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The thickness of the mantle transition zone beneath the Society hotpots using data from the TIARES network.

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We have conducted a seafloor geophysical observation near the Society hotpots from 2009 to 2010 as a part of the TIARES project (Tomographic Investigation by seafloor ARrray Experiment for Soceity hotpots). We deployed 9 sets of BBOBS and OBEM, 2 differential pressure gauges in the experiment. In the presentation we present a result on the mantle transition zone (MTZ) structure obtained with a receiver function analysis using broadband seismograms. A preliminary results indicates an area of a thin MTZ 200 km immediately the south to the Society hotspot (thinner than a global average by 20-30 km). The lateral dimension of the thin MTZ is about 200 km. There is another area of the thin MTZ 300 km EES to the hotspot. The thin MTZ areas are roughly correlated with slow P-velocity anomalies in the MTZ obtained by a P-wave tomography (Obayashi et al., 2014). They may represent hot mantle plumes ascending through the MTZ.