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## FRACTION OF ABSORBED PHOTOSYNTHETICALLY ACTIVE RADIATION FOR A SEMI-DECIDUOUS FOREST AND WETLAND FOREST IN BRAZIL

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### ABSTRACT

Fraction of absorbed photosynthetically active radiation by the plant canopy (fPAR) is an important ecophysiological variable to monitor long-term changes in vegetation due to natural and anthropogenic influences. Because of the variation of fPAR in natural ecosystems, this study focuses on the patterns of variation of transmittance, reflectance and fPAR for two forests with different canopy structures, a forest located in a climatic transition between Amazonian rain forest (a semi-deciduous forest) and savanna and a cambara (*V. divergens*) monospecific forest. Transmittance, reflectance and fPAR were calculated with meteorological data measured from two towers installed in both forests. Our results indicate that on average, the annual average fPAR for the semi-deciduous and cambara was 92.3 and 84.8%, respectively. Measurements indicate that the fPAR for the cambara was 9% less than that for the semi-deciduous forest. The values and variation of  $r$ ,  $t$  and fPAR was due to the fraction of canopy openness, and was influenced by solar zenith angle and amount of diffuse radiation.



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