

In the thesis we study a sequential monitoring scheme for detecting a change in variance. We assume to have a stable historical period of length  $m$ . The goal is to propose tests with asymptotically small probability of type I error and power 1 as  $m$  tends to infinity. Two such procedures were proposed. The first uses estimates of variance from the historical period, the second uses recursive estimates. The distribution under the null hypothesis and also under the alternative hypothesis was derived for both test statistics. Furthermore a simulation study for of the finite sample performance of the monitoring schemes was conducted.