Supplementary File of the Paper "Distribution-Free Monitoring of Univariate Processes"

Peihua Qiu[1] and Zhonghua Li[1,2]

[1]School of Statistics, University of Minnesota, USA

[2]LPMC and Department of Statistics, Nankai University, China

This file contains the results based on 10,000 replications, when $M = 200$ or 500 and when the second approach described in Section 3 of the paper is used for choosing the parameters of the related control charts.

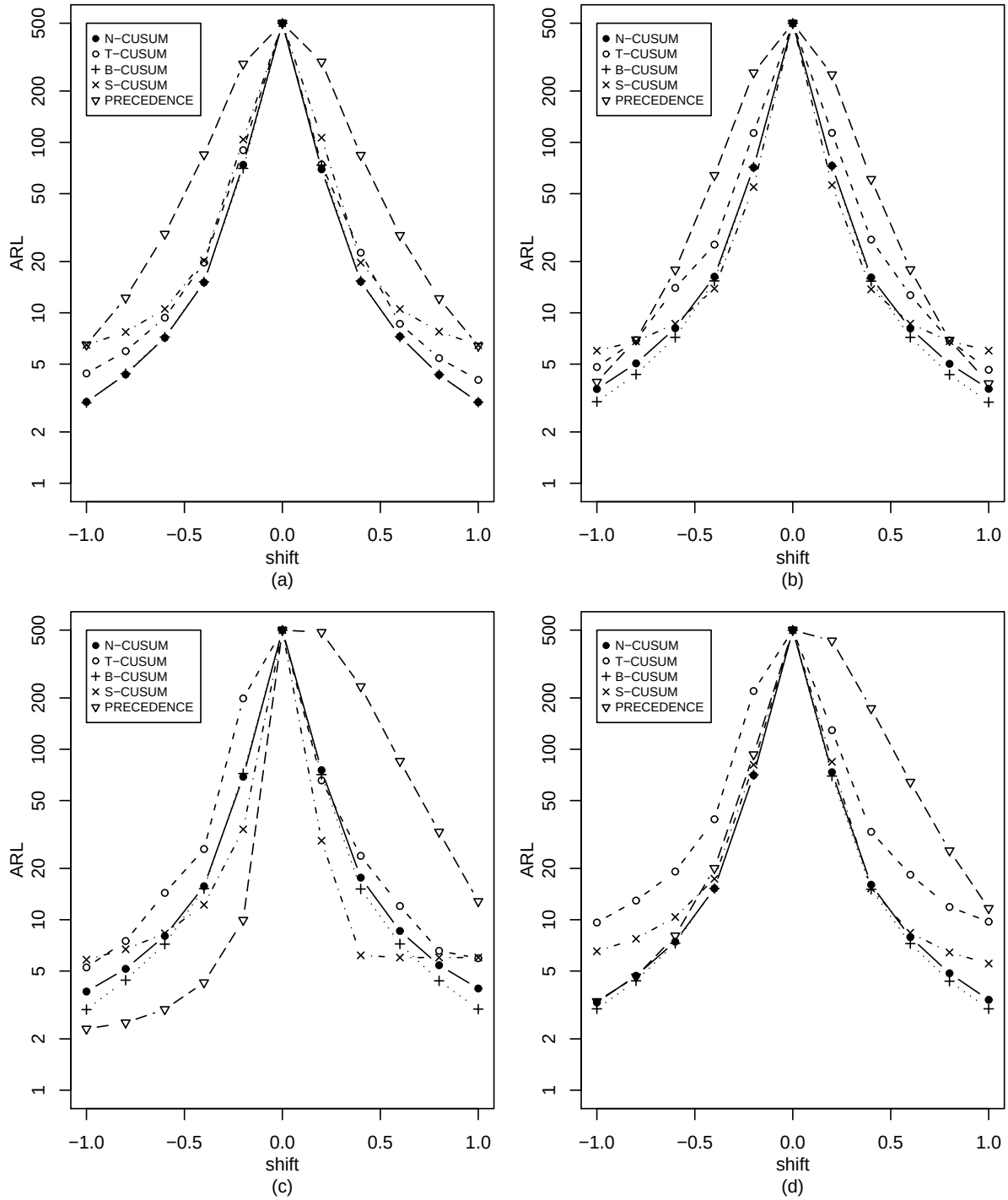

Figure S.1: OC ARL values of five control charts when $ARL_0 = 500$, $M = 200$, $m = 5$, and the actual IC process distribution is the standardized version of $N(0,1)$ (plot (a)), $t(4)$ (plot (b)), $\chi^2(1)$ (plot (c)), and $\chi^2(4)$ (plot (d)). Procedure parameters of the control charts are chosen to be the ones that minimize their OC ARL values when detecting each individual shift. Scale on the y-axis is in natual logarithm.

