

The Météo-France operational SAR model

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The National Forecasting Centre, at Météo-France, runs an operational service to support the *Centres Régionaux Opérationnels de Surveillance et de Sauvetage* (CROSS) in search and rescue operations at sea. The core of the service is a trajectory model, called MOTHY, used for forecasting the positions of drifting objects. The system includes local area hydrodynamic coastal ocean modelling and real time atmospheric forcing from a global meteorological model. It has been operational since 1998, and there was a considerable increase in the requests these last years. Predictions of drift are available for selected customers by sending a specific customer request form.

The motion of a drifting object on the sea surface is the net result of a number of forces acting upon its surface (mainly water currents and atmospheric wind). The immersed fraction is a key parameter. However, it is usually unknown. The output is time-evolving tracks of nine simulated objects whose immersion varied from 10 to 90 %.