

# CALIFORNIA STATE SCIENCE FAIR 2017 PROJECT SUMMARY

Name(s)

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**Project Number** 

J1215

## **Project Title**

# **Light Pollution in the Americas and Its Possible Contributors**

## **Abstract**

## **Objectives/Goals**

The objective of this study is to measure the amount of light pollution at different locations within North and Central America and identify the main contributors of the light pollution detected.

#### Methods/Materials

NIKON Camera, Tripod, ImageJ. Photographs were taken at locations and processed through ImageJ, an image processing program

## Results

Once the images were analyzed it was observed that the amount of light pollution detected varied throughout the locations. Difference in population seemed to be the most likely reason for the variation of light pollution measures but a direct correlation was not found between the two.

#### **Conclusions/Discussion**

The population of a city or general area is a major contributor to the amount of light pollution the city or area produces, but it is not the only contributor. The layout of the city, monuments in the surrounding area, the lifestyle of the population, and how wealthy a city is affect the amount of light that location produces.

## **Summary Statement**

I measured the amount of light pollution in different locations in North and Central America, proving not only population, but many other factors contribute to light pollution.

## Help Received

I took all photographs and collected date with no help and only used the program ImageJ to process the images.