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Monitoring Light pollution at Kottamia Astronomical Observatory

Abd El Fady Morcos and Mohamed Aboushelib

Astronomy, National Research Institute of Astronomy and Geophysics (NRIAG), Egypt,
email: fadymorcos@nriag.sci.eg

Light pollution is a big concern to many scientists, especially astronomers. Without dark skies, they are unable to receive the faint signals of light from distant bodies in outer space. Many astronomical observatories are built in remote locations in an effort to escape the light of cities and towns, but since the 1970s, light pollution has started to become a threat due to development and urbanisation. Kottamia Astronomical Observatory in Egypt has one of the largest telescopes in Africa and the largest one in the Middle East and North Africa region. Due to the constructions of the New Administrative Capital city and other new cities around it since late 2015, the night sky brightness at Kottamia observatory has been changed due to the light of these cities. The data about the variation of the sky brightness at the location of the observatory, has been collected for the interval from April 2012 to March 2020 from VIIRS/DNB on board Suomi NPP satellite. The data obtained for every three months are represented graphically. The effect of the sky glow over the Kottamia observatory has been studied and it is noticed that the light pollution is increasing due to spreading the light from Cairo city more than the other new cities brightness.

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