

# Weather Station Overhaul



# Weather Station Online

## CURRENT LOCAL CONDITIONS

### Geissberger Observatory Dome

Conditions as of: 06:13 PM Thursday, Dec 12, 2019

**13.8°C**

HIGH: 14.9°C at 11:59 AM  
LOW: 13.0°C at 06:03 AM



#### Wind:

2.5 km/h SW

High gust 30.6 km/h @ 03:34 AM



#### Humidity:

96.3%

Feels like 14.2°C



#### Rain:

1.8 mm

Seasonal Total 116.4 mm



#### Barometer:

1,025.7 mb

Steady

Vantage Pro2 Plus with 24-hr-Fan-Aspirated Radiation shield,  
includes UV & Solar Radiation Sensors via WLL  
Shop Weather Stations at [www.davisinstruments.com](http://www.davisinstruments.com)

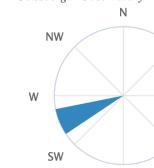
Wind Speed  
Geissberger Observatory Tower



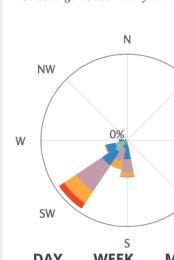
Total Rain  
Geissberger Observatory Tower



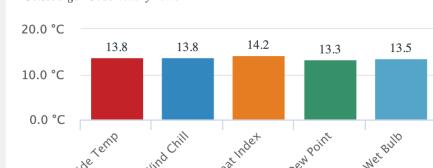
Wind Direction  
Geissberger Observatory Tower



Wind Rose  
Geissberger Observatory Tower



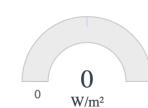
Temperature  
Geissberger Observatory Tower



Humidity  
Geissberger Observatory Tower



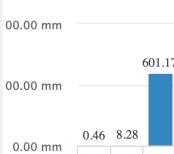
Solar Radiation  
Geissberger Observatory Tower



Barometer  
WeatherLink Live



ET  
Geissberger Observatory Tower



UV  
Geissberger Observatory Tower



Local Forecast  
WeatherLink Live

Evening



Sunrise/Sunset  
WeatherLink Live



Moon Phase  
WeatherLink Live



Full Moon

THSW Index  
Geissberger Observatory Tower



THW Index  
Geissberger Observatory Tower



[Current Conditions](#)

[Station History \(requires WeatherLink login\)](#)

