

K9(G70)

K9(G70)

Proposal Abstract K9(G70)

1. **Arms Control Problem:**
Nuclear weapons - comprehensive test ban
2. **Verification Type:**
 - (a) Seismic sensors - international network
 - (b) International exchange of information
3. **Source:**

Canada. "Working paper concerning seismological capabilities in detecting and identifying underground nuclear explosions". CCD/305, 10 August 1970.

See also: Sweden. "Technical working paper offering a comparison of two systems for verification of a comprehensive test ban". CCD/306, 12 August 1970.
4. **Summary:**

On 17 April 1969* Canada suggested that countries submit to the UN Secretary General, a list of all seismic stations from which they would be ready to supply records for the purpose of monitoring a test ban. The intent was to determine existing resources available for an international seismic monitoring network. This idea was resubmitted in a more formal working paper in May 1969.** Eventually, the proposal was incorporated in General Assembly Resolution 2604 A(XXIV). The paper under discussion here (CCD/305) is an assessment of the returns made pursuant to this resolution.

Existing seismic data resources available for any international network could detect earthquakes and underground explosions down to m_b 4.0-4.2, occurring in the northern hemisphere at 50% probability. At 90% probability the detection threshold is m_b 4.5-4.7.

Identification is more difficult; the threshold in this case being potentially:

 - (1) m_b 4.0-4.4 for earthquakes at 50% probability,
 - (2) m_b 4.5-4.9 for earthquakes at 90% probability,
 - (3) m_b 5.0-5.4 for underground nuclear blasts at 50% probability, and
 - (4) m_b 5.5-5.9 for underground nuclear blasts at 90% probability.

Sweden later introduced a working paper (CCD/306) comparing that system suggested by the UK paper (CCD/296), abstract K10(G70) and that suggested by Canada (CCD/305), giving the following capability for both in terms of blast yields:

* ENDC/PV.404.

** ENDC/251. It was revised in August, 1969.