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New Relationship in Carbon Cycle

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ABSTRACT
The problem of carbon dioxide accumulation in the atmosphere is closely related to the biological carbon cycle processes insufficiently studied from the global viewpoint. Based on data obtained from the literature on net primary production (NPP) and soil respiration (SR) of world ecosystems, a quantitative analysis of the relationship between these basic parameters of the production/destruction phase of the carbon cycle is offered in this paper. A direct correspondence (equality in carbon equivalent) is shown between the organic matter being generated (NPP) and the carbon dioxide release from soil into the air (SR). The established relationship is of fundamental nature because it shows a new aspect of the planet-scale mechanism.

KEYWORDS
Biosphere; Biological Turnover; Carbon Balance; Dynamic Equilibration; Plant Productivity; Soil Respiration

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