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Intercalibration of Visual Winds from VOS and Scatterometer Winds

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The calibration of visually estimated winds (Beaufort winds) from Volunteer Observing Ships (VOS) is assessed in comparison to QuikSCAT equivalent neutral wind speeds. Visual winds are expected to be more stress-like than wind-like, in that the characteristics observed are more stress-like than wind-like: white capping and other wave characteristics are more directly a function of stress than wind, and like equivalent neutral winds they are relative to the moving surface. We hypothesize that visual wind estimates will have a similar calibration to scatterometer winds, and use statistical analyses to show that this is the case. The calibration is examined as a function of wind speed, and for most wind speeds is statistically indistinguishable for scatterometer winds. At low wind speeds, there is the appearance of considerable bias, but this is demonstrated as being due to a statistical artifact associate with the noise in the VOS observations. While the calibrations are remarkably similar, there is much greater random error in the VOS winds ($\sim 3\text{ms}^{-1}$) than in the scatterometer winds ($\sim 1\text{ms}^{-1}$). The calibrations are also compared to prior calibrations such as Lindau (1995).

Oral

- **Data homogenization (benchmarking, bias adjustments, step change analysis, metadata)**