Figure S1: Global map of geoneutrino flux from ^{238}U+^{232}Th decay in the mantle calculated for the TOMO model for all combinations of BSE and DM compositional estimates. A unique radius for the crust–mantle boundary is used (6346.6 km), flux is evaluated at radius of 6371 km and shown in TNU. Continental outlines (black) and plate boundaries (white) are plotted. Middle column calculated using central values of the enrichment factor, right and left columns calculated at $\pm 1\sigma$ limits for the enrichment factor in each case. The color scale is common within each BSE estimate used. Empty maps labeled "n/a" reflect inconsistency for the particular combination of BSE and DM compositional estimates (enrichment factor smaller than one or even negative).

Figure S2: Same as Figure S1 except for the color scale, which is identical for all maps.

−1σ bound	central value of enrichment	+1σ bound

Cosmochemical BSE

Arevalo & McDonough DM

N/A | N/A | N/A

Salters & Stracke DM

N/A | N/A | N/A

Workman & Hart DM

Geochemical BSE

Arevalo & McDonough DM

Salters & Stracke DM

Workman & Hart DM

Geodynamical BSE

Arevalo & McDonough DM

Salters & Stracke DM

Workman & Hart DM

	−1σ bound	central value of enrichment	+1σ bound

Cosmochemical BSE

Arevalo & McDonough DM

N/A   N/A   N/A

Salters & Stracke DM

N/A   N/A   N/A

Workman & Hart DM

Geochemical BSE

Arevalo & McDonough DM

Salters & Stracke DM

Workman & Hart DM

Geodynamical BSE

Arevalo & McDonough DM

Salters & Stracke DM

Workman & Hart DM

TNU