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## SMALL SAMPLE STATISTICS OF THE YULE-WALKER METHOD FOR AUTOREGRESSIVE PARAMETER ESTIMATION

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In this paper we will give the expectation of (the square of) the reflection coefficient, residual variance and prediction error in small sample statistics in white noise. We will construct approximations of these expectations which are more accurate than the known first order Taylor approximations. We need these better approximations because in some applications (radar applications for example) the number of observations is small.