



CLIM Program Transition Workshop

May 14-16, 2018

Lecture: *On the Probability Distributions of the Intensity and Duration of Heatwaves*

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Abstract:

Heatwaves are affecting the human mortality and the global climate adversely. There are many existing ad hoc definitions of heatwaves in literature. Here, we are identifying a notion of intensity and duration of the possible heatwaves and finding a proper definition using their distributions. We are modelling these two factors and attempting to find the predictive ability of our model. We have also obtained some preliminary results on obtaining the probability distribution of duration and intensity for a sequence of stationary random variables. We are exploring these concepts on a heat data of Atlanta from the year 1991-2012. The next goals are to relax the stationary assumption and obtaining more general results.