



Figure DR1: Seismic reflection line ISE 9 and an interpretation of this line (for more details see Clark et al. 2007). The ISE 9 line is a North-South oriented line perpendicular to the other lines discussed in our work (for trace of the line see map above). Note that this line shows a similar crustal structure like the East-West directed lines shown in Fig. 3 and no evidence for a major transform fault limiting the Galicia Bank and the Southern Iberia Abyssal plain can be observed.

Reference cited:

Clark, S.A., Sawyer, D., Austin, J.A., Christeson, G.L., and Nakamura, Y., 2007, Characterizing the Galicia Bank-Southern Iberia Abyssal Plain rifted margin segment boundary using multichannel seismic and ocean bottom seismometer data: *Journal of Geophysical Research*, v. 112, B03408, doi:10.1029/2006JB004581.