PO.46

Above and beyond the ZX 300e's 200m Classification

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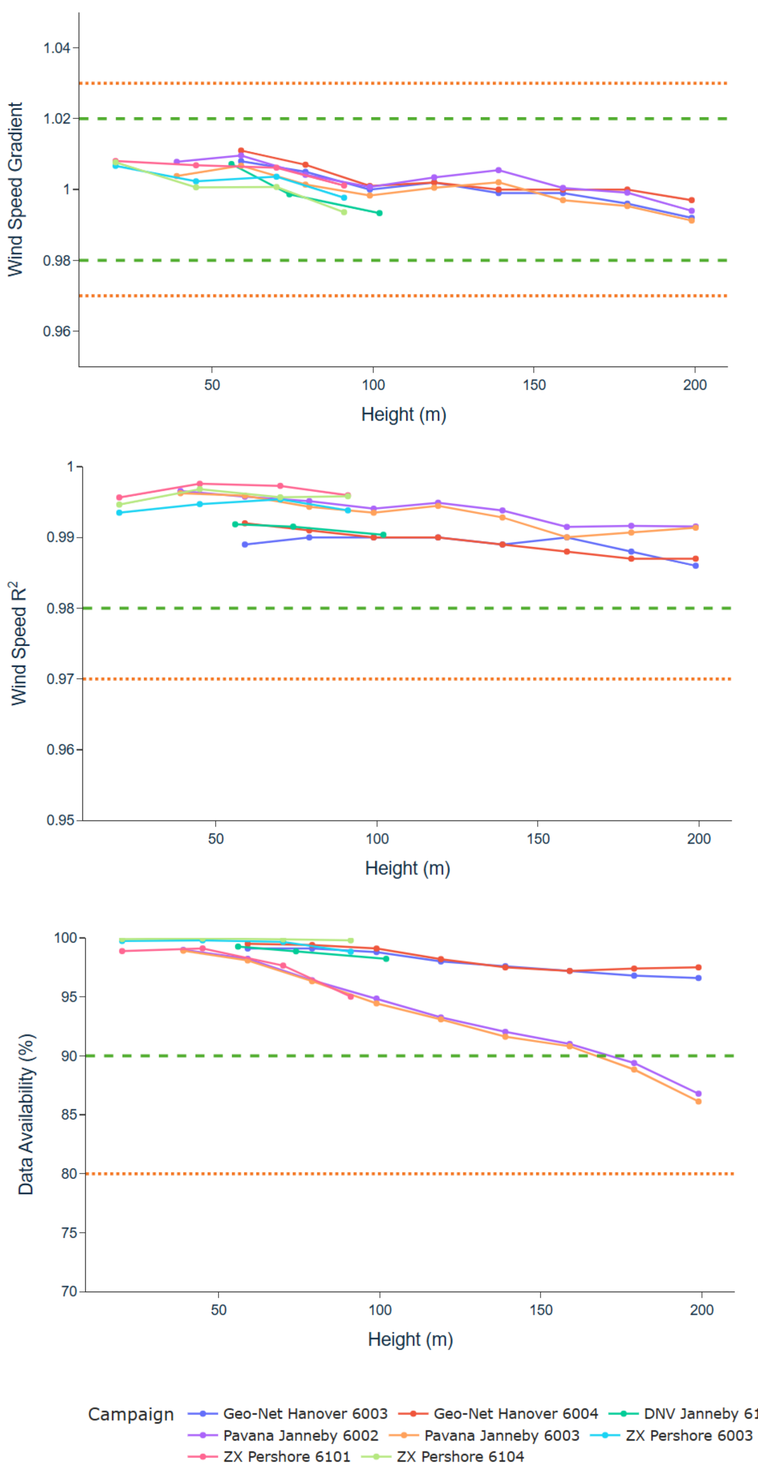
ZX Lidars

Several verification tests were performed as part of the ZX 300e performance credentials at IEC-compliant test sites.

In total, there are 8 campaigns with 5 lidars at 4 sites. Two of the sites feature 200m met masts. Each of the campaigns was at least 3-months long and all seasons are covered across the campaigns.

Across all campaigns, wind-speed regression gradients are within 1% of unity, r^2 exceeding 0.985. Data availability exceeds 90% for all but Pavana's Janneby test site, which remains above DNV's minimum acceptance criteria.

In all plots, green dashed lines indicate DNV recommended best-practice limits, while the orange dotted lines show minimum acceptance thresholds.



