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## Why use real-time operational data in Solar Physics and Space Weather research?

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The Solar Influences Data Analysis Center (SIDC) at the Royal Observatory of Belgium (ROB) is well known for its advanced solar data analysis methods and comprehensive data catalogues, including CACTUS for automatic CME detection, Solar Demon for EUV flare and dimming detection, SPoCA-suite for the extraction of active regions and coronal holes, etc. Beyond its research initiatives and data processing capabilities, SIDC is also deeply engaged in operational activities related to space weather, ground-based and space-based instrumentation and observations.

This presentation aims to illustrate how real-time operational data collected and analyzed by forecasters serves as a valuable resource for researchers. It will highlight the importance of integrating this data into research workflows and demonstrate how such integration can lead to significant advancements in both solar physics research and space weather forecasting. Finally, from an operational perspective, we will pinpoint areas where real-time models perform poorly, highlighting opportunities for further exploration to improve our knowledge of solar physics and enhance forecasting models.

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