# Back to Barcroft!





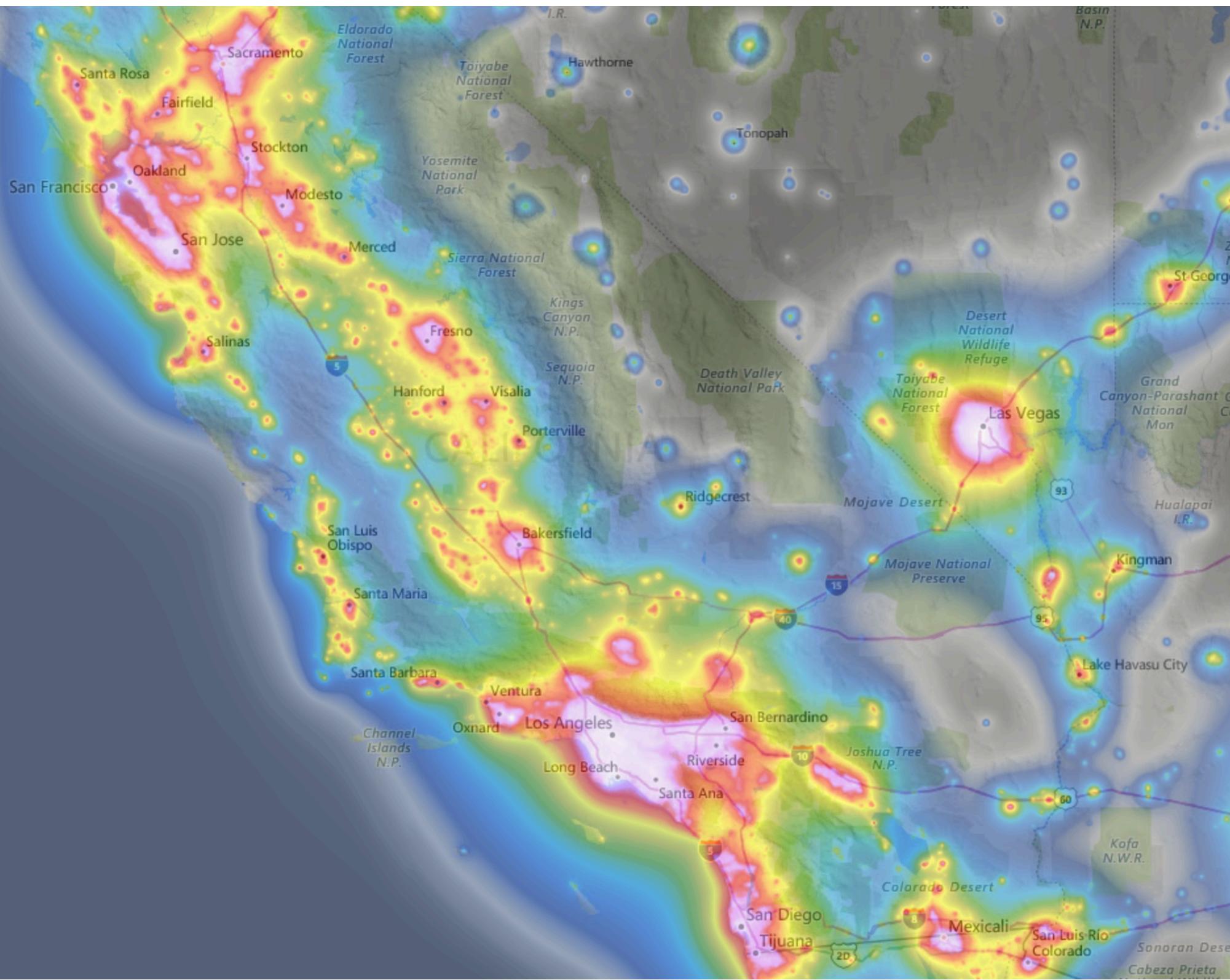


