VALIDATION OF MODIS ACTIVE FIRE DETECTION PRODUCTS FOR VIETNAM

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Summary
This paper presents results of validation of MODIS active fire detection products. Using the algorithm of Louis Giglio (2003) to extract the heat anomaly, compared with real forest fires that occurred from 2010 to 2015. To validate the accuracy of the algorithm and determine suitable temperature threshold of band T4 for Vietnam, the authors used data from 100 real forest fires in the past compared with fire information extracted from MODIS satellite imagery: the location of heat anomaly, temperature value of band \(T_4\) and temperature difference value \(\Delta T\). The validating results show that: (i) the forest fire detection capacity of MODIS satellite images in Vietnam is 71% accurate, (ii) the temperature threshold of thermal band T4 for forest fires in Vietnam is from 310 K to 350 K and the value temperature difference \(\Delta T\) is from 10 K.

Keywords: Forest fire, validation, fire hotspot, forest fire detection, MODIS.