**Dry Lightning and Forest Fires: a Climatological Approach**

Brian Vant-Hull, NOAA-CREST, City College of New York

The chances of a forest fire being initiated by lightning depends largely on the amount of recent rainfall. Since lightning and rainfall are coupled, lowering the threshold of rainfall that defines ‘dry lightning’ also lowers the number of lightning flashes classified as possible candidates for ignition. The competing effects of flash ‘dryness’ and number of flashes means it is not obvious what rainfall threshold is best. In this work the rainfall threshold is tuned to maximize the correlation between the number of annual ‘dry lightning’ flashes and the number of lightning induced wildfires to create a climate indicator for the National Climate Assessment (NCA). Rainfall data is from the NCEP stage IV database at hourly intervals, and lightning data from the National Lightning Detection Network, binned to match the hourly intervals. Both are regridded to the 0.2 degree grids used for the NCA lightning indicators. Under this binning scheme a rainfall threshold of zero produces the best correlation to wildfires. Dryness of wood is thus far more important than number of flashes when predicting lightning induced forest fires.