

K24(A76)

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Proposal Abstract K24(A76)

1. **Arms Control Problem:**
Nuclear weapons - comprehensive test ban
- peaceful nuclear explosions
2. **Verification Type:**
Seismic sensors
3. **Source:**
Bolt, Bruce A. Nuclear Explosions and Earthquakes: The Parted Veil.
San Francisco: W.H. Freeman, 1976.
4. **Summary:**
This work focusses on underground nuclear explosions. It is written with the non-expert in mind and covers the following areas:
 - (1) The history of international negotiations regarding a test ban.
 - (2) Background information on the scientific principles involved in nuclear explosions in general as well as specifically those underground.
 - (3) Background information on seismology.
 - (4) Discussion of seismic monitoring capabilities (The identification capability in the Northern Hemisphere was about magnitude 4.5 by 1975 using unclassified seismological networks, according to Bolt).
 - (5) Discussion of evasion tactics such as concealment in natural earthquakes, simulation, and decoupling.
 - (6) The history and potential of peaceful nuclear explosions (PNEs are likely to prove attractive for excavation of water storage, irrigation and large-scale quarrying purposes, concludes Bolt).
 - (7) The environmental dangers of underground tests.