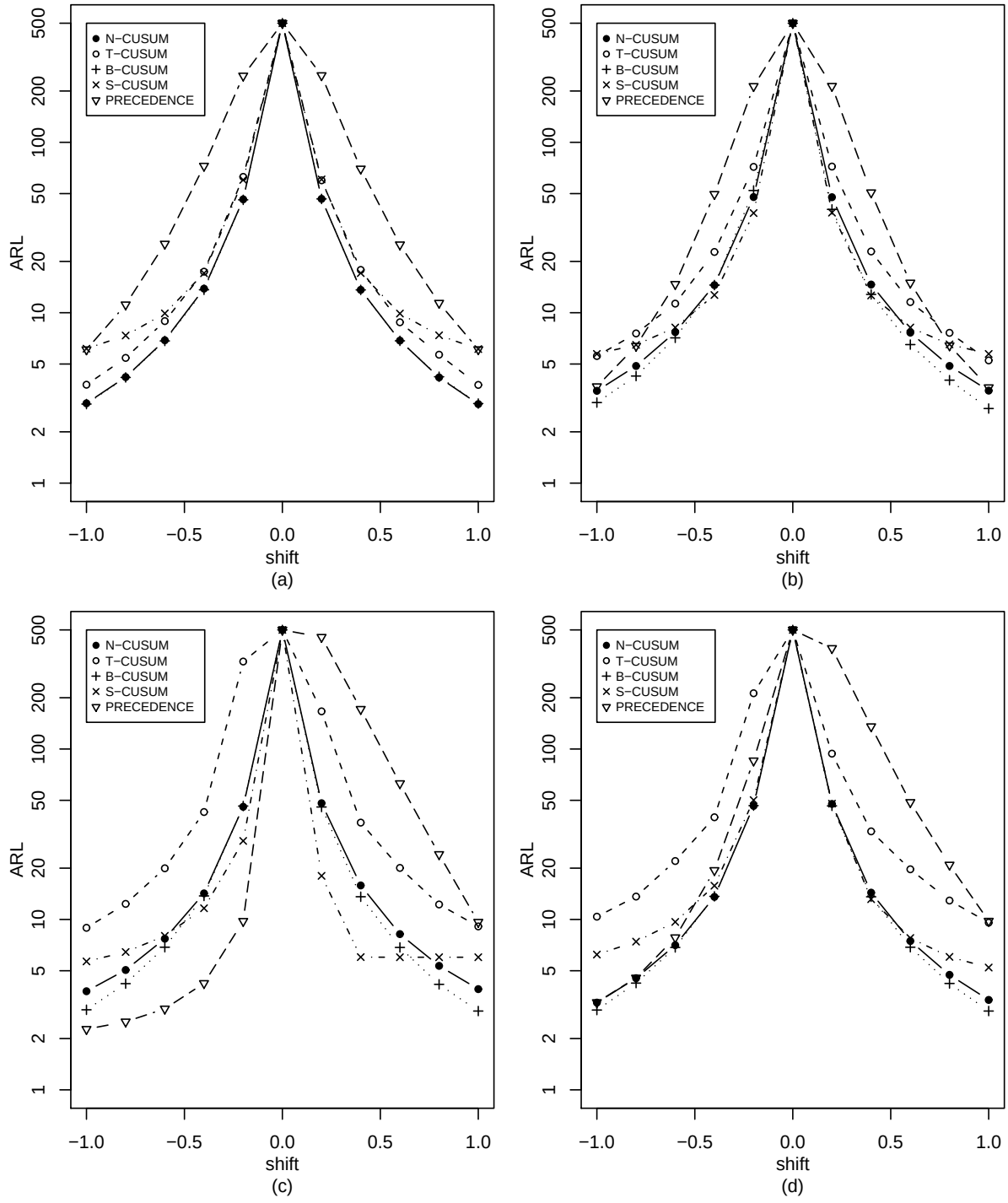

Figure S.2: OC ARL values of five control charts when $ARL_0 = 500$, $M = 500$, $m = 5$, and the actual IC process distribution is the standardized version of $N(0,1)$ (plot (a)), $t(4)$ (plot (b)), $\chi^2(1)$ (plot (c)), and $\chi^2(4)$ (plot (d)). Procedure parameters of the control charts are chosen to be the ones that minimize their OC ARL values when detecting each individual shift. Scale on the y-axis is in natual logarithm.