### Proposal Abstract K7(G69)

## 1. Arms Control Problem:

Nuclear weapons - comprehensive test ban - partial test ban

# 2. Verification Type:

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

#### 3. Source:

Japan, ENDC/PV.424, 31 July 1969 See also: ENDC/PV.416, 3 July 1969.

## 3. Summary:

A CTB treaty should be accomplished by two steps. First, the nuclear weapon states would agree to prohibit underground tests above seismic magnitude 4.75. According to the consensus at a SIPRI meeting in the summer of 1968 there is almost a 100 per cent certainty of detecting a blast over this magnitude. Uncertainty remains for any event below  $m_b$  4.0 (equivalent to a 2 kiloton explosion in granite, 6 kt in tuff, or 25 kt in partially saturated alluvium). This first step would include a commitment by the parties to cooperate with each other in order to devise within a certain period of time a system of verification which would be capable of monitoring explosions below  $m_b$  4.0. The second step would be a complete ban on underground nuclear tests when a system of verification had been worked out.

International exchange of seismic data would play an essential role in both the limited and complete test bans. There is a need to examine present seismic observatories and international exchange of data. There also is a need to standardize measurements and to designate certain observatories to provide data. All states should agree to make seismic data internationally available on a daily basis. This exchange would include complete seismic records to ensure credibility of the data.

An international centre would be required which would report the data promptly to parties since speed is of critical importance.\* In addition to this quick reporting centre it would be necessary for another international monitoring centre to objectively analyze seismic data. This center would have four main functions:

- (1) to examine reports of the quick reporting center,
- (2) to collect necessary data on suspicious events,

<sup>\*</sup> Reference is made to similar statements by the UK and by Canada in ENDC/PV.404, 17 April 1969.