Suggested topics: Remote Sensing Applications

Sub topics: Climate/Environment

■Paper title:

Study on the creation of ultraviolet distribution map using satellite images

Author name (s): Teppei ISHIUCHI, Masaru TAKATA, Haruka NAKAZAWA

Proposed presenter (s): Teppei ISHIUCHI

Mailing address: ishiuchi@akashi.ac.jp

Phone: +81-78-946-6177

E-mail: ishiuchi@akashi.ac.jp

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■Abstract:

In recent years, the destruction of the ozone layer is in progress globally, the depletion of the ozone layer of the ecosystem, such as an increase in cataracts and skin cancer effect is concerned, because it leads to the ground reaching the amount of increase in harmful ultraviolet (UV-B). Therefore, this study showed the difference in the amount of ultraviolet rays in daily living area such as park green space and sandy beaches, residential district, college of Akashi city. And this study made survey of the land cover situation targeted these points and the measurement of UV reflectance using a simple UV instrumentation of the land cover each. This study aims at creating a detailed ultraviolet estimation distribution map in Akashi city from the results of land-cover classification using satellite images and the ultraviolet reflectance of land cover each using remote sensing techniques. As the results, this study showed that the ultraviolet reflectance of the concrete and sand is high, meanwhile, the ultraviolet reflectance is lower because vegetation such as grass have absorb more ultraviolet radiation. In addition, this study created an image by matching the result of land-cover classification results and the ultraviolet reflectance of land cover each displays a warm land cover high UV reflectivity, and color-coded by stages according to the ultraviolet reflectivity later. Finally, this study created UV distribution map more precise than ultraviolet estimation distribution map of 20km square are provided by the Meteorological Agency.