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ON THE EMPIRICAL BAYES APPROACH TO MULTIPLE DECISION PROBLEMS WITH SEQUENTIAL COMPONENTS

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Abstract. The empirical Bayes approach to multiple decision problems with a sequential decision problem as the component is studied. An empirical Bayes m-truncated sequential decision procedure is exhibited for general multiple decision problems. With a sequential component, an empirical Bayes sequential decision procedure selects both a stopping rule function and a terminal decision rule function for use in the component. Asymptotic results are presented for the convergence of the Bayes risk of the empirical Bayes sequential decision procedure.

Key words and phrases: Empirical Bayes procedures, asymptotic risk equivalence, asymptotic superiority, sequential components, multiple decision problems.