

K4(G65)

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Proposal Abstract K4(G65)

1. Arms Control Problem:

Nuclear weapons - comprehensive test ban

2. Verification Type:

- (a) Seismic sensors - international network
- (b) International exchange of information
- (c) International control organization

3. Source:

Sweden. "Memorandum on international cooperation for the detection of underground nuclear explosives". ENDC/154, 2 September 1965.
See also: ENDC/PV.222, 10 August 1965.

4. Summary:

The paper proposes the creation of a "detection club" to extend international cooperation in seismology for the purpose of detecting underground blasts. The paper is concerned only with the detection aspect of seismic verification.

Despite improvements in seismic monitoring, few nations, if any, would have the capability to monitor signals over the entire globe. To enable all states to monitor a CTB treaty, data from several seismic stations widely distributed and suitably sited would have to be made available.

The "detection club" would be essentially an international data service, providing access to first class data for independent analysis. If such cooperation began before the test ban enters into force, research on remaining verification problems would be facilitated.

The data should preferably come from good instruments at well chosen, globally distributed sites. Such a network could, if necessary, be based on data from selected stations in a small number of countries. It might be desirable, in order to heighten a potential violator's uncertainty, to keep some stations outside the network.

The data exchanged should be in the form of short bulletin-like messages. Results of calculations on the data should also be included. Records would be exchanged on request.

Another important element of the system is the adoption of standards for instrumentation and data formats. It might be necessary to establish some international coordinating body to cope with the large amount of data generated by existing and projected seismic stations.

Given the existence of scientific data exchange networks, the specific needs of a "detection club" might in some cases require only adjustments of present national and international efforts. Use might be made of existing global telecommunications networks (e.g. the World Meteorological Organization's network). Coordination with existing global seismological cooperative efforts would also be desirable.