INTRODUCTION
Evapotranspiration is a combination of two processes: evaporation and transpiration. Evaporation releases water from the surface of the soil, the leaves of plants, and the other surfaces of vegetation. Both processes contribute directly to atmospheric water vapor content. Transpiration, however, releases water from within the vegetation via the stomatal pores. If the volume of water transpired by the vegetation increases there is a rise in the net energy balance. This rise causes an increase in the air temperature which in turn results in an increase in the rate of evapotranspiration by reducing the relative humidity. Evapotranspiration is greatest during periods of high transpiration, however, releases water from within the vegetation via the stomatal pores. If the volume of water transpired by the vegetation increases there is a rise in the net energy balance. This rise causes an increase in the air temperature which in turn results in an increase in the rate of evapotranspiration by reducing the relative humidity. Evapotranspiration is greatest during periods of high transpiration.

The height of tree measurements were marked using four nails on each tree above which the steel tape measurements were made. Inconsistencies in bark surface did contribute to some measurement errors. In order to calculate the standard deviation seven of the eight of observers measured three times each of the six trees. The average of the eight readings for each tree was taken as the final result. Inconsistencies in bark surface did contribute to some measurement errors.

In order to distinguish the spectral densities of the frequencies embedded in the data, a Fourier decomposition was used on the same trees (figures 4a-d ad 5b-d). When calculating the Fast Fourier Transforms (FFTs), an interval of five and one-third was selected for examination (126 hourly points). The FFT plots are actually a subset of the six-node spline plots as shown by the shaded areas in the spline plots. The FFT plots for the non-significant precipitation span (figures 4b and 5b) reveal little in the way of explicit evidence for any dominant periodicity, although in both plots frequency 5 (128/5=25.6, which coincides closest with the diurnal frequency) is quite prominent. In examining the spline plots for the rain events (figures 4d and 5d) it was apparent there were only 4 periodic cycles even though it was thought that there would be approximately five cycles during the examination interval (which was true for all of the trees). The FFT plots further prove a concentrating of the frequency of the periodicity around 4-5 which implies periods of between 25.6 and 32 hours. Figure 4a and 5a show FFT plots for two of which were the most significant during the field study. The relationship between major precipitation events and the tree circumference spline appears to reveal a reaction delay of approximately three to six hours. This delay was measured on the surrounding soil and was attributed to the dampening effect of precipitation and the roots storage capacity of the soil.

RESULTS
The biological processes behind the cycles observed during this period still require additional investigation using the data at hand. Water vapor exchange through the stomata pores and nutrient flow (including water) through the xylem of the leaves are both specific processes that should be examined. Synoptic scale weather patterns have yet to be examined for correlations to the environmental conditions. Insolation and advection factors should also be more closely examined for correlations to evapotranspiration rates and environmental conditions.

REFERENCES
Bogatkevich, Rostislav V., of the National Academy of Sciences in Belarus, measured daily radial growths peaking at 6:30 a.m. and 6:30 p.m. Patterns. Peters believes that they are related to the uptake of water by trees and vary with the rates of evapotranspiration.

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