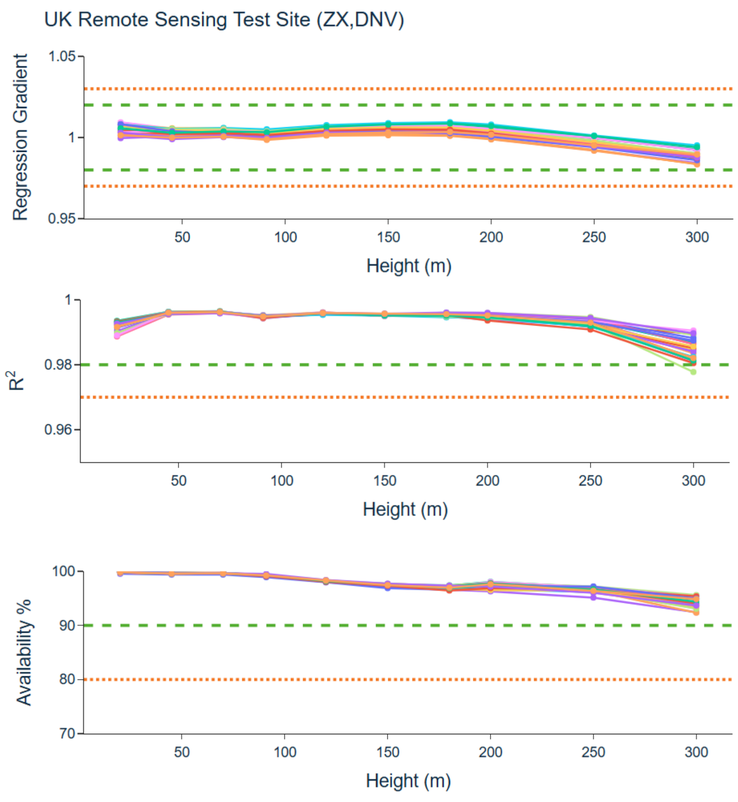
The ZX 300e achieved a 0% classification uncertainty from 21 to 200m under IEC61400-50-2:2022, indicating no measurable sensitivity to environmental variables across the classified height range.

Beyond formal classification, the ZX 300e has been proven across eight independent measurement campaigns at IEC compliant test sites, 25 concurrent measurement campaigns at the UK Remote Sensing Test Site, and a campaign in highly complex terrain.

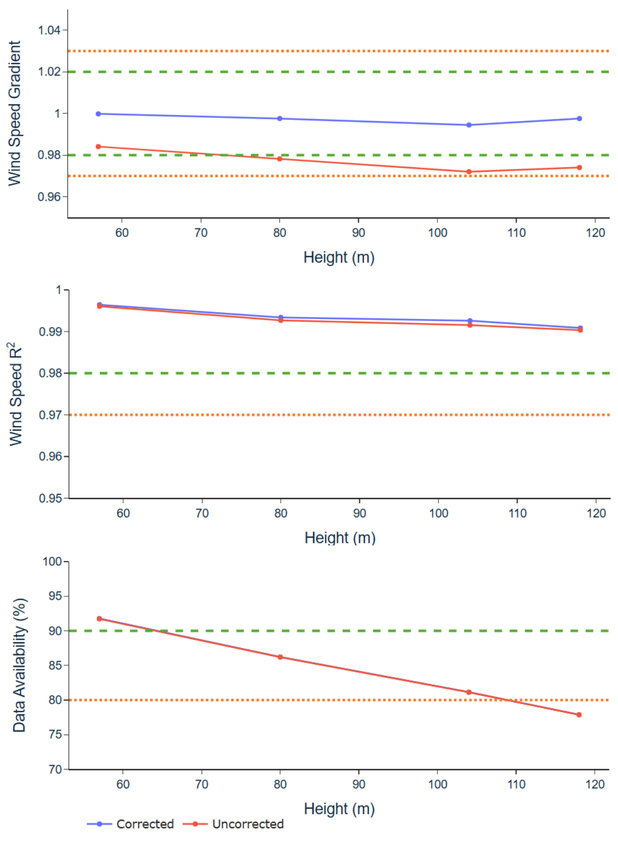
Performance credentials demonstrated accuracy within industry acceptance criteria, high availability, consistency across devices, and resilience in complex terrain when CFD corrections are applied.

Consistency across a fleet of 25 ZX 300e units was demonstrated at the UK Remote Sensing Test Site against a 92m mast over a three-week period.

The mast is extended to 300m using a validated lidar on top of the mast, named Midar (see PO. 43).



The ZX 300e demonstrates reliable and accurate performance in highly complex terrain. Wind speeds were corrected using CFD provided by Deutsche WindGuard, resulting in post-correction regression gradients within 1%.



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