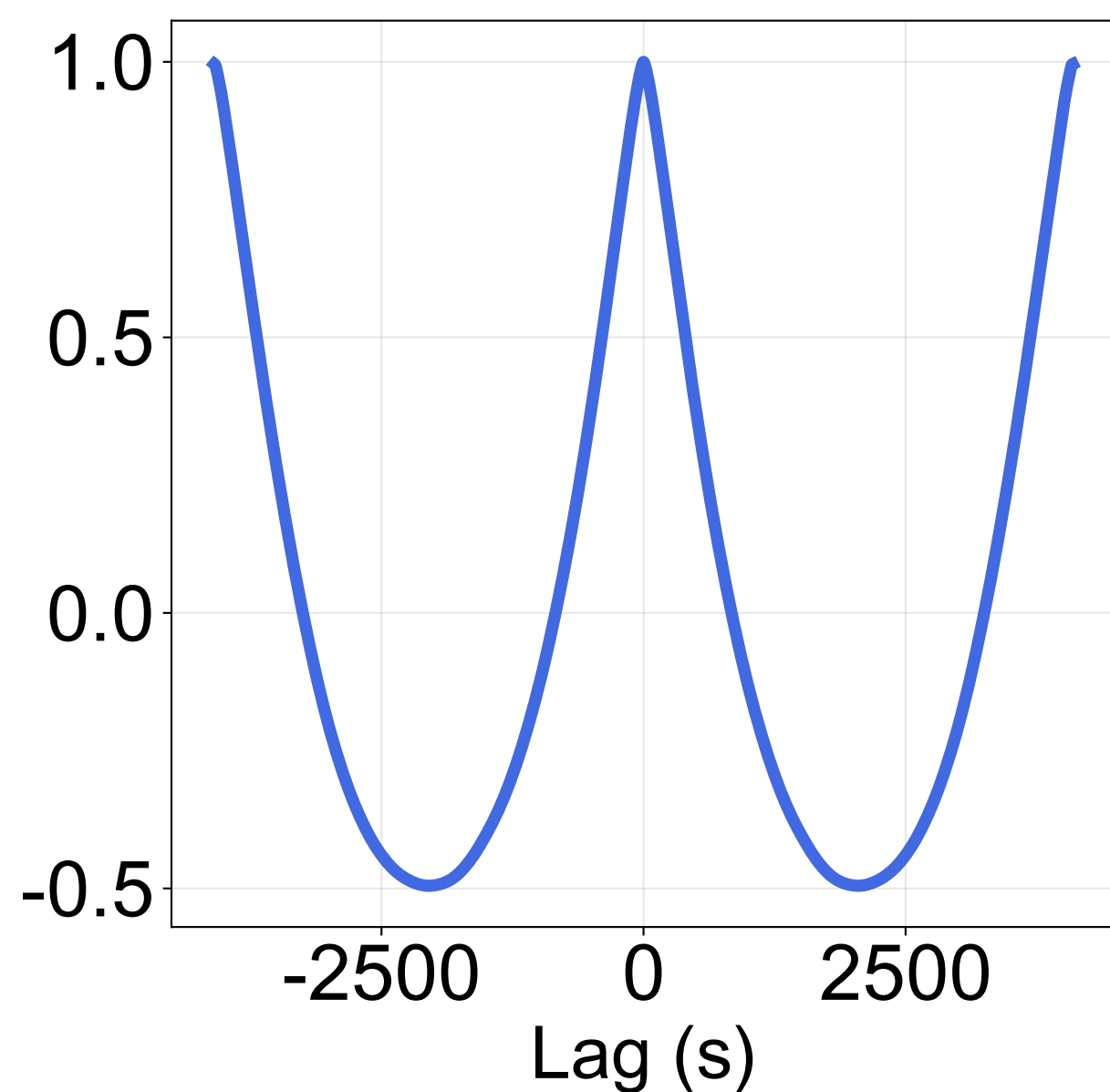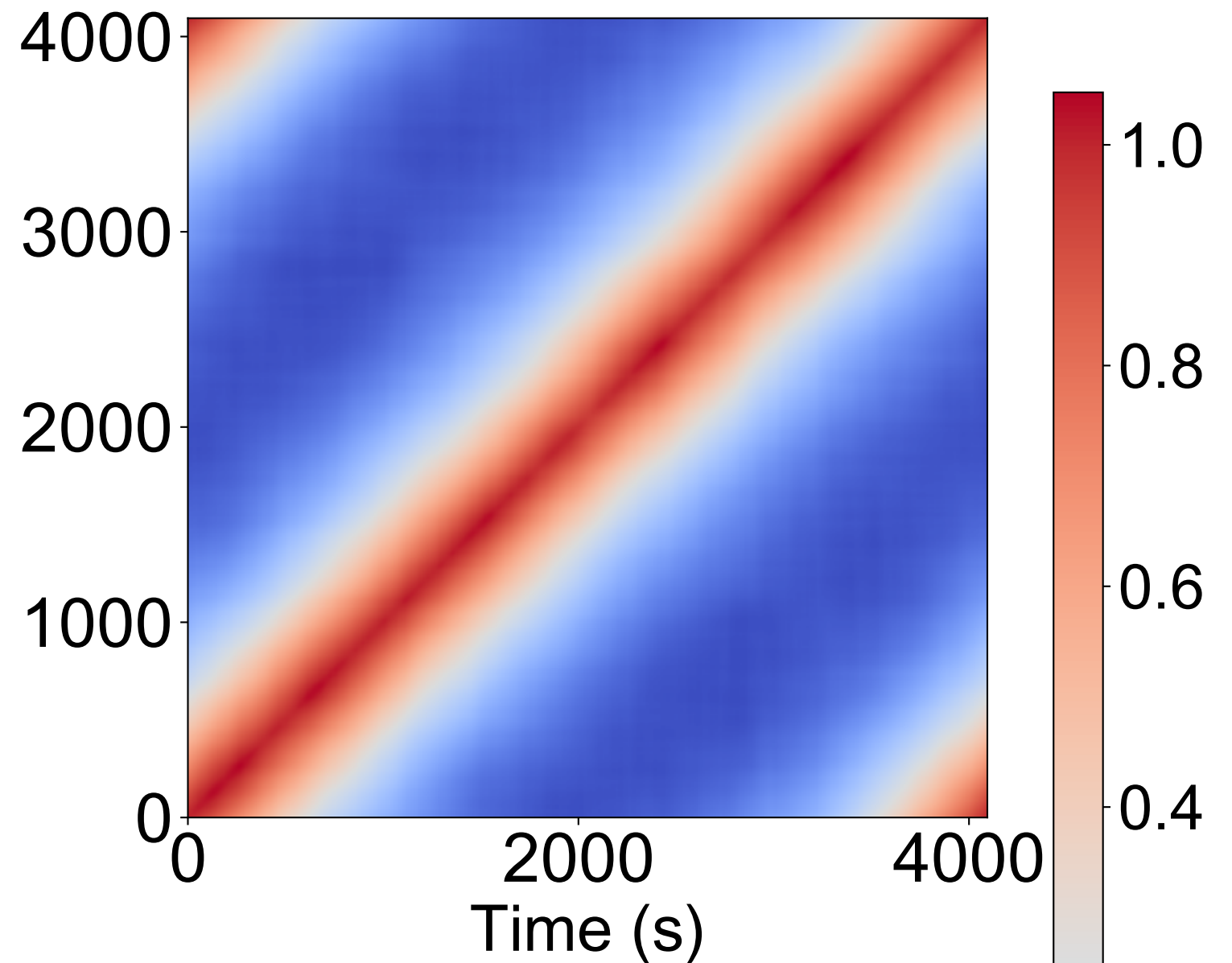