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Pallavi Basu and **Luella Fu*** (luella@sfsu.edu), 1600 Holloway Ave, Mathematics Department, San Francisco, CA 94132, and **Wenguang Sun**. *Optimal Control of False Discovery Exceedance*. Preliminary report.

In multiple-testing, scientific findings usually come from experiments that have been performed only a few times or even just once, but researchers often use the false discovery rate (FDR), a Type I error control based on averages, in their testing procedures. It is more desirable to control the FDP for each experiment so that the results from a single operation of a testing procedure are reliable. From this reproducibility standpoint, the false discovery exceedance (FDX) is very relevant, because it does not rely on averages as FDR does. The FDX keeps a low probability on the event that the FDP exceeds an acceptable proportion each time the testing procedure is carried out. We propose an FDX procedure using an empirical Bayes framework and compare this method with other well-known Type I error criterion. (Received March 03, 2020)