

## INTERMEDIATE EFFICIENCY OF TESTS UNDER HEAVY-TAILED ALTERNATIVES

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**Abstract.** We show that for local alternatives which are not square integrable the intermediate (or Kallenberg) efficiency of the Neyman–Pearson test for uniformity with respect to the classical Kolmogorov–Smirnov test is infinite. By contrast, for square integrable local alternatives the intermediate efficiency is finite and can be explicitly calculated.

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**Key words and phrases:** asymptotic relative efficiency, intermediate efficiency, goodness-of-fit test, Kolmogorov–Smirnov test, Neyman–Pearson test, local alternatives, heavy-tailed alternatives, square integrable alternatives.

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