

The dynamics of fire activity in the Brazilian Pantanal

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Summary

We analyze the changes in the patterns of fire occurrence in the Brazilian Pantanal based on remote sensing data resources. To estimate the spatio-temporal dynamics of fire occurrence we use a structural representation in a log-Gaussian Cox process, decomposing the intensity function in components of trend, seasonality, cycles, covariates and spatial effects. The results obtained indicate that there are relevant variations in the trends of fires occurrence in the Brazilian Pantanal, the intensity of occurrence of fires is statistically higher in natural vegetation, and that a relevant part of the record of fires observed in the first three quarters of 2020 cannot be explained by climatic factors alone, possibly being caused by intentional human actions.