

Climate predictability for societal applications including AI/ML

*Swadhin Behera¹, Manali Pal², J.V. Ratnam¹, Rajib Maity², Takeshi Doi¹, Yushi Morioka¹, Masami Nonaka¹

1. Application Laboratory, JAMSTEC, 3173-25 Showa-machi, Yokohama 236-0001, 2. Indian Institute of Technology, Kharagpur, India

The tropical Indo-Pacific domain is important for global climate. Particularly, the warm pool region rooted in both basins plays an important role in the modulation of ocean and atmosphere variability on several spatio-temporal scales. While both basins share the extended warm pool, each of the two basins has its own modes of ocean and climate variations. Tropical Pacific Ocean is well-known for the El Niño/Southern Oscillation (ENSO) phenomenon, the influence of which is seen world-wide during ENSO occurrence years. Recently, another mode of climate variability called the ENSO Modoki is discovered in the tropical Pacific Ocean. The ENSO Modoki is distinct from ENSO in terms of its characteristics and global impacts. Therefore, predictability of ENSO and ENSO Modoki is important for reducing their impacts on the society. Coupled models like SINTEX-F has been predicting the ENSO Modokis quite well. Here an attempt is made to compare those predictabilities using predictions from an AI/ML based statistical approach.

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