



Predicting El Niño in 2014 and 2015 with Met Office GloSea5 and ECMWF System4

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Early in 2014 several forecast systems were suggesting a strong 1997/98-like El Niño event for the following northern hemisphere winter 2014/15. However the eventual outcome was a modest warming. In contrast, winter 2015/16 saw one of the strongest El Niño events on record. Here we assess the ability of two operational seasonal prediction systems to forecast these events, using the forecast ensembles to try to understand the reasons underlying the very different development and outcomes for these two years. We test three hypotheses. First we find that the continuation of neutral ENSO conditions in 2014 is associated with the maintenance of the observed cold southeast Pacific sea surface temperature anomaly; secondly that in the forecasts warm west equatorial Pacific sea surface temperature anomalies do not appear to hinder El Niño development; and finally that stronger westerly wind burst activity in 2015 compared to 2014 is a key difference between the two years. Interestingly, in these years at least, this interannual variability in wind burst activity is predictable. ECMWF System 4 tends to produce more westerly wind bursts than Met Office GloSea5 and this likely contributes to the larger SST anomalies predicted in this model in both years.