

EARTH OBSERVATION SYMPOSIUM (B1)  
Future Earth Observation Systems (2)

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## CLIMATE RESEARCH FROM ISS

**Abstract**

The ISS today offers unique opportunities for research of global climate change. Complementing research from satellites, the ISS is of particular interest for dedicated missions due its orbit, which covers most of the populated area of the Earth at various times of the day from low altitude. In addition the ISS as a platform offers to scientific instruments a comfortably large level of resources in power, mass and volume. The availability and accessibility of it allows for rapid implementation of perceived missions. The paper will give a general overview on unique ISS capabilities as an observation platform for climate research and will detail some of the mission concepts. Within the ACES (Atomic Clock Ensemble in Space) mission, being under final assembly at Astrium, new measurement techniques such as relativistic geodesy and advanced GNSS applications will be explored paving the way to even more ambitious ISS missions in climate research that are under evaluation following a recent ESA Announcement of Opportunity.