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LIST OF SYMBOLS

Symbol	Description
C_X	$M \times M$ Covariance matrix
N	Number of data
M	Number of column by choose from matrix
$N^{'}$	$N - M + 1$
$N^{'} = N - M + 1$	Number of each rows matrix
P	Lag time of matrix
D	Matrix generated from sliding of a window size
E	Matrix of eigenvector
A	Principal components time series
R	Reconstruction
λ	Eigenvalues
I	Identity matrix
d_r	Value obtained from Willmott theory
P_t	Data prediction from the model at any time t
O_t	Data from real survey at any time t
$\overline{O}$	Average of data from real survey