CORRECTION

SIGNAL EXTRACTION FOR NONSTATIONARY TIME SERIES

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We correct results of the above paper for the particular case of Assumption A when \( \delta(B) \) and \( \delta_0(B) \) have a common zero or zeroes. For this case the general solution to (4.9) in the paper can be written

\[
\begin{bmatrix}
E(s_s(z_i)) \\
E(n_{s*}(z_i))
\end{bmatrix} = \begin{bmatrix} H_1 & H_2 \end{bmatrix}^{-1} \begin{bmatrix} H_2 z_{d*} + H_3 R_{m*} \end{bmatrix} + E(\xi_s(z_i)),
\]

where \( \begin{bmatrix} H_1 & H_2 \end{bmatrix}^{-1} \) is a generalized inverse of \( \begin{bmatrix} H_1 & H_2 \end{bmatrix} \) and \( \xi_s = \begin{bmatrix} \xi_s' & \xi_n' \end{bmatrix}' \) is a \((ds + dn) \times 1\) zero mean random vector (partitioned conformably with \( \begin{bmatrix} s_s' & n_s' \end{bmatrix}' \)) such that \( \begin{bmatrix} H_1 & H_2 \end{bmatrix} \xi_s = 0 \). For this case we must extend Assumption A to include an assumption that \( \xi_s \) is independent of \( z_s, u, \) and \( v \). Then \( E(\xi_s(z_i)) = 0 \), and (4.9) and Theorem 3 of the paper still hold. However, results in Section 5.1 of the paper on variances of signal extraction errors need to be modified: \( H_1, \xi_s \) should be added to (5.6) on page 659, and \( H_1, \text{Var}(\xi_s) H_1' \) should be added to (5.7) on page 659 and to the expression in Theorem 5 (page 660) for \( \text{Var}(s_s(z_i)) \). Notice that \( \text{Var}(\xi_s) \) needs to be known. Kohn and Ansley (1987) pointed out the problem in this particular case and took a different approach to get results analogous to the (corrected) Theorems 3 and 5.

An unrelated error on page 659 of the paper is that the zero matrix in the expression for \( K_2 \) should be of dimension \( t \times (t - d) \) not \( t \times (t - d + ds) \).

REFERENCE