

技术方法

基于ASTER数据反演我国南方山地陆表温度

王凤敏, 田庆久, 魏建宏

南京大学国际地球科学系统研究所, 南京210093

摘要:

以贵州省黎平县山地植被覆盖区为例, 基于ASTER遥感数据进行15 m分辨率的归一化植被指数制图和地表发射率制图, 在利用

MODTRAN 4大气辐射传输模型进行大气订正的基础上, 基于普朗克辐射方程的推导反演陆表温度, 取得了较为理想的结果。

关键词: 热红外 遥感 ASTER 陆表温度 发射率

RETRIEVING LAND SURFACE TEMPERATURE OF MOUNTAIN AREAS IN SOUTHERN CHINA BASED ON ASTER DATA

WANG Feng-Min, TIAN Qing-Jiu, GUO Jian-Hong

International Institute for Earth System Science, Nanjing University, Nanjing 210093, China

Abstract:

This research was performed in Liping County, Guizhou Province, a typical mountain area covered by vegetation in southern China. Having classified land surface objects based on the Normalized Difference Vegetation

Index (NDVI) map compiled from ASTER data, the authors assumed different emissivities for different objects and made

scale conversion to 90 meter resolution, thus compiling the emissivity map of the study area. Then the radiance of

the study area was obtained through the thermal infrared bands of ASTER which was atmospherically corrected by

MODTRAN 4. At last, the authors retrieved the land surface temperature based on the Plank radiate deduction

equation and acquired good results.

Keywords: Thermal infrared Remote sensing ASTER Land surface temperature Emissivity

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