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Internal tides west of the Iberian Peninsula

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We analyze moored measurements west of the Iberian Peninsula to estimate the amplitudes of the semidiurnal internal tides on a basin-scale. The moored measurements have been collected by many researches during decades. Decay of amplitudes as the internal tide propagates from the continental slope is estimated based on the lines of moorings normal to the coast. Directions and wavelengths of the internal tides are determined from the spatiotemporal spectra at the semidiurnal frequency calculated from the data of moored temperature measurements on clusters of moorings in the middle of the Iberian Basin and south of the Iberian Peninsula. The generation of internal tides is associated with the interaction of the currents of the barotropic tide with the slopes of the bottom topography. The measurements reveal strong internal tides close to the Iberian coast. The amplitudes exceed 40 m.
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