

Making a Sky Glow Map in and around “Luminous city Hakodate”

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We have observed night sky brightness using by Sky Quality Meter with Lens (SQM-L) and Sky Quality Meter with Lens Ethernet (SQM-LE) in and around Hakodate since 2011. We had conducted fixed point observation, moving observation at the 280 points in Hakodate for 5 years. Also, mass of point observation was conducted in 2012 October using 40 SQM-L by many students who live in and around Hakodate. Hakodate region is separated into seven regions by the night sky brightness every 0.5 magnitude by square arc seconds. Also, we observed naked eye limited magnitude and found the relationship between naked eye limited magnitude and night sky brightness at the fixed points. Then, we published Sky Glow Map in and around “Luminous city Hakodate”.

It is considered that the night sky in and around Hakodate is not brighter than other big cities. The milky way visible area is not so far from urban area. Although, according to the result of experiments, it is considered that reflected lights by snow in winter season, and high humidity, high concentrations of spm and pm2.5 affect the night sky brightness.

Keywords: The Night Sky Brightness

