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Observations on the Microseism Record of Significant Wind Storms in the North-East Atlantic

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Windstorms in the North-Atlantic commonly track North-Eastward towards western Europe, past the north coast of Ireland and into the Norwegian sea. These storms are also a source of ocean generated microseisms (OGM) which can be observed on terrestrially based seismometers and seismic arrays. Here we discuss the seismic signature of several significant windstorms, including ex-hurricane Ophelia, that occurred during the winter season 2017/18. Ireland is an excellent location to study such storms as it has a highly energetic ocean wave climate and is known to be close to a major source region for OGM. Three-component seismic arrays located in Ireland are used to track the OGM associated with these storms and to identify the seismic phases generated by such storms.

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