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## Model forecast error correction based on the Local Dynamical Analog method: an example application to the ENSO forecast

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Numerical forecasts always have associated errors. Analogue correction methods combine numerical simulations with statistical analyses to reduce model forecast errors. However, identifying appropriate analogues remains a challenging task. Here, we use the Local Dynamical Analog (LDA) method to locate analogues and correct model forecast errors. As an example, an ENSO model forecast error correction experiment confirms that the LDA method locates more dynamical analogues of states of interest and better corrects forecast errors than do other methods. This is because the LDA method ensures similarity of the initial states and the evolution of both states. In addition, the LDA method can be applied using a scalar time series, which reduces the complexity of the dynamical system. Model forecast error correction using the LDA method provides a new approach to correcting state-dependent model errors and can be readily integrated with other advanced models.