

An Assessment of the S2S Forecast Skill of a Hybrid Model That Combines Machine Learning with an AGCM

- specific phenomenon on the S2S timescales (e.g., ENSO).



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Equatorial Waves

Madden-Julian Oscillations (see Fig. 4).



Figure 4. The normalized symmetric and components of Wheeler-Kiladis diagram obtained from our model forecasts (left) and from ERA5 data (right).

- equatorial waves).

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RESULTS (cont.)

Our 2-year forecasts are able to capture various convectively coupled equatorial waves (e.g., Kelvin and Rossby waves) and signatures of the

CONCLUSION

Our ML/physics-based hybrid global climate model has forecast skill with useful skill on the S2S timescale for various phenomena (e.g., ENSO,

Our trained model is very computationally efficient – can be run on a regular laptop to produce multi-year forecasts in just a couple of hours.

REFERENCES