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Signatures of storm Ophelia in microbarom measurements in the Czech Republic on 15-18 October 2017

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A change in microbarom arrivals was observed at Panska Ves array (50°32'W 14°34'E) between 15 October 2017, 21:07 UTC and 16 October 2017, 04:22 UTC. The azimuth of arrival turned from the usually observed direction of 310° to 260°. Then, during 16-18 October 2017, the back-azimuth gradually returned to the values around 300-310°. The observed microbarom back-azimuths followed the track of the storm Ophelia. The signal elevation increased from 26° to 36° between 21:07 and 00:39 UTC on 15/16 October 2017. By way of contrast, on 14 October and 17 October 2017 elevations between 20° and 30° prevailed. The increase of RMS signal amplitudes was observed during the event, particularly at frequencies around 0.2 Hz.
The storm Ophelia (former hurricane Ophelia) travelled above the eastern Atlantic along western coast of Europe to the North East between 15 and 17 October 2017. It was accompanied by winds of speed 20-40 m/s (from www.nhc.noaa.gov). We assume that the storm was able to shift the microbarom source region transitorily from the Northern Atlantic to localities along the Ophelia trajectory above the Eastern Atlantic.