

# Seasonal fluctuations in the secondary microseism wavefield recorded offshore Ireland

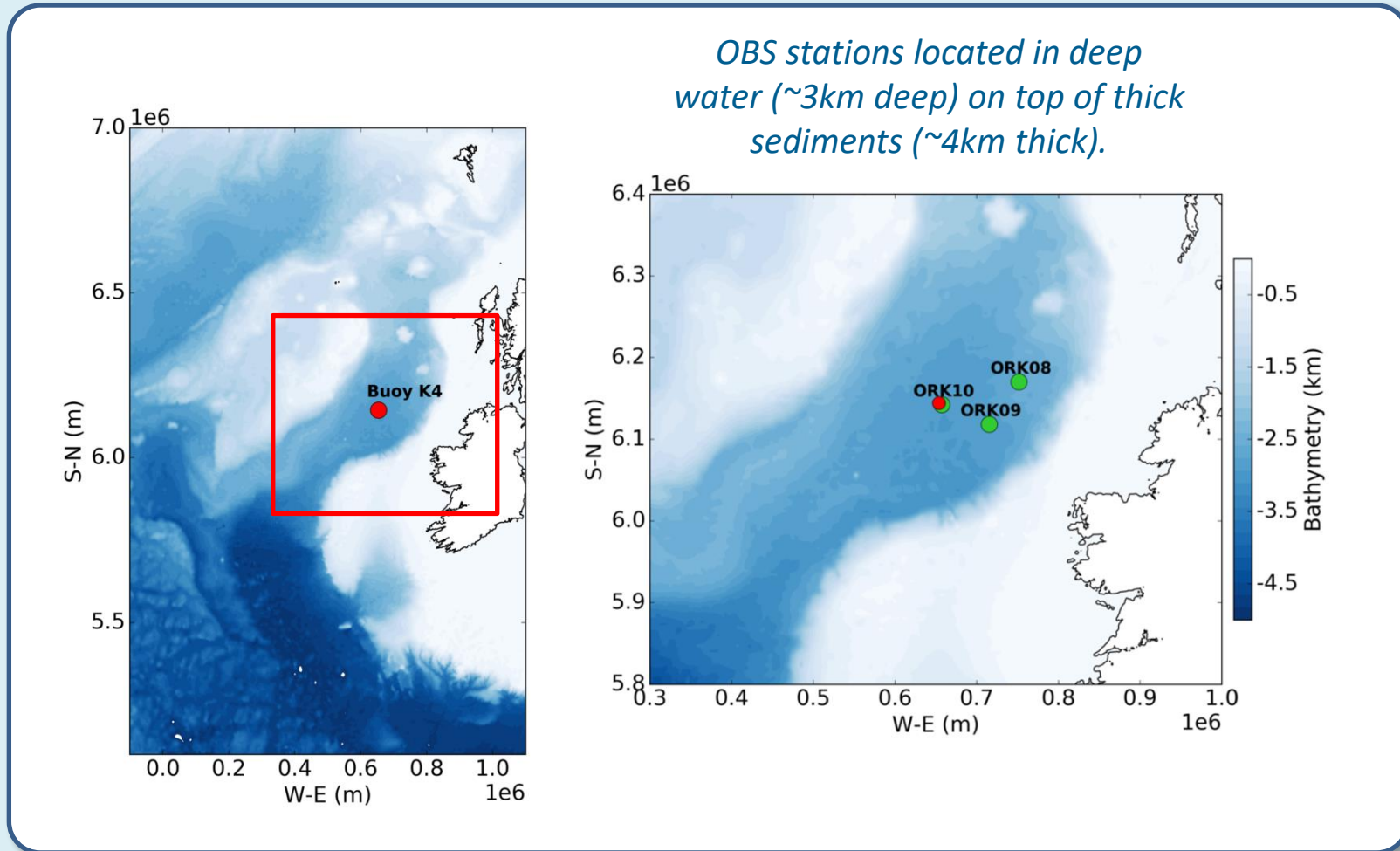
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# Comparison of secondary microseism wavefield recorded offshore Ireland with ocean wave model hindcast data at buoy K4



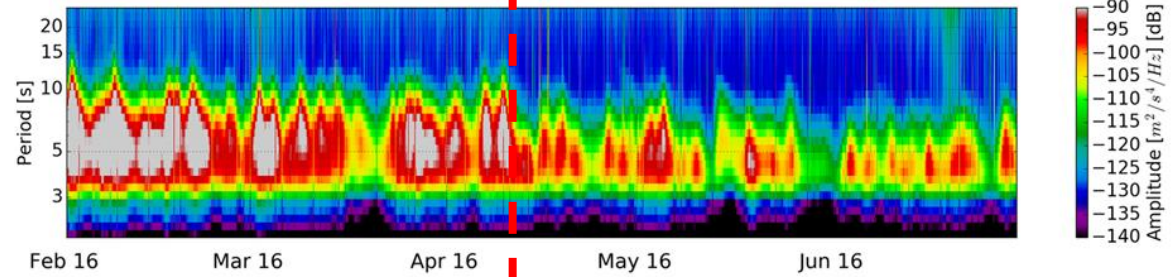


Higher mode Rayleigh waves become more dominant as the number of daily opposing ocean wave count at local buoy K4 increases

