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**ST7: Protocol for measurements of Boundary Layer Height** with 3D measurement techniques, in particular by ceilometers.

The linked resources for ST include:

- 1) Deliverable 6 (D1.6) Observational methodologies for horizontal and vertical profiling for Air Quality (AQ) purposes: [https://riurbans.eu/wp-content/uploads/2022/10/RI-URBANS\\_D6\\_D1\\_6.pdf](https://riurbans.eu/wp-content/uploads/2022/10/RI-URBANS_D6_D1_6.pdf), summarizes the 3D-mapping capacities and requirements for the instruments. **Particularly section 2.1.**
- 2) Requirements for the implementation of ceilometer measurements for the Boundary Layer Height determination is described in M7 (M1.8) Requirements for the implementation of vertical profiling measurements in pilot sites [https://riurbans.eu/wp-content/uploads/2023/03/RI-URBANS\\_M7.pdf](https://riurbans.eu/wp-content/uploads/2023/03/RI-URBANS_M7.pdf)
- 3) The guidelines and standard operating procedures for ceilometers are provided by ACTRIS Center for cloud remote sensing: <https://www.actris.eu/sites/default/files/inline-files/CCRES%20SOPs%20-%20ALCs.pdf>

Scientifically this ST\_A is linked to Kotthaus et al., 2023, <https://doi.org/10.5194/amt-16-433-2023>, which summarizes the current state-of-the-art in the determination of the BLH measurements using different techniques and to Kotthaus et al., 2020, <https://doi.org/10.3390/rs12193259> where algorithm used for such RI-URBANS tool is described.