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Hyperspectral lidar in non-destructive 4D monitoring of climate variables

S. Kaasalainen¹, T. Hakala¹, O. Nevalainen¹, E. Puttonen¹, and K. Anttila^{1,2}

¹Finnish Geodetic Institute, Masala, Finland

²Finnish Meteorological Institute, Meteorological research, Finland

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Abstract. The first applications of a prototype 8-channel full waveform active hyperspectral lidar (HSL) show a possibility to determine various target 3D characteristics with remote observations. The results open up a prospect for four-dimensional (4D – a three dimensional target representation with time as a fourth dimension) monitoring of important climate variables, such as those related to tree physiology or snow pollution.

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