

The drifters were deployed within the German Bight of the North Sea from the FS Heincke during cruise HE 490, which was performed between 21. June and 5. July 2017. 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, five Albatros drifters MD03i were used. The MD03i is a cylinder shaped drifter, 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 2). To enhance the drifters drag a sail was attached 1.0 m below the sea surface. The sails were made of two circular black plastic parts (0.35 m diameter) joined perpendicularly in the center. Due to the very small area above the water surface the drifter path represents the current in the upper meter of the water column.



*Figure 1: Drifters MD03i used during the experiment. The drifter sails were mounted 1.0 m under the sea surface and had a diameter of 0.35 m.*



*Figure 2: Drifter MD03i with only approximately 0.08 m above the water surface.*

Note: The Drifter 2 sail was lost during the experiment.