



## **UltraFast Thermometer 2.0 - new temperature sensor for airborne applications and its performance during ACORES 2017**

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Second generation of UltraFast Thermometer (UFT-2) is a miniature instrument aimed at high resolution airborne temperature measurements, both in clear air and in clouds. The device employs thin resistive tungsten wire as sensing element. In comparison with the predecessor, UFT, the whole thermometer is smaller and includes no moving parts (e.g. wind vane) in order to allow for certification on various flying platforms.

Dedicated model of the instrument was manufactured to mount on ACTOS (Airborne Cloud Turbulence Observation System) and used to measure small-scale temperature fluctuations during ACORES (Azores stratoCumulus measurements Of Radiation, turbulEnce and aeroSols) helicopter-borne research campaign in the summer 2017.

The details of the UFT-2 design will be described together with the discussion of the expected properties. Instrument performance in flight during ACORES campaign will be presented, including both general issues concerning the sensor as well as remarks specific for the platform used.