A12B-01 Response of Amazonian tropical forests to short- and long-term climatic variations (Invited)

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Forests respond non-linearly to changes in clouds, radiative balance, climate, and atmospheric chemistry, providing strong feedbacks in terms of modified fluxes of heat, water vapor, CO_2, and biogenic gases. This paper analyzes more than a decade of eddy flux and biometric observations in a central Amazon forest, and compares to other sites in the region. The time series of observations is used to partition changes in ecosystem fluxes in terms of basic responses of the ecosystem to environmental forcing as well as internal changes to the ecosystem. Using the ED-2 model, we place the observed responses in the context of projected long term changes in water balance, vegetation structure, and biophysical feedback to the atmosphere.

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