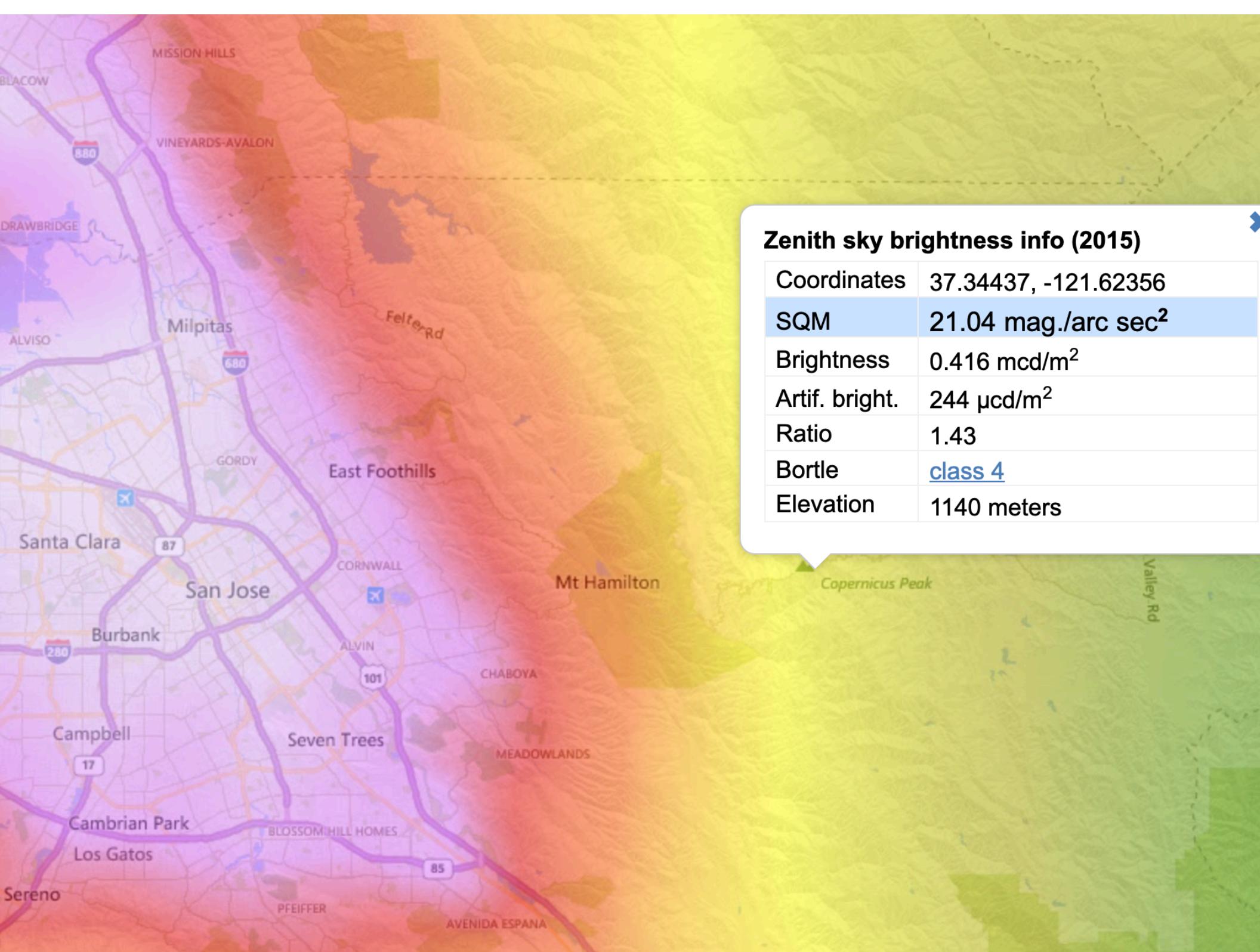
# Exoplanet Detection with Small Telescopes at Deep Springs

