Geophysical Research Abstracts
Vol. 20, EGU2018-18093, 2018
EGU General Assembly 2018

Urban Energy Balance from Space: final results from URBANFLUXES

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The H2020-Space project URBANFLUXES investigated the potential of Copernicus Sentinels to retrieve the key components of the Urban Energy Budget (UEB). The Discrete Anisotropic Radiative Transfer (DART) model was used to estimate the net all-wave radiation fluxes. The storage heat flux was determined using the Element Surface Temperature Method (ESTM) after being modified to use satellite observations. Turbulent sensible and latent heat fluxes were estimated with the Aerodynamic Resistance Method (ARM). The fluxes were evaluated with in-situ flux measurements in London, Basel and Heraklion. URBANFLUXES prepared the ground for further innovative exploitation of Earth Observation data in climate variability studies scales and emerging applications (sustainable urban planning, mitigation technologies) to benefit climate change mitigation and adaptation. The wide range of data produced (e.g. land cover, vegetation phenology, surface morphology) have a much large possible applications. This project website (http://urbanfluxes.eu) provides more detailed information.