

- 1) a simple ellipse-shape footprint
- 2) a stability corrected footprint

are shown in this figure for 16 cases. The correlation results shows that a better correlation is obtained with the simple footprint

Simple ellipse footprint	$y=1.1016x-2.126$
Stability corrected footprint	$y=0.9681x-1.762$
Simple ellipse footprint *	$y=1.0634x-2.276$

The simple footprint* is calculated from satellite SAR wind speed maps with wind direction input (θ) to the SAR algorithm and in-situ wind direction observations. This gives the best correlation and an error of only ≈ 0.61 m/s. Comparison of in-situ wind direction and SAR-derived wind direction results as shown in the figure below.