

The solid Earth as a "window" of the atmosphere and oceans

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We have shown that Earth's free oscillations are continuously excited at the ngal order level from our spectral analysis. As a powerful excitation mechanism, the atmospheric excitation hypothesis is considered, which can well explain the amplitudes. And we have shown that the observed amplitudes of the modes coupled with atmospheric sound waves are larger than those of other modes. We have also showb the annual varaition of modal amplitudes of about 10 %. These phenomena strongly support the hypothesis. If the hypothesis is true, the solid earth can be considered as a "window" from which we can monitor the activities of the atmosphere and the oceans since it is a suitable media globally transferring the information on their activities in the seismological frequency band.