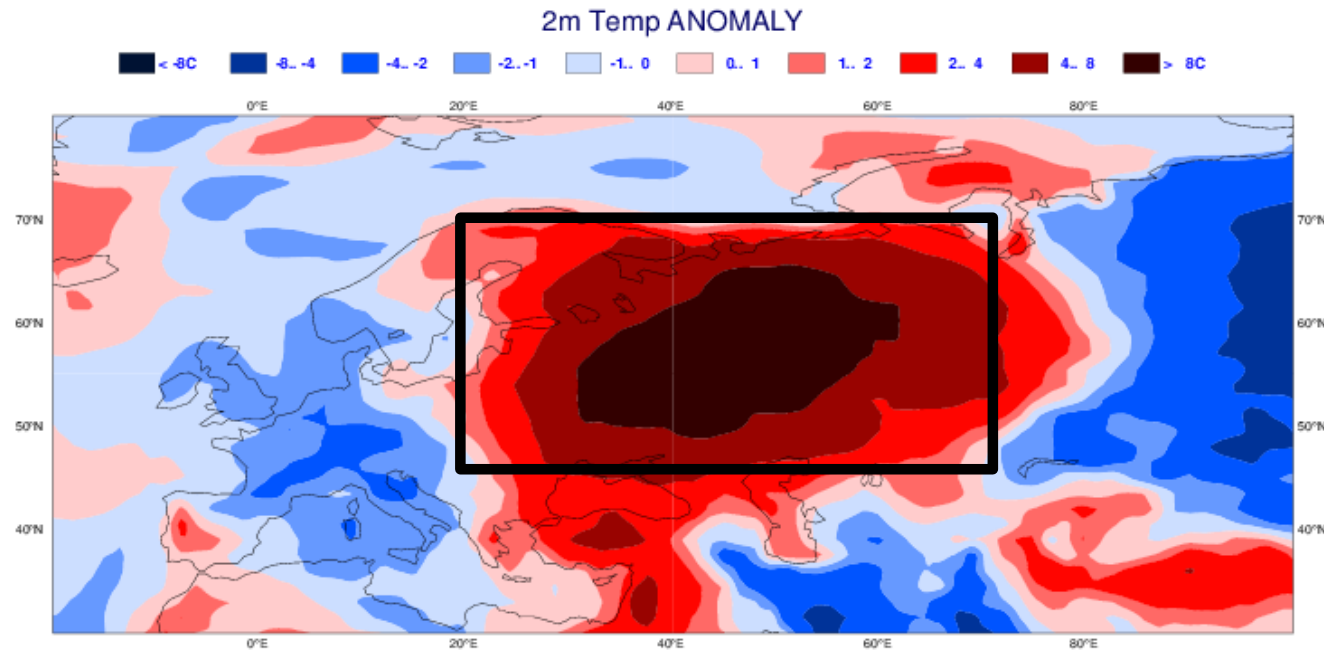


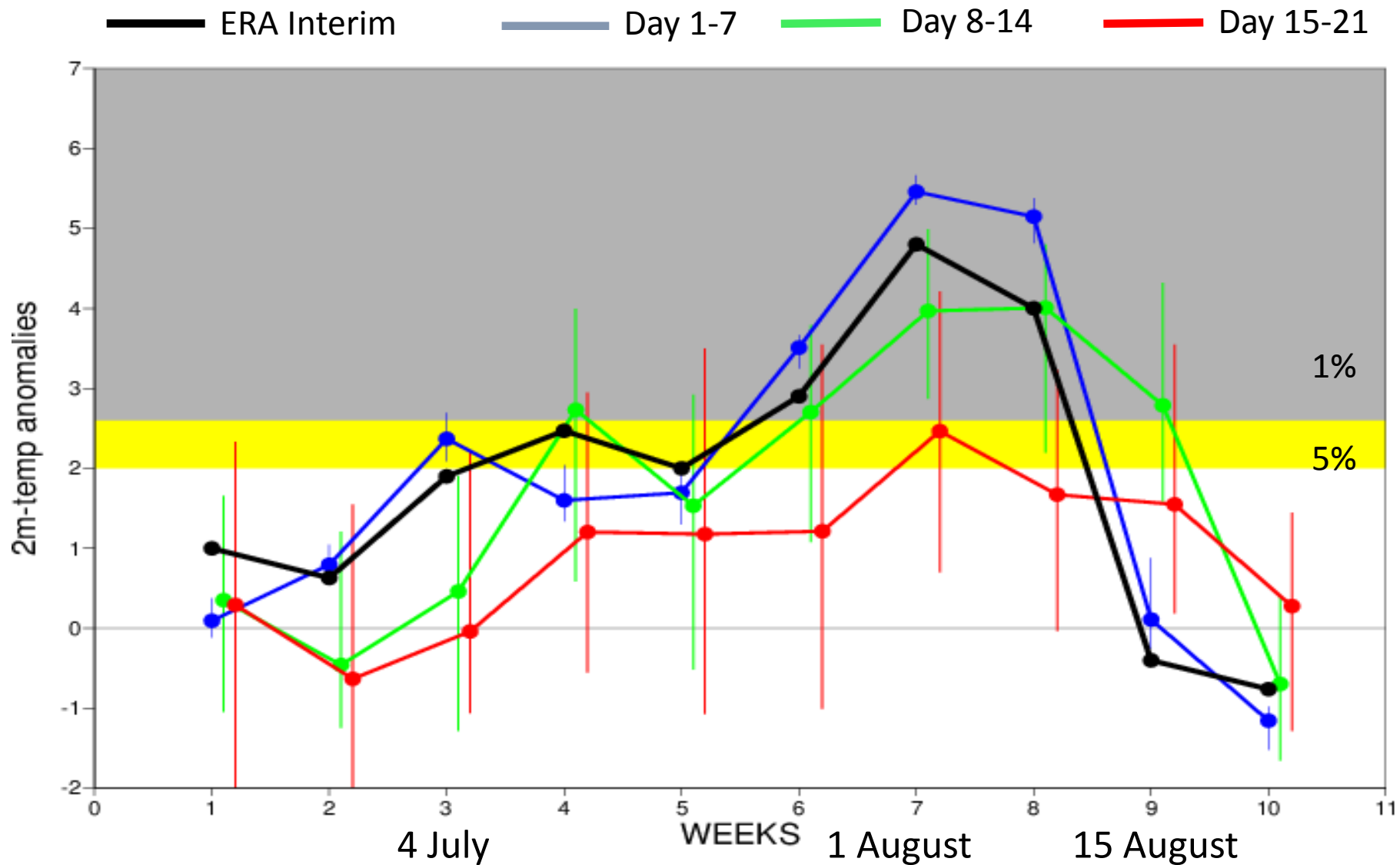
Russian Heat Wave July-August 2010

- Worst heat wave on record over the past 33 years (Hoag, Nature 2014)
- Estimated 55,000 deaths
- Wildfires, smoke, worst drought in nearly 40 years, and the loss of at least 9 million hectares of crops

