



Figure 5: Comparison between NUTS and our samplers for Bayesian logistic model with diagonal metric adaptation (tuned by `Rstan`'s default setting): The x-axis in each plot corresponds to the desired accept probability  $\delta$  of the primal-dual averaging algorithm. In the first row, y-axis is the minimum, mean, median and maximum of ESS per gradient for the parameters. ESS of samples of NUTS, eHMC, eHMCq and eHMCu is estimated by `ess` of R package `mcmcse`.