

## Forecasting the occurrence of Nor'westers - A Lagged Time Series Approach

**ABSTRACT :** The primary objective in this paper is to demonstrate the viability of an alternative approach that consists of modelling the pattern of occurrence and non-occurrence of thunderstorms over Northeastern part of India as a whole as well as over some of the cities confined within the zone of study during pre-monsoon season. The type of the model used consists of a First-Order Two-State (FOTS) Markov chain to describe the occurrence of pre-monsoon thunderstorms. Results reveal that FOTS Markov chain model represents a replica model for 24 hours forecast of pre-monsoon thunderstorm over Northeastern part of India. The model, on the other hand, fails to forecast the occurrence of pre-monsoon thunderstorms over individual cities under consideration.

**Key Words:** Pre-monsoon thunderstorms, Northeastern part of India, Markov chain model, forecast.