

TIME SERIES ANALYSIS IN ASTROPHYSICS

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The book brings together in a coherent way the results from the Time Series studies in mathematics, astronomy, geophysics and other branches of science, where periodicity, power spectra and underlying model for the observational data should be investigated. Emphasized are irregularly spaced data analysis, searching for the periodicity and the events counting, which is widely used now in the physical measurements. The computational algorithms are given for the described methods, as well as a number of model and real cases. The same data examples are used throughout the analysis to illustrate various approaches.

The book intends to a wide circle of the readers, both students and investigators.

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Time Series. Wavelets. Medicine, Nursing & Dentistry. Radiative Processes in Astrophysics: This clear, straightforward, and fundamental introduction is designed to present from a physicist's point of view radiation processes and their applications to astrophysical phenomena and space science. It covers such topics as radiative transfer theory, relativistic covariance and kinematics, bremsstrahlung radiation, synchrotron radiation, Compton scattering, some plasma effects, and radiative transitions in atoms. Time Series Analysis. Lecture Notes for 475.726. Ross Ihaka Statistics Department University of Auckland. Obviously, not all time series that we encounter are stationary. Indeed, non-stationary series tend to be the rule rather than the exception. However, many time series are related in simple ways to series which are stationary. Two important examples of this are: Trend models : The series we observe is the sum of a deterministic trend series and a stationary noise series.