Abstract View

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Bispectra of Sea-Surface Temperature Anomalies

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ABSTRACT

Observed anomalies of sea-surface temperatures (SST) exhibit significant triple-correlations and bispectra. Features of this type are not covered by the standard Ornstein Uhlenbeck (OU) concept of SST fluctuations. The present paper derives the spectrum and the bispectrum for a simple non-Gaussian Markov process. It can be shown by means of the inverse modeling technique that this process yields a satisfactory approximation to the spectra and the real part of the bispectra of SST-anomaly data. Moreover, the analysis indicates that the imaginary part of the bispectrum cannot be represented in terms of a single-variable model.