Angular correction of land surface temperature using the feature space of radiance and fraction of vegetation cover

Abstract

1. Introduction

restriction: natural surface (not urban)

1. Method of LST angular correction
   1. Thermal infrared radiative transfer model

Assume that a scene consists of two homogeneous components: vegetation and soil, then the thermal radiance in a certain viewing angle can be expressed as:



where  is viewing zenith angle (VZA);  is the radiance emitted by the whole scene;  is directional fractional vegetation coverage (FVC);  and  are the effective emissivity of vegetation and soil component, respectively;  and  are effective radiance of vegetation and soil component, respectively.

From Eq. (1),

* 1. feature space of radiance and fraction of vegetation cover

1. Method verification using simulated image
   1. Simulated image
2. data
3. simulation
4. feature-space creation
   1. LST correction result analysis
5. Angular correction of LST application and comparison
6. Discussion
7. Result

Acknowledgement

Reference