## Capturing Blue-shift of Red Edge using the Spectrum of Earthshine -The Earth seen from the space-

\*Noa Itou<sup>1</sup>, \*Ayami Yoshino<sup>1</sup>

1. Yokohama Science Frontier High School

The purpose of this study is to find out geochemical abnormality such as mineralization zones of the earth from the ground by observing the blue-shift thorough a spectrum of the earthshine.

The earthshine is the astronomical phenomenon of sunlight reflecting from the earth's surface and illuminating the dark side of the moon. Sudden increase in reflectance of the red wavelength in the reflection spectrum of the plant is called a red edge. Blue-shift means that a red edge shifts to the blue wavelength side when a plant felt stress.

In this study, observation of the earthshine using the telescope and a plant experiment on the ground were performed.

As a result, in the observation of the earthshine, detecting a red edge is succeeded but the blue-shift was indistinct. In the experiment of the plants, a blue-shift was seen in the red edge of the plant gave water stress. However a blue-shift was indistinct in the plant brought up with solution of the heavy metal salt.

Keywords: Earthshine, Spectrum, Red Edge, Blue-shift



地球照のスペクトル(Flat補正済み)

植物実験の結果(11日経過)

