

Spectroscopic observation of a meteor using a diffraction grating

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We attached a diffraction grating to a digital single-lens reflex camera and shot at the time of the meteor shower. We calculated the wavelength of each bright line on the pictures based on the calibration work so that identified which elements are the source of meteor luminescence. Also, we measured the luminance change of each bright line. As a result, we identified several elements as the source of meteors we observed. Especially, we specified an oxygen forbidden luminescence in Gemini meteor shower (2017). Moreover, there was a result that sodium is deficiency in Gemini meteor shower (2017).

Keywords: meteor, spectroscopic observation, diffraction grating, meteor shower, calibration, sodium (Na)

