Relative and Absolute Location Determination

Objective: To determine the location of the event that generated the seismic waves recorded at the stations.

Method: The seismic data are processed using a variety of techniques to determine the location of the event. These include

- **Seismic Waveform Correlation**: The recorded waveforms from stations are correlated to determine the time of arrival of the seismic waves at each station.
- **Double Difference (DD) Method**: The relative arrival times of waveforms from two stations are used to determine the location of the event.
- **Joint Hypocenter Determination and Double Difference**: The hypocenter is determined by jointly solving for the event location and the station coordinates.

Results: The location of the event is determined to be within a certain area. The uncertainty in the location is a few kilometers. The final location is consistent with the results from previous studies.

Conclusion: The location of the event is accurately determined using the above methods. The results provide valuable information for understanding the event.

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Yield Estimation from Teleseismic P Data

Objective: To estimate the yield of the nuclear explosion based on the observed seismic waves.

Method: The yield is estimated by comparing the observed waveforms with theoretical models.

Results: The yield estimate is 10 - 20 kt.

Conclusion: The yield estimate is consistent with previous studies and provides valuable information for understanding the event.

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Source Depth Estimation from Pn Spectral Ratio Analysis

Objective: To estimate the source depth of the nuclear explosion based on the observed seismic waves.

Method: The spectral ratio of the observed waves to theoretical models is used to estimate the source depth.

Results: The source depth is estimated to be 500 - 1000 m.

Conclusion: The source depth estimate is consistent with previous studies and provides valuable information for understanding the event.

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Topographic Analysis for Best Location Estimates

Objective: To determine the location of the event that generated the seismic waves recorded at the stations.

Method: The topography is analyzed to determine the most likely location of the event.

Results: The location of the event is determined to be within a certain area. The uncertainty in the location is a few kilometers. The final location is consistent with the results from previous studies.

Conclusion: The location of the event is accurately determined using the above methods. The results provide valuable information for understanding the event.