

Mapping Dark Sky Access Across Texas Over Time

By: Jasper Tyner

Abstract

The Visible Infrared Imaging Radiometer Suite (VIIRS) instrument onboard of the Suomi-NPP satellite has provided unprecedented night time light data that could be used as an indirect indicator of various parameters, including light pollution, population distribution, etc. The proposed project will integrate multi-temporal night light data from VIIRS with other datasets, including population data from the most recent census, ground-based light classification data (Bortle scale) to better understand how population growth affects light pollution over time, and to give insight into the importance of Dark Sky Preserves as population growth continues, across the State of Texas. Various spatial and statistical analysis techniques will be applied to address the objectives of this proposal including hotspot and density analyses, and statistical analysis of changes in population datasets.

Introduction

Methods

Data

Results

Conclusion