

ON TESTING THE DILATION ORDER AND HNBUE ALTERNATIVES

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Abstract. In this paper we develop a new family of tests for the dilation order based in a characterization of the dilation order. This family of tests statistics can be used for testing the exponentiality against HNBUE (HNWUE) alternatives. Asymptotic distributional results are given for both families of tests. For the HNBUE (HNWUE) we also derive the exact distribution under the null hypothesis.

Key words and phrases: Asymptotic normality, dilation order, harmonic new better [worse] than used, normalized spacings, order statistics, Pitman's asymptotic efficiency.

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