

Study of lunar brightness during lunar eclipse - Focusing on the relationship between lunar eclipse and aerosol -

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We observed lunar eclipses in 2021 and 2022. We predicted that the brightness of the lunar eclipse in 2021 will be a dark lunar eclipse with a Danjon scale of $L = 1$ to 2 due to the influence of the volcanic plume from the Fukutoku Okanoba volcano that erupted in August before the lunar eclipse. The brightness of the moon at that time was as bright as $L=3$. In addition, the brightness of the moon during the lunar eclipse in 2022 was predicted to be affected by the volcanic plume from Tonga volcano, which erupted in January before the lunar eclipse. We expected that the brightness of the moon at that time would not dim. When I actually observed this lunar eclipse, the brightness of the moon was slightly dark with $L=2$. We considered the cause of the difference in appearance of these two lunar eclipses.

Keywords: lunar eclipse, Danjon scale, aerosol

