



A satellite-based sunshine duration product for climate applications

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Besides 2m-temperature and precipitation, sunshine duration is one of the most important and commonly used parameters in meteorology. There are measured time series of more than 100 years length. Sunshine duration is used for climate monitoring and plays an important role in branches such as tourism, health sector, agriculture, vegetation modelling and solar energy.

EUMETSAT's Satellite Application Facility on Climate Monitoring (CM SAF) here presents a preliminary product for daily and monthly sunshine duration for Europe. Basis of the retrieval of sunshine duration is a high-resolved satellite product of the direct solar radiation derived from the Meteosat satellites. A comparison with ground-based data showed overall high agreement, but also some systematic differences, which are caused by the different concepts of satellite- and ground-based sunshine durations. The presented sunshine duration product is based on a stable high-quality satellite climate data record of more than 30 years length; it is therefore well suitable for climate applications. Some example applications will be shown.