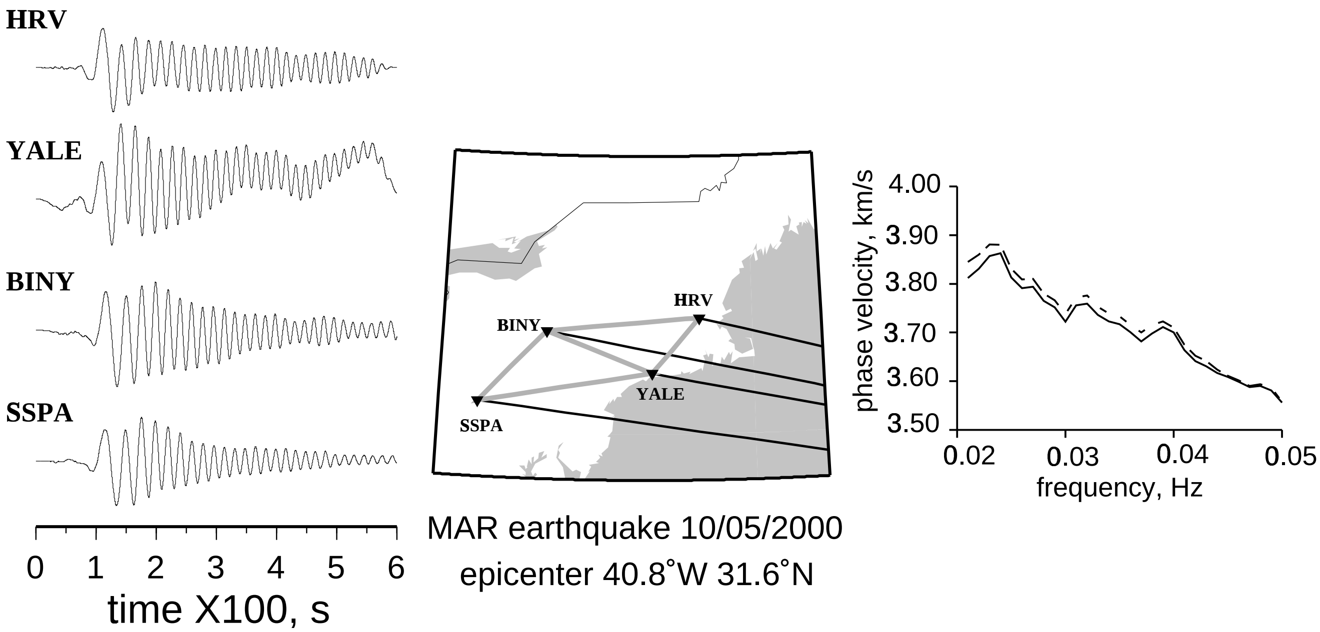

Figure 5. (left) Well-dispersed Raleigh wave from a Mid-Atlantic Ridge earthquake observed on four vertical-component broadband stations in Northeastern US. (middle) Map showing four stations (HRV, YALE, BING, SSPA), which define southern and northern trianges. (right) Local estimate if phase velocity for each triangle, computed with the differential phase method. Note that the northern triangle (solid curve) has systematically lower velocities.

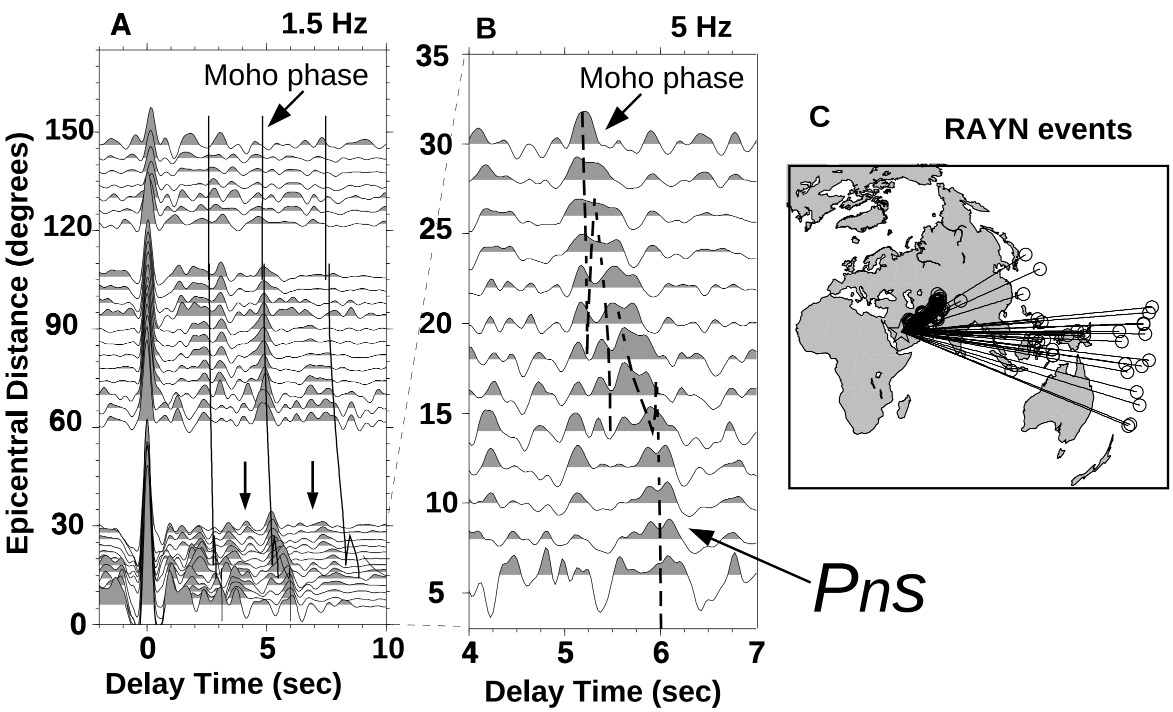

Figure 6. A) Radial receiver functions (RF) computed for GSN station RAYN (Ar-Rayn, Saudi Arabia), averaged in epicentral-distance bins with 50% overlap (10° bins for 60°<Δ < 160°; 2° bins for 5°<Δ <30°). Results for broadband data (channel BH, 20 sps) are shownfor eastern backazimuths, with RF spectra limited at 1.5Hz. Superimposed delay curves are computed for the three P-S converted phases that would arise from interfaces at 21, 41 and 72 km depth in a simple velocity structure based on the model for RAYN suggested by Levin & Park (2000a). The phase velocities of incoming *P* and *Pn* waves are computed for a source at 15 km depth using the IASPEI91 model and software. The hypothetical Moho head-wave conversion *Pn*s has a near-constant delay of ~6 s for 0°<Δ < 17°. Arrows show time interval expanded in panel B. B) Regional and near-teleseismic RAYN receiver functions, averaged in 2° epicentral-distance bins. Results for broadband data (channel HH, 40 sps) are shown for eastern backazimuths, with RF spectra limited at 5Hz. Dashed lines show delay curves for converted phases, as in A. C). Map of sources used in RF analysis.