The characteristics of ocean ambient noise in the water of Taiwan

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Abstract

The ocean ambient noise is mainly composed by the breaking bubbles generated from the surface geophysical phenomena, such as winds, waves, internal waves, and rain. In the continental shelf region, the biological and anthropogenic noises are also contributed to the overall ambient noise level. In general, the ambient noise is frequency, time, and space dependant. Several months of acoustic ambient noise data have been collected using the Passive Aquatic Listener in the water near Taiwan. These data are analyzed to describe spectral, temporal, and spatial characteristics of ocean ambient noise. The relationships between the ambient noise and its source are also studied. If the sources are identified, the acoustic data can be treated as ambient signal rather than ambient noise to describe the intensity of these geophysical phenomena.