Preliminary Study on Relation Between Temperature, Humidity and Night Sky Brightness in Yogyakarta

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The meteorological data is important to be collected especially at the observatory. Temperature and Humidity are two paramaters that can be monitored as part of meteorological data collection. The observatory site also need to be protected from light pollution. The light pollution level usually quantized by the value of Night Sky Brightness (NSB). In this paper, the relation between temperature, humidity and NSB will be studied. The temperature and humidity were measured DHT11 Sensor that is assembled and monitored using Internet of Thing method. The NSB was measured using Sky Quality Meter. The measurements have been done in Observatorium UAD, Yogyakarta. The correlation calculation was employed to perform relationship analysis. The correlation value of temperature on NSB are in the range of -0.441 to 0.576. Hence, there is no particular pattern for the relationship between temperature and NSB. The correlation value of humidity on NSB are in the range of -0.497 to 0.881. Here, the humidity tend to have positive relationship to NSB. As the humidity increased, the NSB is increasing. However, the investigation on temperature and humidity data changes in particular duration of time measurement will give complete information about the relationship between temperature, humidity and NSB. The conclusion can be used to create predition model of NSB monitoring system.