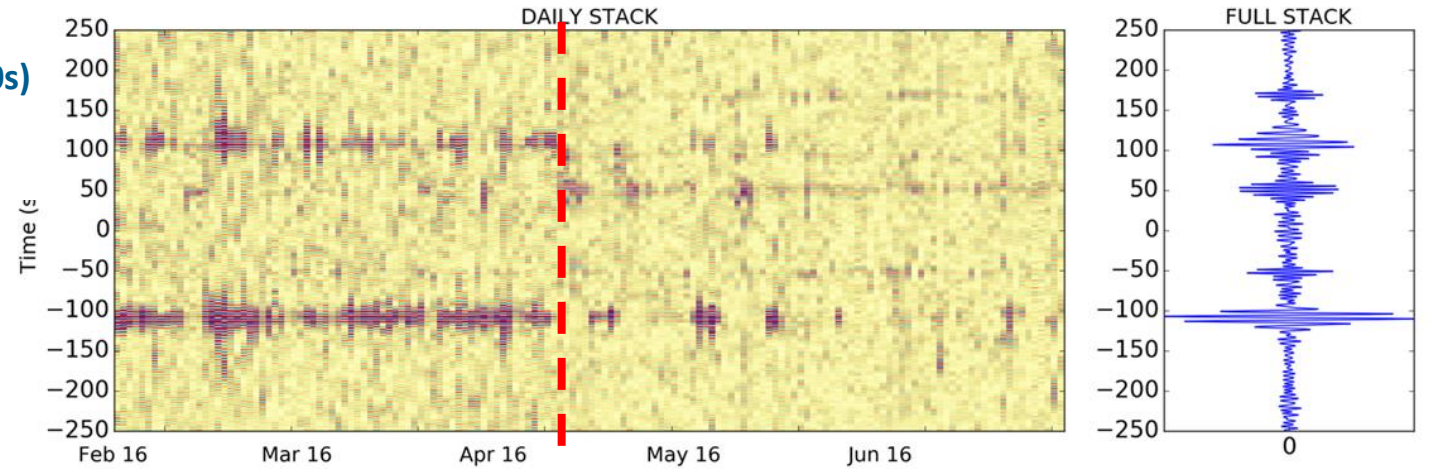
➔ **Local seismic noise**

Hindcast directional wave spectrum for buoy K4 was downloaded from the Ifremer ftp (<ftp://ftp.ifremer.fr>)

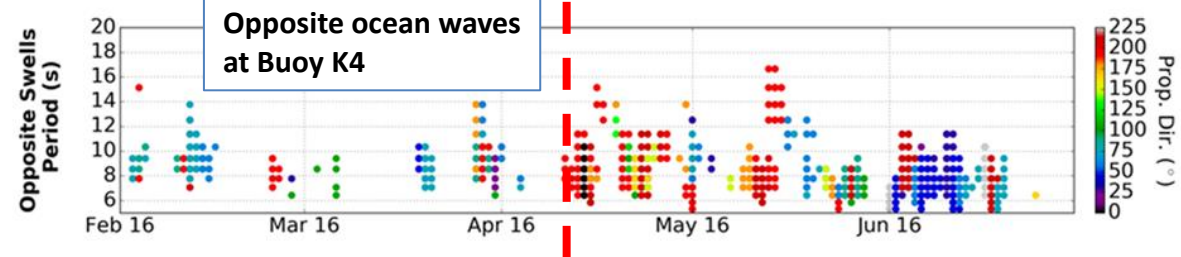
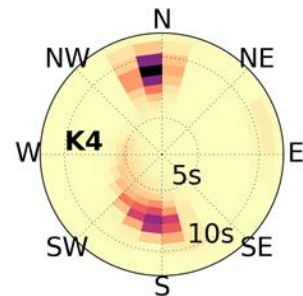
**Seismic Energy at ORK10**



**Cross-correlation (3-10s) between ORK08 and ORK09**



Example of wave directionnal spectrum at K4 for one particular day with a high count of opposing waves





## Summary

- **Higher seismic modes excited offshore locally by the presence of thick sediments**
- **The secondary microseism wavefield recorded in the ocean brings further insights on the microseism source locations that fluctuate through the seasons.**
- **Changes in the recorded secondary microseism wavefield offshore Ireland is likely reflecting fluctuations in the storm track between the winter and summer months of 2016.**

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