## Abstract View

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# Analysis of Surface Current Response to Wind

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ABSTRACT

The response of the surface current to the wind has been described at various times by quadratic and linear laws. The quadratic response leads to Ekman-type currents while the linear response may be indicative of Stokes drift. The velocity records of six satellite-tracked drifters which lost their drogues and the Fleet Numerical Weather Central's surface wind analysis were used to test the relative merits of these responses. It was concluded that a linear law relating the wind and the wind drift surface current was superior to the classic quadratic law. The angle between the wind and the surface current predicted by the model was about 15° *cum sole*. However, it was also found that a model which superposed the Ekman quadratic response and linear Stokes drift response explained the data just as well as the linear law.