

P-II-2

**Effect of vessel type and platform relative wind direction
on the comparison between buoy and ship wind speeds**

Bridget R. Thomas and Val R. Swail
Environment Canada
E-mail: Bridget.Thomas@EC.GC.CA

Some inhomogeneities between ship and buoy wind reports are due to factors (such as different anemometer heights) whose effects can be computed theoretically and compensated for. Other factors such as air flow distortion and differences in averaging technique are less well understood, and not easily predicted from theory. This study attempts to identify these factors and to quantify them using statistical techniques. In particular we study the influence of the platform relative wind direction on the reported wind speed, with data primarily from tankers and container ships.

Comparing u_{10n} buoy winds (adjusted to 10 m effective neutral) to u_{10n} measured and Lindau-adjusted estimated ship winds, we find that the ship-buoy wind speed relationship is significantly dependent on the heading of the ship relative to the wind and seas, and on the vessel type.