National Aeronautics and
Space Administration

# Introductory Webinar: Introduction to NASA's "Black Marble" Night Lights Data

December 3, 2020

9:00-11:00 EST (English) or 14:00-16:00 EST (Spanish)

At night, satellite images of Earth capture a uniquely human signal - artificial lighting. Remotely-sensed lights at night provide a new data source for improving our understanding of interactions between human systems and the environment. NASA has developed the Black Marble, a daily calibrated, corrected, and validated product suite, so night light data can be used effectively for scientific observations. Black Marble is playing a vital role in research on light pollution, illegal fishing, fires, disaster impacts and recovery, and human settlements and associated energy infrastructures. The data (originally retrieved from the VIIRS day night band sensor) has been corrected by multiple novel algorithms, providing high-quality, cloud-free, atmospheric-, terrain-, vegetation-, snow-, lunar-, and stray light-corrected nighttime radiances.

This webinar will focus on building the skills needed to choose the appropriate night lights product, acquire and understand Black Marble data, and how to use the data in analyses for tracking urbanization, electrification, and disaster monitoring.

**Black Marble Background, Use, and Applications**

- Understanding nightlights (NTL) data collection and the variety of light sources that are captured in Black Marble data
- Comparison of existing night lights products and new features
- Technical description of Black Marble
- Data download
- Post-processing and quality assessment
- Time series and change detection
- Data applications (monitoring urbanization, electrification, and the impact of disasters on the electrical grid)

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