen ability to access large historical archives of global imagery, as well as to efficiently task small satellites to a site in the aftermath of an event. The public and commercial nature of these information resources makes them of particular valuable to international organizations with large and diverse membership bodies for the increased ability to share the information amongst member states and freely access the sources. The presented project will be an examination of how high temporal satellite imagery and video provided by Google/Skybox Imaging can support international treaty verification in the areas of non-proliferation, arms control and disarmament. The work will feature a case study on the DPRK's Punggye-ri test site, detailing the unique insight small satellites can provide in monitoring testing activities, for tasks such as establishing the chronology of vehicles, tunneling activities, and ground disturbance.

Primary author: PATTON, Tamara (Vienna Center for Disarmament and Non-Proliferation)

Presenter: PATTON, Tamara (Vienna Center for Disarmament and Non-Proliferation)

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