



Dust orientation measurements

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Abstract. Dust orientation is an ongoing investigation in recent years (Ulanowski et al., 2007). Its potential proof will be a paradigm shift for dust remote sensing, invalidating the currently used simplifications of randomly-oriented particles. Vertically-resolved measurements of dust orientation can be acquired with the new polarization lidar “WALL-E”, designed to target the off-diagonal elements of the backscatter matrix which are non-zero only when the particles are oriented (Tsekeri et al., 2021). Herein, we present first measurements of oriented dust particles acquired during the ESA Aeolus Cal/Val Campaign “ASKOS” at Cabo Verde (June and September 2022).

Acknowledgments: This research was supported by D-TTECT (Grant Agreement 725698) funded by the European Research Council (ERC) under the European Union's Horizon 2020 research and innovation program and PANGEA4CalVal (Grant Agreement 101079201) funded by European Union's Horizon Widera 2021 Access program.

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