

Shades of color in the sky in Iwaki

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We took an interest in the difference of the sky color. We examined the weather information to find out why there are several shades of blue in the sky. We took pictures of the sky around 12 o' clock, and found the value of RGB; components of colors. Moreover we checked the temperature and humidity at the spot, and found the amount of water vapor. Later, we made a graph and inspected the relationship between the value of RGB and the amount of water vapor. The results are as follows. Red is 50 ~ 100, Green is 70 ~ 120, Blue is 120 ~ 170 where the amount of water vapor is 2.0 ~ 12.6g/m³, and the sky color there becomes deeper. Moreover, we focused on B/R value, which indicates the wavelength dependence of the atmosphere, and found the value becomes large from September to January. We concluded that the Mie scattering occurs when there is a large amount of water vapor, the sky color becomes pale by the scattering regardless of the wavelength of light.