



## **Comparison between H02B/H18 and 2A-DPR precipitation products over MSG full disk area according to the H-SAF validation methodology**

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H-SAF is the Satellite Application Facility on support to operational Hydrology and water management supervised and coordinated by EUMETSAT (European Organisation for the Exploitation of Meteorological Satellites) since 2005. Currently, the program entered in its Third Continuous Development and Operation Phase (CDOP-3), which will end on February 2022. During this phase, H-SAF contributes to the EUMETSAT MTG (Meteosat Third Generation) program by providing operational precipitation products based on combined microwave/infrared (MW/IR) techniques for the high spatial/temporal/spectral resolution Flexible Combined Imager (FCI) and for the MTG Lightning Imager (LI). Moreover, in view of the EUMETSAT Polar System Second Generation (EPS-SG) satellite mission, day-1 precipitation products for the Microwave Sounder (MWS), and Microwave Imager (MWI) will be delivered to provide precipitation estimates on a global scale. The collaboration with the NASA Precipitation Measurement Mission (PMM) Research Program promotes fruitful interactions on several critical aspects in precipitation retrieval algorithm development between H SAF and GPM (Global Precipitation Measurement). The nearly-global observational datasets built from coincident active and passive spaceborne MW observations are used as reference for the development of the EPS-SG precipitation products, and for the optimization of the existing PMW (Passive Microwave) products. The current work fits in this context. The H-SAF validation activities are performed by the Product Validation Group (PVG) composed by experts from the National Meteorological and Hydrological European Institutes under the coordination of the Italian Civil Protection Department (DPC). The product validation methodology is based on comparisons with radar and rain gauge data to produce yearly statistics (multi-categorical and continuous scores) through the use of a Unique Common Code (UCC) developed by the PVG. Recently, the validation over the MSG full disk area was performed with respect to the 2A DPR products. Comparison results obtained by the two H-SAF neural network algorithms retrieved by MW cross-track scanners (AMSU/MHS for H02B and ATMS for H18) over the European and full disk area are shown.