



Contribution ID: 42

Type: **Oral presentation**

# How well do current observations observe key features of warm conveyor belts?

*Wednesday, 11 March 2020 09:00 (25 minutes)*

In this presentation the key features of warm conveyor belts that need to be observed to characterise them correctly in the analysis are recalled. This includes the warm conveyor belt itself, with features such as elongated cloud bands, spiral and hook cloud formations, areas of intense latent heating and surface precipitation. But also associated features such as the dry intrusion and the cold conveyor.

It is well documented how such features appear in satellite imagery, but in order to ensure that the feature is well represented in the analysis, so that the forecast model can evolve it correctly, requires quantitative information on vorticity, shear, humidity gradients, clouds and precipitation. On occasion intensive observation campaigns can provide detailed observations to better understand processes and describe more fully these systems. But in this talk we examine what the current WMO Integrated Global Observing System (WIGOS) can provide that is relevant to warm conveyor belts, identifying strengths and weaknesses, including a specific gap analysis with respect to these processes. This can both inform what is needed in terms of the future evolution of the WIGOS, and also enable intensive observation campaigns to focus on what is most needed.

**Primary author:** ENGLISH, Stephen (ECMWF)

**Presenter:** ENGLISH, Stephen (ECMWF)

**Session Classification:** Session 5

**Track Classification:** Workshop: Warm Conveyor Belts –a challenge to forecasting