Application of FY2C data for Precipitation Monitor on Huaihe River Basin

Huang Yong, Hu Wen, Liu Huijuan Anhui Institute of Meteorology

Using information of radiation, which come from atmosphere and observed by meteorological satellite, instance precipitation could be reduced. As to estimate technique, because of the different precipitation mechanism, there is no union technique for different kinds of cloud, such as convective cloud, status cloud and non-precipitating cloud. So it is important to classify the clouds during the rainfall estimation. In the early study, Scofield(1987) has already used the technique of enhances infrared image for rainfall estimation of convective cloud. And it is similar to the technique, which is introduced in the paper.

As beginning, entropy of images are estimated, and then the images with cloud are classified automatically. Secondly 9 thresholds are selected after counting the thresholds of classify. With the 9 thresholds the classification of satellite imagery is realized. Finally classified satellite imagery are applied in a heavy rain case on the early July 2007 on Huaihe Basin, and results are compared with the enhancement technology of infrared image in GOES manual. As a result, it is shown that the two methods have their own advantages and disadvantages respectively. And the optimal technology is combining the two methods. Finally, relationship of rainfall and FY2C cloud top temperature are concluded during autumn in Huaihe Basin.