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Sommario/riassunto	Coherent structures are patterns in the wind field of the atmospheric boundary layer. The deployment of two scanning Doppler lidars facilitates the measurement of the horizontal wind field, but the inherent averaging processes complicate an interpretation of the results. To assess the suitability of this technique for coherent structure detection large-eddy simulations are used as a basis for virtual measurements, and the effects of the lidar technique on the wind field structure are analyzed.