



## **A Hidden Markov Model perspective on regimes and metastability in atmospheric flow**

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By using Hidden Markov Models, a new perspective is developed on the existence of atmospheric flow regimes. To identify regimes, we search for the presence of metastable states in model data, and we do so by fitting Hidden Markov Models to the data. If the resulting Markov chain possesses metastable states, we identify these as regimes. In this perspective, regimes can be present even though the observed data has a nearly Gaussian probability distribution.