WS08_05

New Wave Seismics

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Summary

This talk will focus on the field of seismic oceanography. Seismic oceanography exploits acoustic energy reflected from temperature and salinity boundaries in the water column to map oceanic structure at unprecedented horizontal resolutions. New insights into four-dimensional ocean dynamics that marine seismic data has to date provided, along side potential future applications, will be reviewed. In addition, the challenges and opportunities presented by processing water column seismic reflection data, as opposed to sub-surface datasets, will be discussed. Advances include: estimating temporal changes in the water column during seismic data collection; quantifying noise, water turbulence and wave energy from seismic data; and inversion techniques to extract the high resolution temperature and salinity structure with precision uncertainty. Such non-conventional approaches to seismic data processing, alongside better quantifying the influence of the water column on the quality of marine seismic data, will be of interest to this community. Finally, the integration of autonomous systems into the acoustic mapping of oceanic thermohaline structure will be considered.

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Dr. Katy Sheen, University of Exeter (Penryn Campus)

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