

Observation of the Earth by Measuring spectrum of the Earthshine

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The phenomenon that the dark part of the moon looks shiny caused the light reflected on the earth is earthshine. By measuring spectrum of this phenomenon, the earth may be observed from the earth without using any artificial satellites. However, in the first place, the light of earthshine is sunlight so the result will be affected by spectrum of sunlight. In my hypothesis, from this fact, the spectrum of the earth will be measured by dividing earthshine by the sunlight. As the result, the spectrum of the earth was measured. Also, there were the plant-specific phenomena like green edge, red edge and blue shift and the absorption line of oxygen in the graphs. From these results, by measuring spectrum of earthshine and comparing the results, the environmental state of the earth may be quantified.

Keywords: Earthshine, Spectrum, Absorption line, Green edge, Red edge, Blue shift

