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The propagation of wind turbine wakes has been a subject of intense study due to their implications for wind turbulence, fatigue loading and power production in arrays of turbines, particularly offshore. The Galion Lidar allows us to directly measure and dramatically image wind turbine wakes with previously unattainable degrees of precision and detail.

Wind turbine wake visualisation allows us to understand their formation and propagation and mitigate their impact on other turbines as never before. The 2nd generation Galion Lidar introduces a step change in wind turbulence and wake studies making it possible to view and image the movement of wind as it travels through operational turbines.

Turbine wind turbulence imagery

The propagation of wind turbine wakes over large distances can be precisely measured directly and in detail over several kilometers. In the animated image below we see an aerial view of wind turbine wakes surveyed using Galion. The impact of wake induced wind turbulence can be assessed and wake models validated, reducing project uncertainty.