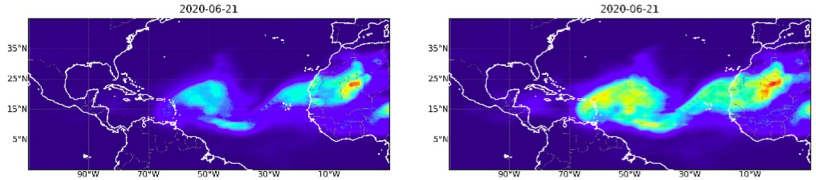
WP5.5 Cloud and Aerosol Analysis Study

Aerosol ECVs : Aerosol Optical Depth (Dust AOD, FM AOD, AOD)
Cloud ECVs : Cloud Optical Depth (Cloud Top Height, Cloud Fraction, Ice Water Path, Liquid Water Path)

WP5.5.1 Dust aerosol analysis with the BSC system

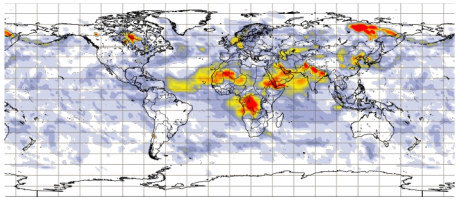
Jeronimo Escribano (**BSC**)



Constrain global **dust** aerosol simulations from the BSC MONARCH model with CCI data to produce dust analyses during the extraordinary event of June 2020.
→ Explore pixel-level uncertainties, Coarse AOD vs DOD, Comparison with DOMOS results.

WP5.5.2 Cloud/Aerosol analysis with the ECMWF system.

Angela Benedetti and Kirsti Salonen (**ECMWF**)



Joint assimilation of **aerosol** and **cloud** ECVs in the ECMWF IFS during June 2020 and September 2021 with the IFS 4DVar scheme in CAMS configuration.
→ Impact of COD and AOD level 2 data on the 4D-Var analysis

OWP5.5 Cloud and Aerosol Analysis Validation Study:

Evaluation using the ESMValTool and internal tools at BSC/ECMWF
Soil Moisture, Water Vapour ECVs.
A. Benedetti and K. Salonen (ECMWF), Axel Lauer (**DLR**), J. Escribano (BSC)