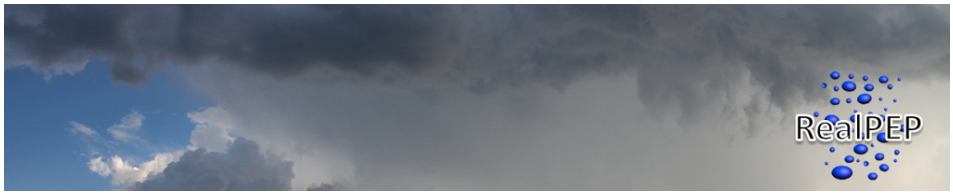

Contribution ID: **66** Type: **Oral presentation**

Exploiting new observations and data assimilation techniques for improved forecasting of convective precipitation

Tuesday, October 6, 2020 1:45 PM (40 minutes)

Brief periods of intense rainfall can lead to flooding with the potential to cause damage to property and to threaten lives. To improve the prediction of these events, more accurate forecasts of convective rainfall are needed, and these can then be used to inform flood guidance and warning systems. In this talk we will review data assimilation for convection-permitting numerical weather prediction and discuss the main unsolved issues still facing this area, including forecast error covariance modelling, nonlinearity, microphysics and multiscale assimilation. We will highlight recent progress in understanding observation uncertainty and how better characterization of observation uncertainty can lead to better observation impacts in the assimilation. We will discuss novel observation types arising from datasets of opportunity. We will end by discussing the assimilation and observing systems for the future of high impact weather prediction.

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Session Classification: Numerical Weather Prediction (NWP)