

Visualizing Light Pollution -The Influence of City Lights on the Night Sky-

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From daily astronomical observations, we have felt the influence of city lights on the brightness of the night sky, and in a previous study of this group in 2021, we found that city lights and the presence of clouds reflecting them affected the brightness of the night sky. In this study, an automatic camera system using a single-lens reflex camera was used at night, and a relative comparison method using JPEG images was used to analyze two years of data. Additionally, brightness of the entire sky was observed by SQML for three nights. The results showed that city lights have a significant impact on the brightness of the night sky, and that even a few clouds in the night sky reflect city lights and increase the brightness of the night sky. We also investigated LED and HID lamps, which have been increasing in number in recent years, and found that they affect the brightness of the night sky more than conventional light sources.

Keywords: light pollution, night sky, Visualization

