Energy-specific solar radiation data from meteosat second generation (msg): the heliosat-3 project

Results in Brief

HELIOSAT-3: shedding light on solar energy applications

A new solar energy operational processing chain put together by the University of Oldenburg in Germany is providing a range of high quality solar radiation data to its end users.

ENERGY

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The launch of Meteosat second generation (MSG) satellites into space heralded a new age in earth observation science. The HELIOSAT-3 project was established to develop new data products for solar energy applications with MSG data. The goal was to enable more efficient installations of photovoltaics and other solar energy technologies.

The University of Oldenburg led a group comprising eight other research institutes during HELIOSAT-3. One of the major deliverables was the implementation of a solar energy operational processing chain in an effort to supply end users with a continuous flow of data products.

Relevant hardware and software components were developed and installed at the University of Oldenburg to ensure a steady inflow of MSG data. System reliability was enhanced with back-up mechanisms established with other HELIOSAT-3 participants. The MSG data is subsequently fed to data processing software that incorporates the new HELIOSAT-3 algorithms. Efforts were also made to semi-automate data exchange.

The result is that end users of the solar energy operational processing chain have access to a number of different types of solar data. Near real-time solar irradiance data is available for specific locations while historic data can be provided as a time series or plotted on a map.

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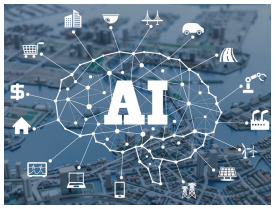

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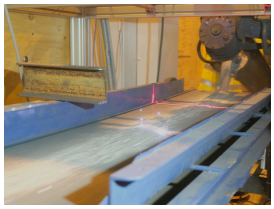

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Project Information

HELIOSAT-3

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