



Tracing the drift of MH370 debris throughout the Indian Ocean

Arne Biastoch, Jonathan V. Durgadoo, and Siren Rühls

GEOMAR Helmholtz Centre for Ocean Research Kiel, Theory and Modelling, Kiel, Germany (abiastoch@geomar.de)

On 8 March 2014, a missing Boeing 777 of Malaysia Airlines (MH370) disappeared from radar screens. Since then, extensive search efforts aim to find the missing plane in the southeastern Indian Ocean. Starting with a flaperon washed up at La Réunion in July 2015, several pieces of debris were found at different shores at islands and African coasts in the southwestern Indian Ocean. Ocean currents were examined to understand the drift paths of debris throughout the Indian Ocean, and in consequence to identify the location of MH370. Here we present a series of Lagrangian analyses in which we follow particles representing virtual pieces of debris advected in an operational high-resolution ocean model. Of particular importance is the large-scale influence of surface waves through Stokes drift. Large number of particles are analysed in statistical approaches to provide most likely starting locations. Different pieces of debris are combined to refine probability maps of their joint start positions. Forward vs. backward advection approaches are compared.