1145-VT-2257 **Davidson Barr*** (`db3170@tc.columbia.edu`) and **Salvatore P Giunta** (`spg2133@tc.columbia.edu`). *Are P-value Still Reliable? Discussing Statistical Significance.*

P-Values have long been the standard metric used to determine whether or not data from an experiment is statistically significant. In recent years, P-Values have faced increasing criticism and many consider them to no longer be sufficient to evaluate data and a contributor to the ongoing Replication Crisis in science. This culminated in the American Statistical Association's 2016 statement about proper use of p-values in statistical analysis. In this presentation, we examine the strengths and weaknesses of P-Values and introduce some alternative methods of determining statistical significance. In particular, we discuss confidence intervals, Bayesian Statistics, likelihood ratios, d-values, and w-values. We also examine other non-metric based adjustments to current practice including flexible thresholds, pre-registered studies and random auditing. Finally, we discuss some implications for teaching statistics at the secondary and university level. (Received September 25, 2018)