



Using feedbacks and couplings between subsystems of the climate system to evaluate climate models

Ernesto Rodriguez-Camino (1), Carmen Sánchez de Cos (2), José M. Sánchez-Laulhé (2), and Carlos Jiménez-Alonso (2)

(1) AEMET, Madrid, Spain , (2) AEMET, Málaga, Spain

This work aims to broaden the spectrum of methods for model evaluation by providing new physically based metrics that focus on accurate couplings between subsystems of the climate system. A simplified version of the feedback scheme that describes the dynamics of subtropical high-pressure systems is applied to evaluate how well CMIP5 climate models can simulate atmosphere-ocean-land interactions and resulting feedbacks in the Azores high-pressure system during summer, which affects climate throughout the Atlantic near southern Europe and North Africa.