# PERFORMANCE EXPECTATIONS FOR THE TRANSPORTABLE ARRAY IN ALASKA Modeling Magnitude of Completeness and Location Accuracy Nick Ackerley, Ottawa, Canada





# **NNN Nanometrics**

- -110 N -120 6 -130 4

## **RESULTS AND DISCUSSION**

Three significant array configurations were modeled:

a) existing stations

b) the proposed transportable array

c) a hypothetical permanent array

The model of the spatial variability of MC of the existing network matches observations in southern Alaska quite well. Cursory inspection shows agree- ment within 0.3 magnitude units. The model further predicts a MC greater than M4 over much of northern and western Alaska.

The transportable array with its typical 70 km spacing should have a (temporary) MC well below M3 across the mainland. The model shows how extension of the TA into the Yukon has a clear benefit in terms of illuminating the Tintina fault.

A permanent array with a maximum station spacing on the order of 300 km will represent a significant improvement on existing coverage of the north and west of Alaska. With judicious station retention the MC can be maintained below M3.5 in northern and western Alaska.

No validation of location accuracy results for the existing network has yet been undertaken. A more detailed comparison of the modeled and actual MC is also needed. It may then become necessary to refine the velocity model and other modeling inputs.

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