

## Figure 14 For example...

The initial results of the multi-year project funded by the Verification Research Programme at the University of Toronto, concentrating on the use of high frequency seismic signatures for verifying a nuclear test ban, were reported in the June 1987 issue of the University of Toronto Research Highlights:

### ***Researchers Discover Method for Monitoring Small Nuclear Blasts***

*Researchers in the Department of Physics have made significant progress in two areas considered vital to a verifiable nuclear test ban treaty: improved accuracy for estimating explosive yield size and a method to differentiate small nuclear explosions (a few tons of TNT) from small earthquakes.... Drs. Kin-Yip Chun, Gordon West and Richard Kokoski used mineblast and earthquake data to devise a mathematical method that eliminates the amplitude fluctuations from seismic wave readings.... Using their mathematical method, the researchers have devised a way to recapture wave frequencies that are lost as the seismic waves from an explosion or earthquake move out from the source.... If their methodology is confirmed, it will eliminate one of the most irksome problems in the path of a Low Threshold Test Ban Treaty, considered by some to be a necessary transitional step toward a Comprehensive Test Ban Treaty....*

This type of innovative research, in concert with the on-going activities of Canadian experts in the Group of Scientific Experts in Geneva, the upgrading of the analytical capabilities at the Geological Survey of Canada in Ottawa, the sponsorship of specialist workshops on seismic verification, and the modernization of the Yellowknife seismic array, combine to form a comprehensive research package aimed at developing an effective verification system for a global nuclear test ban.

