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Aleksey S Polunchenko^{*} (aleksey@binghamton.edu), 4400 Vestal Pkwy E, MATH, Binghamton, NY 13902. On the Minimax Performance of the Generalized Shiryaev-Roberts Quickest Change-Point Detection Procedure in Continuous Time.

We consider the classical minimax quickest change-point detection problem where the goal is detect a possible onset of a drift in a standard Brownian motion observed live. We derive analytically and in a closed-form all of the relevant performance characteristics of the Generalized Shiryaev-Roberts (GSR) procedure set up to control the drift of the Brownian motion. By virtue of the obtained performance formulae we show numerically that the GSR procedure with a carefully designed headstart is nearly minimax in the sense of Pollak (1985). (Received August 19, 2019)