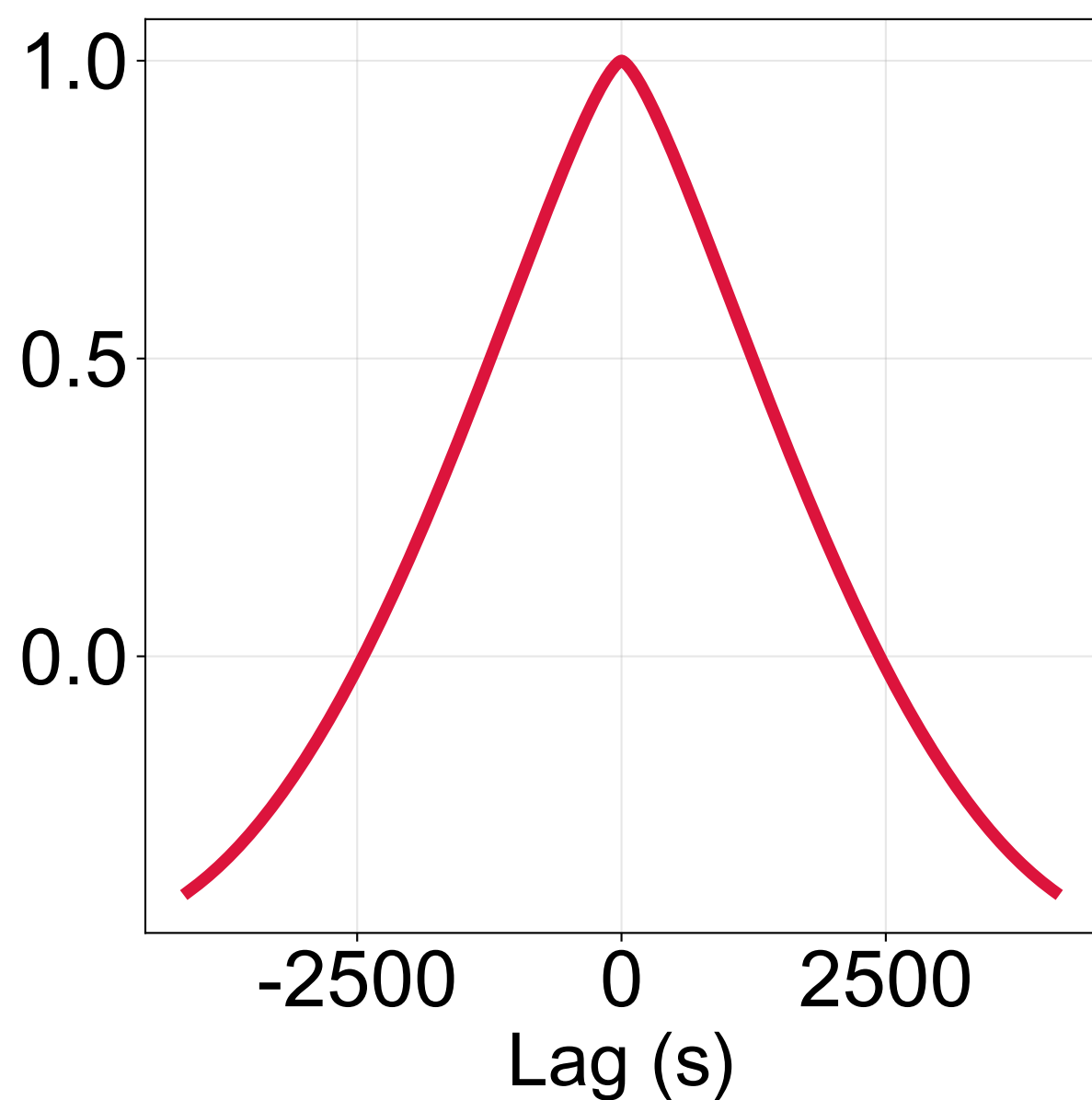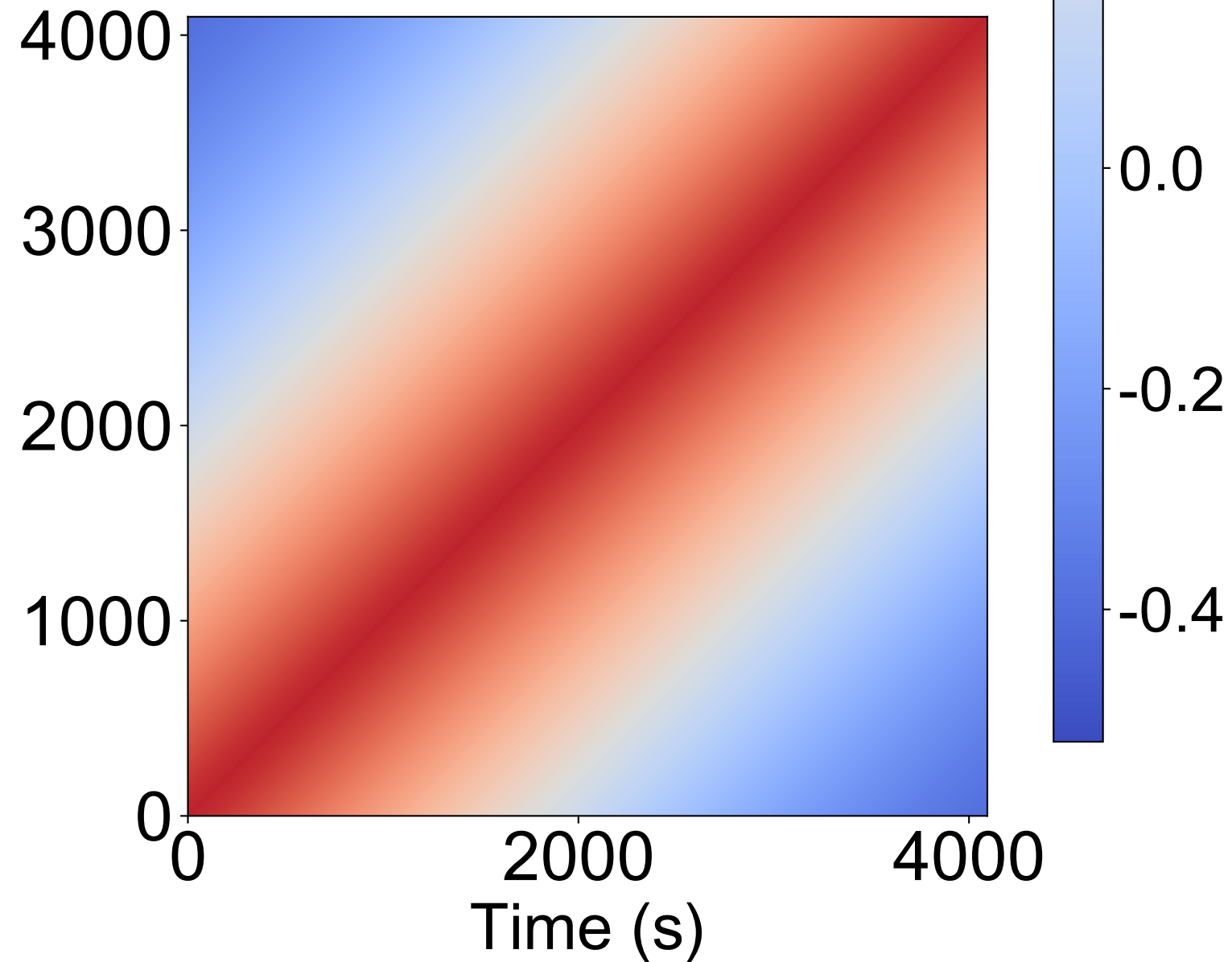Case 1: Time-time Correlation

Case 1: Covariance Matrix

Case 2: Time-time Correlation

Case 2: Covariance Matrix

Case 1: Diagonal in FFT space; Case 2: Diagonal in CFT space