



## **Rayleigh wave group velocity tomography in southern Greenland from correlation of ambient seismic noise.**

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Data from permanent and temporary seismograph stations in south Greenland have been used to determine the Rayleigh wave group velocities between 31 different station pairs by the cross-correlation technique. By cross-correlating noise sequences from ambient seismic noise between pairs of stations we extract the Rayleigh wave energy component of the Greens function. Prior to the cross-correlation data are band-pass filtered from 2 Hz to 100 s, time windows including recordings of earthquakes greater than 7.0 Mw are not used and amplitudes above a specific threshold are cut down. Data is cross-correlated in one month time windows and correlations of several months are stacked. The Rayleigh wave group velocity is obtained for the short periods of 5-10 s and 10-20 s and the longer periods of 30-50 s. A tomography inversion of the Rayleigh wave group velocities at these three frequency intervals is presented. These results provide new information on the structure of the crust beneath the Greenland ice cap.