

Observations of sprites by the grating and identification of bright lines

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We installed a diffraction grating in Watec100N, which is a sensitive monochrome video camera, and we observed spectra of sprites with it.

And we tried to identify bright lines by following the steps described below.

1. To subtract about ten average images which have been photographed before and after the emission of sprites' light.
2. To make brightness of the images uniform.
3. To calculate the wavelength of sprites' spectra of a mercury lamp and a neon lamp.
4. To consult literature for the wavelength of spectra of oxygen and nitrogen.
5. To try to identify bright lines comparing the results of the above-mentioned facts of No.3 and No.4.

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