**AN IMPROVED PROTOCOL FOR PRECIPITATION MEASUREMENT**

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This project provides an alternative protocol for measuring weather precipitation. The proposed protocol uses the following formula: (absolute value of voltage produced/area of a single precipitation element)/duration of weather event. This produces a numeric value with the units of watts, though it is designated as RPU (rain power units) for sake of clarity. This formula takes into account the correlation between variables, such that a short precipitation event with large droplets and high impact force will not produce the same RPU value as a long precipitation event with similar precipitation element characteristics. Voltage, which is directly proportional to impact force, was measured with a mounted piezoelectric component, while an all-purpose baking flour covered tray captured the size of the droplets at the moment of impact. While the RPU value can be calculated for an individual drop, it is better to apply the formula based on the overall average values since it is more useful to look at the weather event as a whole, rather than as individual precipitation elements. Altogether, the low equipment cost and simple formula allow for a greatly improved protocol for precipitation measurement.