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The Thermal Inertia Characteristics of the System Ocean-Atmosphere

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ABSTRACT

To estimate the time delay between the planetary temperature change and the change of the incoming solar radiation fraction absorbed by the ocean and the atmosphere, the analytical energy balance model is presented. The model generalization allows of using averaged data for model parameterization. Using the model, the time delay is investigated on four model cases of absorbed radiation change. The interconnections among the time delay, the planetary thermal inertia and the ocean active layer depth are established.

KEYWORDS

Thermal Inertia; Planetary Temperature; Total Solar Irradiance; System Ocean-Atmosphere

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