

## Geostationary satellite products for solar energy applications: The NextSENSE2 short-term solar forecasting system

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NextSENSE2: 1)Solar energy nowcasting and short-term forecasting tool

2) Temporal Coverage: Surface solar radiation real-time estimates + forecasts every 15 minutes, up to 3 hours ahead.

3) **Spatial Coverage: Europe**, **Middle East–North Africa** (MENA) region, at a high spatial resolution of approximately **5 km**. The EUMETSAT's NWC SAF software-related product utilized as input to NextSENSE2 is cloud microphysics (CMIC) retrievals (specifically the cloud

## optical thickness (COT)) using real-time MSG satellite data.



The NextSENSE2 is built on top of SENSE2, a tool for real time solar surface radiation estimation, by incorporating state-of-the-art image processing techonologies, such as dense optical flow algorithms for the calculation of Cloud Motion Vectors (CMVs)











