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SHALLOW CRUSTAL STRUCTURE ALONG THE IBERSEIS DEEP SEISMIC REFLECTION TRANSECT

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The seismic data of the deep seismic reflection profile IBERSEIS, which crosses the Variscan orogen of SW Iberia feature close trace spacing (35 m). Thus a relatively high resolution image of the shallow crust can be obtained. These data was complemented by piggy back recording of the Vibroseis shots by a recording system deployed by the Univ. of Paris- Sud. This system was deployed in the neigborhood of outcroping granitic intrusions and perpendicular to the main transect. This final “T” shape recording geometry provided limited 3-dimensional coverage. The joint data set has been used for velocity determination of the shallow crust using 3-D travel time inversion schemes. The velocity models present the granitic plutons as relatively high velocity anomalies which directly correlate with the surface geology. Sharp gradients in the velocity fields determined by the travel time inversions map/correlate with the contacts/sutures between terranes.