



## **Quantitative evaluation of precipitation gauge bird deterrent mechanisms**

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“Contamination” from avian activity is a constant contributor to inaccurate measurements and often complete failure in precipitation gauges. Various bird deterrent schemes have been deployed both by rain gauge manufacturers and by individual research groups, but few data exist regarding the effectiveness of the deterrent mechanisms outside of the anecdotal claims that “none of them work well.” We have recently re-purposed a commercial trail camera, commonly used to record images of game animals, to quantify the effectiveness of bird deterrent devices on our ATMOS 31 precipitation gauge. Our initial attempts using a 3-D printed ring and spike design actually made the precipitation gauge more attractive to birds, but subsequent iterations have substantially improved bird deterrent effectiveness.