ERA interim 2mtm anomalies 1-7 August 2010



Russian Heat Wave 2010

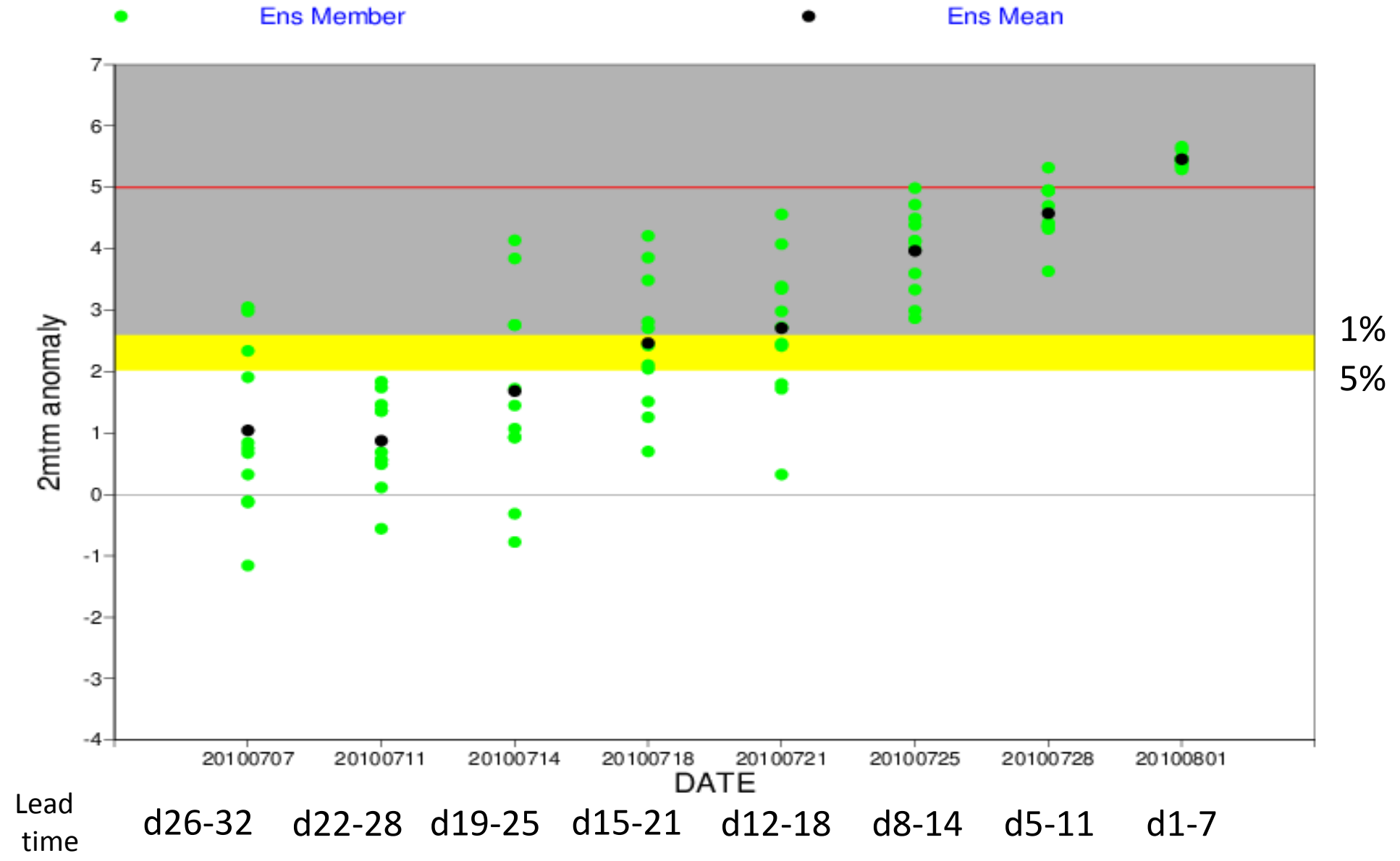


WEEK1: time evolution of heat wave well predicted

WEEK2 and 3: Onset and decay predicted one week too late

Timing of maximum well predicted

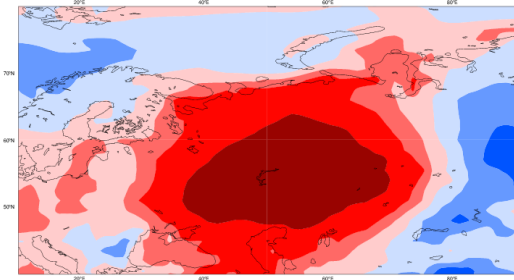
2mtm anomalies over Russia – ECMWF reforecasts 1-7 August 2010



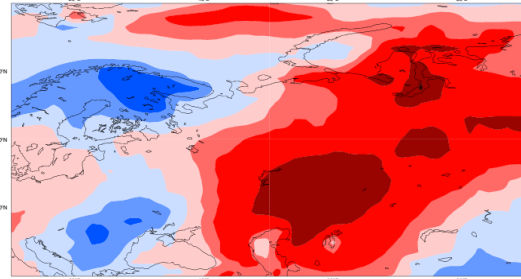
2mtm anomalies over Russia – S2S reforecasts

