Atmospheric Correction Inter-comparison eXercise: the second implementation

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The atmospheric correction inter-comparison exercise (ACIX) is an international initiative to benchmark various state-of-the-art atmospheric correction (AC) processors. The first inter-comparison exercise initiated in 2016 with the collaboration of European Space Agency (ESA) and National Aeronautics and Space Administration (NASA) in the frame of the CEOS WGCV (Committee on Earth Observation Satellites, Working Group on Calibration & Validation). The evolution of the participating processors and the increasing interest of AC community to repeat and improve such experiment stimulated the continuation of ACIX and its second implementation (ACIX-II). In particular, 12 AC developer teams from Europe and USA participated in ACIX-II over land sites. In this presentation the benchmarking protocol, i.e. test sites, input data, inter-comparison metrics, etc. will be briefly described and some representative results of ACIX-II will be presented. The inter-comparison outputs varied depending on the sensors, products and sites, demonstrating the strengths and weaknesses of the corresponding processors. In continuation of ACIX-I achievements, the outcomes of the second one are expected to provide an enhanced standardised approach to inter-compare AC processing products, i.e. Aerosol Optical Thickness (AOT), Water Vapour (WV) and Surface Reflectance (SR), and quantitatively assessed their quality when in situ measurements are available.