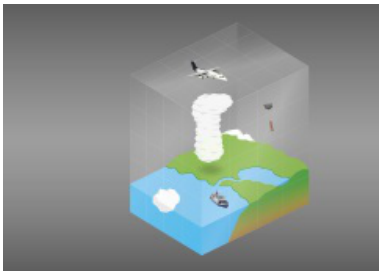

Contribution ID: **4** Type: **Oral presentation**

The impact of dropsonde and extra radiosonde observations from the field campaigns NAWDEX and SHOUT in 2016

Wednesday, 12 June 2019 09:00 (30 minutes)

Dropsonde observations from three research aircrafts in the north-Atlantic region as well as several hundred additionally launched radiosondes over Canada and Europe were collected during the transatlantic field campaign NAWDEX in autumn 2016. In addition, over 500 dropsondes were deployed during NOAA's SHOUT and Reconnaissance missions in the west-Atlantic basin, complementing the conventional observing network for a total of 13 intensive observation periods. This unique dataset was assimilated within the framework of cycled data denial experiments performed with the global model of ECMWF.
On average, these additional observations led to a reduction in forecast error of a few percent in a large area covering the North Atlantic and Europe. The error reduction mainly seems to be related to three particular sensitive episodes that are associated to the extratropical transitions of tropical storm Karl and hurricanes Matthew and Nicole. The forecast sensitivity to observations impact (FSOI) also exhibits largest beneficial impacts for dropsondes near tropical cyclones, followed by dropsondes over the North Atlantic and additional Canadian radiosondes.

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