**Zenithal sky glow measurement in Bandar Lampung as consideration in drafting the regulation of light pollution-free areas around the ITERA Astronomical Observatory (IAO)**

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ABSTRACT

Urban development to big cities generally will be accompanied by excessive use of artificial light, such as street lamps, billboards and building lighting systems. Ineffective and incorrect lighting installation design causes environmental degradation, i.e light pollution. Today, the light pollution is one indicator of environmental degradation and energy waste behavior. Study on light pollution has progressed in many fields of science, extending from traditional fields of astronomy to atmospheric physics, environmental science, natural science and social life. Measurement of sky brightness is also an indicator of the feasibility of an observatory development plan. The location of the observatory is located at coordinates 05o 27 '71 "LS and 105o 09' 39" BT with a height of 1030 mdpl. The construction of an observatory requires a study of the sky's brightness conditions as a matter of consideration to obtain the best observation result. Therefore, to support the Lampung Provincial Government, Institut Teknologi Sumatera (ITERA) and Institut Teknologi Bandung (ITB) in carrying out the construction of observatories in TAHURA WAR, Gunung Betung, Lampung. We did the sky brightness measurements as far as 15 km from the location point of the observatory. We use SQM to measure the brightness of the sky towards the zenith in every crowded area in the city of Bandar Lampung. Then, from the measurement results we make a map of light pollution. From the mapping results, there are four locations that are indicated to be contaminated by light pollution, namely Tanjung Senang, Teluk Betung, Kemiling, and Gedong Tataan with respectively values of 15.8 mpas, 16.6 mpas, 16.8 mpas, and 17.00 mpas.

*Keywords: Artificial light at night; Light Pollution; Environment; Sky Brightness; Sky Quality Meter*

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