

discussions could now take place on the basis of an adequate verification system not requiring on-site inspections for the detection of underground tests. She based her assertion on the following developments: (a) improvement in tele-seismic instruments and increase in the number of array stations; (b) increase in world interest in exchanging seismic data; (c) recent improvements obtained in the methods of interpreting the data collected; and (d) the possibility of surveillance from satellites. By an "adequate verification system" the Swedes understood a system which could differentiate between nuclear explosions and natural occurrences like earthquakes and which would deter violations by a high probability of discovery. However, if agreement could not be reached for political rather than technical reasons, the nuclear powers should make a frank declaration to this effect, indicating whether national security considerations were a factor in their positions.

To substantiate its position, the Swedish delegation subsequently circulated a technical paper outlining the basis for the claim that there were no longer technical and scientific reasons preventing the conclusion of a comprehensive test ban.

The U.S. delegate did not accept the scientific basis of the Swedish argument. Mr. Foster stressed the fact that, despite the efforts of U.S. scientists, there were still serious detection and identification problems. Events below a certain critical level could not easily be detected, whereas events occurring in some regions of the earth, particularly in certain parts of the Soviet Union, could not be identified with certainty. There was still danger that some earthquakes might be identified as explosions, and that some explosions might be mistaken for earthquakes. The former possibility, perhaps leading to unwarranted accusations of agreement violation, had been mentioned by the Swedish representative. The U.S. delegate dealt mainly with the latter possibility, which he considered more dangerous from the point of view of national security.

Subsequently, the British and Canadian delegations in turn informed the ENDC of the results of independent research carried out by scientists in each country. Both groups had come to conclusions quite similar to those reached by their U.S. counterparts — namely, that the Swedish research paper was valuable but not conclusive. Both reports considered that this study led to an interesting avenue of research, but they expressed the opinion that the state of knowledge in this field was not advanced enough to justify the conclusions reached by the Swedish scientists concerning a comprehensive test ban.

### **Conclusion**

The 1967 session of the ENDC was fruitful in that finally a mutually-agreed draft text of a non-proliferation treaty, even though an incomplete one, was tabled by the U.S. and Soviet Co-chairmen. But it was also disappointing to Committee members not only because complete final agreement was not reached by the Co-chairmen on the Draft Treaty but also because the latter had not yet