

Predictive skill of the MJO event in March 2015

from the S2S database

T. Nakazawa¹, H.-S. Kang¹, F. Vitart², A. W. Robertson³, and M. Matsueda⁴

¹ *NIMR/KMA, Seogwipo-si, Republic of Korea*

² *ECMWF, Reading, United Kingdom of Great Britain and Northern Ireland*

³ *IRI, Columbia University, Palisades, United States of America*

⁴ *University of Oxford, Oxford, United Kingdom of Great Britain and Northern Ireland, and University of Tsukuba, Tsukuba, Japan*

The World Weather Research Program (WWRP) and World Climate Research Program (WCRP) launched a new joint research initiative in 2013, the Sub-seasonal to Seasonal prediction project (S2S) (<http://www.s2sprediction.net>) whose main goal is to improve forecast skill and understanding of the sub-seasonal to seasonal timescale, and to promote its uptake by operational centres and exploitation by the applications communities.

A main deliverable of this project is the establishment of an extensive database containing sub-seasonal (up to 60 days) near-real time forecasts (3 weeks behind real-time) and reforecasts (sometimes known as hindcasts), following the work started with the THORPEX Interactive Grand Global Ensemble (TIGGE) database for medium-range forecasts (up to 15 days) and the Climate-System Historical Forecast project (CHFP) for seasonal forecasts.

This research database, hosted at the European Centre for Medium-Range Weather Forecasts (ECMWF) and the China Meteorological Administration (CMA) is now available to the research community from the ECMWF data portal: <http://apps.ecmwf.int/datasets/data/s2s/> with 7 global centres' products (BoM, CMA, ECMWF, JMA, Meteo France, NCEP, and Rushdromet).

In this presentation, we will demonstrate the predictive skill of a recent MJO case in March 2015 using the S2S database of 1 month forecasts by means of the MJO diagram, originally proposed by Wheeler and Hendon (2004) (S2S Museum: http://gpvjma.ccs.hpcc.jp/S2S/S2S_MJO.html).

The result shows that the ensemble mean from each centre shows good performance up to a month, during both the early developing phase and the decaying phase, but the spreads in some centres' ensemble products are too large after two weeks.

Key words: MJO, sub-seasonal prediction, predictability, S2S database

Acknowledgement: This work has been supported by the Grant of NIMR-2012-B-2.

Reference: Matsueda, M. and Endo, H., 2011: Verification of medium-range MJO forecasts with TIGGE. *Geophysical Research Letters* **38**: doi: 10.1029/2011GL047480.