

The drifters were deployed within the German Bight of the North Sea from the FS Heincke during cruise HE 445, which was performed between 18. May and 1. June 2015. The utilized drifters obtain their position via the Global Positioning System (GPS) and communicated their locations to the lab via Iridium (a global full ocean coverage bidirectional satellite communication network). Within the experiment, two different drifter models were used. The cylinder shaped drifter (MD03i), which has a diameter of 0.1 m and a length of 0.32 m, where only approx. 0.08 m are above the water surface when deployed (Figure 1 A)). The other drifters used were sphere shaped (ODi) with a 0.2 m diameter, which is only approx. 0.1 m above the water surface (Figure 1 B). To enhance the drag of both types of drifters, a sail was attached 0.5 m below the sea surface with a 0.5 m length and diameter. Due to the very small sail area above the water surface the drifter's path, represent the current in the upper meter of the water column.

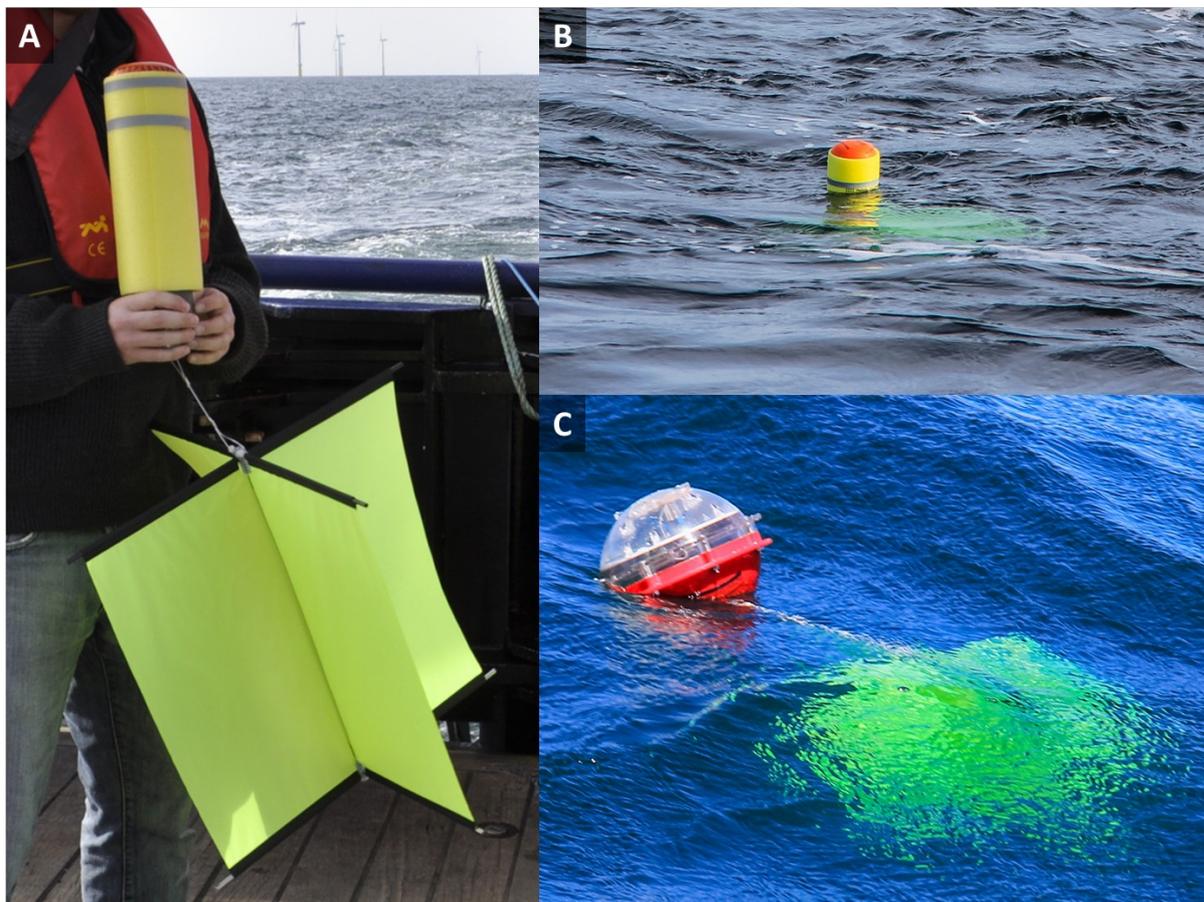


Figure 1: Drifters used during the experiment. The drifter sails were mounted 0.5 m under the sea surface and had a length and diameter of 0.5 m (A). Two kind of drifters were utilized the yellow cylinder shaped one (MDO3i) with only approx. 0.08 m above the water surface (B) and the ball shaped drifter (ODi) with approx. 0.1 m above the water surface (C). Both drifters were photographed shortly after launch and therefore the sail has not settled yet.