Subseasonal-to-seasonal (S2S) forecasts with CNRM-CM: model evaluation and perspectives

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Météo-France takes part in the WWRP/Thorpex-WCRP joint project S2S (Robertson et al. 2015) since May 2015 and thus provides sub-seasonal ensemble forecasts run with the CNRM-CM coupled model (Voldoire et al. 2013) on the 1st of each month up to 61 days.

After describing the current setup, this presentation provides an analysis of the CNRM-CM model ensemble hindcast available on the S2S database, which spans 22 years, by assessing forecast quality and model skill for key variables (e.g. 500 hPa geopotential height, near-surface temperature, sea ice extent) and relevant phenomena at the S2S scale (MJO, NAO). We focus on forecast weeks 2-4 and show that the model exhibits limited but reasonable skill at these time scales. We also examine the case of the July 2015 real-time forecast, focusing on the western Europe heat wave.

Prospects for the increased frequency of real-time S2S forecasts and multi-model assessments using other systems of the S2S database will also be presented.