1-7 August 2010

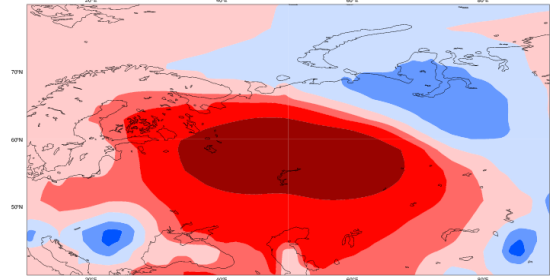
ECMWF (18 Jul)



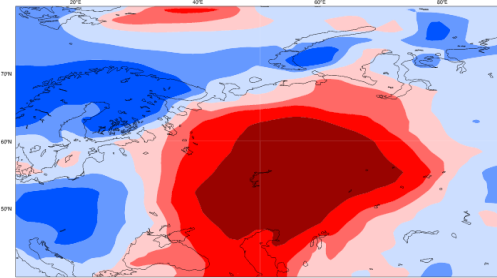
UKMO (17 Jul)



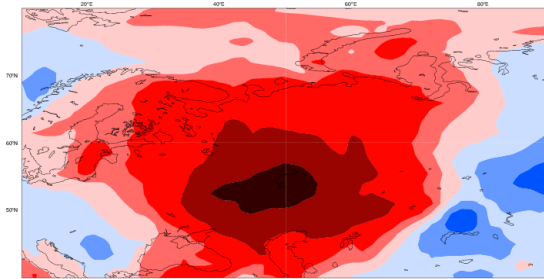
BOM (16 Jul)



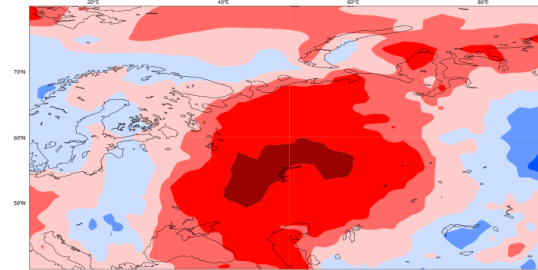
NCEP(16 Jul)



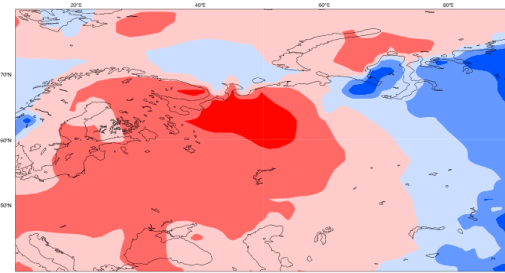
JMA(20 Jul)



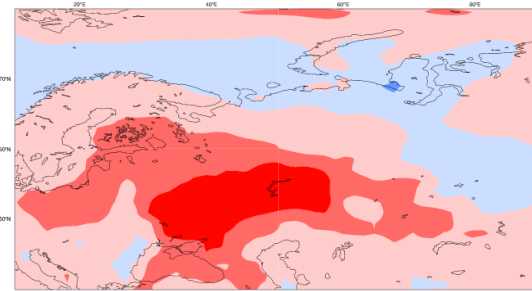
ECCC(21 Jul)



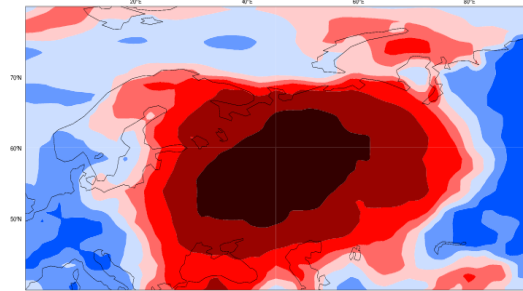
HMCR(20 Jul)



CNRM(15 Jul)



ERA Interim



2mtm anomalies over Russia – S2S models reforecasts
1-7 August 2010

