

# Options for verification of a ban on weapons in space

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# Verification: Key objectives

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- Detecting and deterring violations
- Development of legal and institutional framework for transparency and accountability in space

# Effective verification

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- Definition:
  - “What do we mean by effective verification? We mean that we want to be sure that, if the other side moves beyond the limits of the Treaty in any militarily significant way, we would be able to detect such a violation in time to respond effectively and thereby deny the other side the benefit of the violation.” (Paul Nitze, INF Treaty hearings, 1987)
- Timely detection of militarily significant violations
  - Large constellations
  - Launch patterns
  - All significant Soviet cold-war project were identified

# Transparency

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- Proposed in the PPWT draft
- Would help narrow down possibilities and detect noncompliance
- Disclosures
  - Mission profile, key spacecraft characteristics, orbital parameters and maneuvers
- Intrusiveness
  - Information barrier technologies

# Limits on testing

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- Detection of tests
  - Relatively easy: Kinetic kill, close approaches
  - More difficult: Directed energy, ground-based ASAT
- Importance of transparency and confidence-building measures

# Institutional framework

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- Shared space situational awareness
- Access to physical assets
  - Radars, optical tracking facilities
- Joint Data Exchange Center
- Model institutional arrangements
  - IAEA, CTBTO