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### Spatial and Temporal Analysis of MODIS Vegetable Index of Different Grassland Styles

<b>Journal</b>	<a href="#">Advanced Materials Research</a> (Volume 304)
<b>Volume</b>	<a href="#">Multi-Functional Materials and Structures Engineering</a>
<b>Edited by</b>	Jerry Tian
<b>Pages</b>	284-289
<b>DOI</b>	10.4028/www.scientific.net/AMR.304.284
<b>Citation</b>	Zhuo Wei Hu et al., 2011, Advanced Materials Research, 304, 284
<b>Online since</b>	July, 2011
<b>Authors</b>	<a href="#">Zhuo Wei Hu</a> , <a href="#">Shan Shan Li</a> , <a href="#">Xiao Shuang Wang</a> , <a href="#">Feng Xu</a>
<b>Keywords</b>	<a href="#">EVI</a> , <a href="#">MODIS</a> , <a href="#">NDVI</a> , <a href="#">Spatial</a> , <a href="#">Temporal</a>
<b>Abstract</b>	This paper mainly reports the annual spatial variation of primary types of the grass in the study area through MODIS NDVI and EVI. First of all, we analyze each type invariably characteristic curve of monthly vegetation index in the area severally and analyze the real-time characteristics about different vegetation index of the same type to study the feature of grass in each growth stage. It turned out that the variation trend of each vegetation index is identical in general and the variation of each month is a bit difference. The value of NDVI is bigger than EVI and so is the amplitude of fluctuation. The vegetation index of grass achieves the maximum value in July except the Stenothermal desert grass which achieves it in August, and descends to the minimum in February. It turned out that the yield is filled for grass in July and August. Then we use the image taken in July to analyze the spatial status and take the density segmentation by Maximum synthesis and take two kind of image. Results show that two kinds of vegetation index reflect grass type of spatial continuity and difference. The grading of EVI and NDVI is able to reflect adequately grass type of spatial distribution, and EVI reflects a gradual change of grassland types of space more than NDVI. According to the main grass type vegetation index analysis of the spatial and temporal variation characteristics of grassland, accurate embodies the basic condition can type for further grass information extraction work and grassland dynamic monitoring research which provides the main material basis and basic work.
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*Advanced Materials Research Vol. 304 (2011) pp 284-289*  
Online available since 2011/Jul/27 at [www.scientific.net](http://www.scientific.net)  
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doi:10.4028/www.scientific.net/AMR.304.284

## Spatial and Temporal Analysis of MODIS Vegetable Index of Different Grassland Styles

Zhuowei Hu<sup>1, a</sup>, Shanshan Li<sup>\*, 1, b</sup>, Xiaoshuang Wang<sup>1, c</sup>, and Feng Xu<sup>2, d</sup>

<sup>1</sup> College of Resources Environment and Tourism, Capital Normal University Beijing, China

<sup>2</sup> The National Disasters Reduction Center of China, China

<sup>a</sup>huzhuowei@gmail.com, <sup>b</sup>lishanshan198352@163.com, <sup>c</sup>wangxiaoshuang\_057@163.com,  
<sup>d</sup>xufeng@ndrcc.gov.cn

\*Corresponding author: Shanshan Li

Supported by Key Project of National Key Technology R&D Program (2006BAC08B02, 2007BAH15B02 and 2008BAK49B07)

**Keywords:** MODIS; NDVI; EVI; Temporal and spatial

**Abstract.** This paper mainly reports the annual spatial variation of primary types of the grass in the study area through MODIS NDVI and EVI. First of all, we analyze each type invariably characteristic curve of monthly vegetation index in the area severally and analyze the real-time characteristics about different vegetation index of the same type to study the feature of grass in each growth stage. It turned out that the variation trend of each vegetation index is identical in general and the variation of each month is a bit difference. The value of NDVI is bigger than EVI and so is the amplitude of fluctuation. The vegetation index of grass achieves the maximum value in July except the Stenothermal desert grass which achieves it in August, and descends to the minimum in February. It turned out that the yield is filled for grass in July and August. Then we use the image taken in July to analyze the spatial status and take the density segmentation by Maximum synthesis and take two kind of image. Results show that two kinds of vegetation index reflect grass type of spatial continuity and difference. The grading of EVI and NDVI is able to reflect adequately grass type of spatial distribution, and EVI reflects a gradual change of grassland types of space more than NDVI. According to the main grass type vegetation index analysis of the spatial and temporal variation characteristics of grassland, accurate embodies the basic condition can type for further grass information extraction work and grassland dynamic monitoring research which provides the main material basis and basic work.

### Introduction

The space-time characteristics analysis of different types of grassland vegetation index is the key of the study grassland vegetation. At present, on the studies of the grass, vegetation index can objectively reflect the basic situation of grassland vegetation coverage, it is usually used as one of the main basis of grassland vegetation and information extraction and dynamic monitoring.

Two kinds of vegetation index are MODIS NDVI and EVI. NDVI vegetation index is the MODIS products, which can better reflect grass overlay status and growth characteristics. Grassland in NDVI MODIS is roughly in 0.01 to 0.9. EVI is an enhanced vegetation index, grassland MODIS EVI approximate scope within the 0.01-0.6.

The amplitude of MODIS NDVI is smaller than vegetation index, which has the functions of eliminating soil background influence and purify air failure.[1]

This study adopts two kinds of vegetation index of MODIS NDVI and EVI in 2005. The study has the main categories of grassland type vegetation index trends and different growth stages of phase to analyze the characteristics respectively. It select lawn bowls grass period in July vegetation index image to density of grading distribution segmentation and to form Vegetation index classification distribution, to analysis the space research in vegetation index characteristics and distribution pattern alternation; Compared with the two same grass type kinds of vegetation index characteristics and classification of phase the similarities and differences between the space distribution features.

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