An Algorithm for Pre-Processing of Satellite Images of Cyclone Clouds

Abstract

Rapid advances in satellite imaging technologies have made it possible to obtain images of the atmosphere using different modalities and accordingly, make weather predictions. The progress of cyclone storms is one such area where cloud intensity images exhibit characteristic patterns at various stages of evolution. These patterns have been classified using Dvorak’s technique, which is based on expert human judgment. Recent research efforts are being made to perform a computer analysis of these intensity patterns in order to make the classification process more objective. However, in order to perform an analysis of these image intensity patterns, the satellite images of different modalities need to be preprocessed to extract the dominant cyclone cloud patterns. This paper describes our algorithm to obtain cloud intensity contours to be used for pattern analysis. Results obtained using Visible (VIS) and Enhanced Infra-Red satellite images of cyclones have been found to be promising.

References
An Algorithm for Pre-Processing of Satellite Images of Cyclone Clouds

- ZHANG J. AND HU J. (2008) IMAGE SEGMENTATION BASED ON 2D OTSU METHOD WITH HISTOGRAM ANALYSIS, INTERNATIONAL CONFERENCE ON COMPUTER SCIENCE AND SOFTWARE ENGINEERING, PP. 105-108

Index Terms

Computer Science  
Image Processing
Keywords

Cyclone images  Visible images  Enhanced Infra-Red images  Dvorak Technique