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CO2 exchange over a mixed-grassland savanna in Central Brazil

PAULO ARRUDA, Universidade Federal de Mato Grosso — We used eddy covariance technique to measure the net ecosystem exchange (NEE) of CO_2 between the atmosphere and an savanna in Central Brazil (locally known as cerrado), from February 2011 to February 2013, the data set included measurements of climatological variables. This part of brazilian savana has a long history of land cover change due to human activity, mainly due agricultural activity. Thus, the aim of this study was to evaluate the temporal variation in energy flux in areas of degraded, grass-dominated cerrado (locally known as *campo sujo*) in Central Brazil. The NEE variability is controlled mainly by solar radiation, temperature and air humidity on diel course. Seasonally, soil moisture and changes on land cover plays a strong role on the ecossystem. Daytime CO2 uptake under high irradiance averaged 4-12 μ mol$\cdot$m^{-2} $\cdot$ s^{-1} in the wet season (October to April) and 0-3 μ mol $\cdot$ m^2 $\cdot$ s^{-1} on the dry season (May to September). The net sign of NEE is negative (sink) during of the wet season and positive (source) in the dry season.

Paulo Arruda
Universidade Federal de Mato Grosso

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