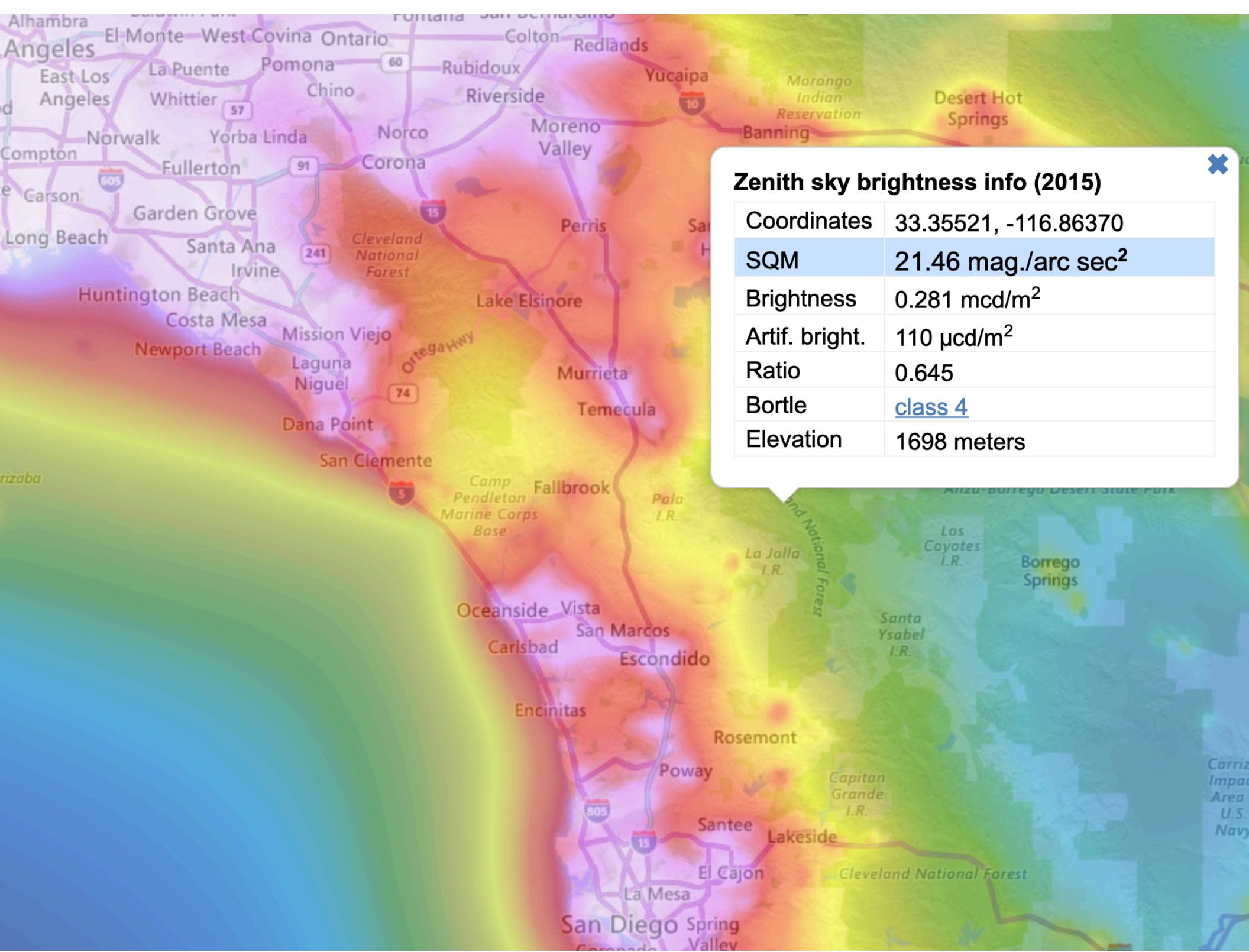
I. Large Surveys and Small Telescopes

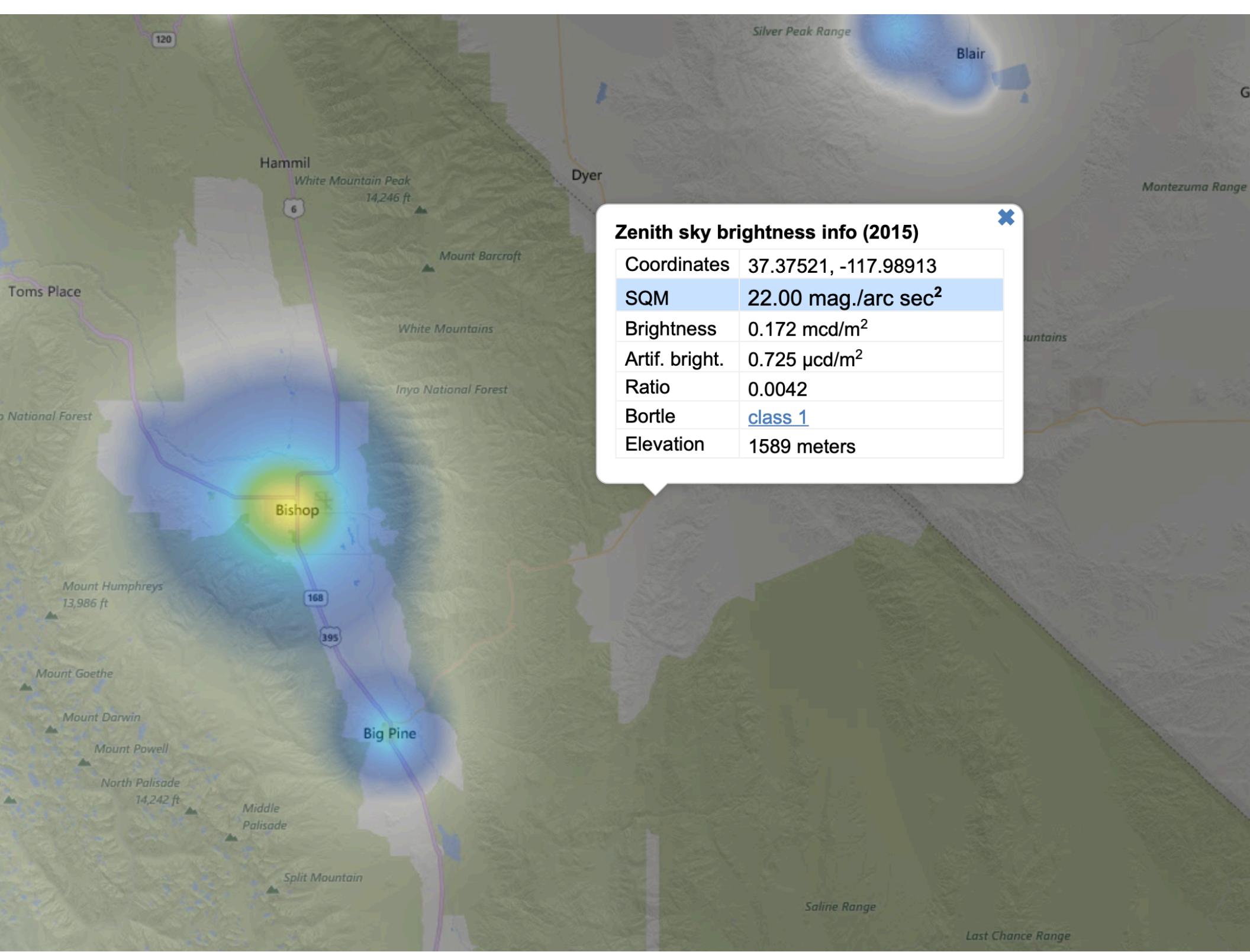
II. Saint Mary's College Milestones

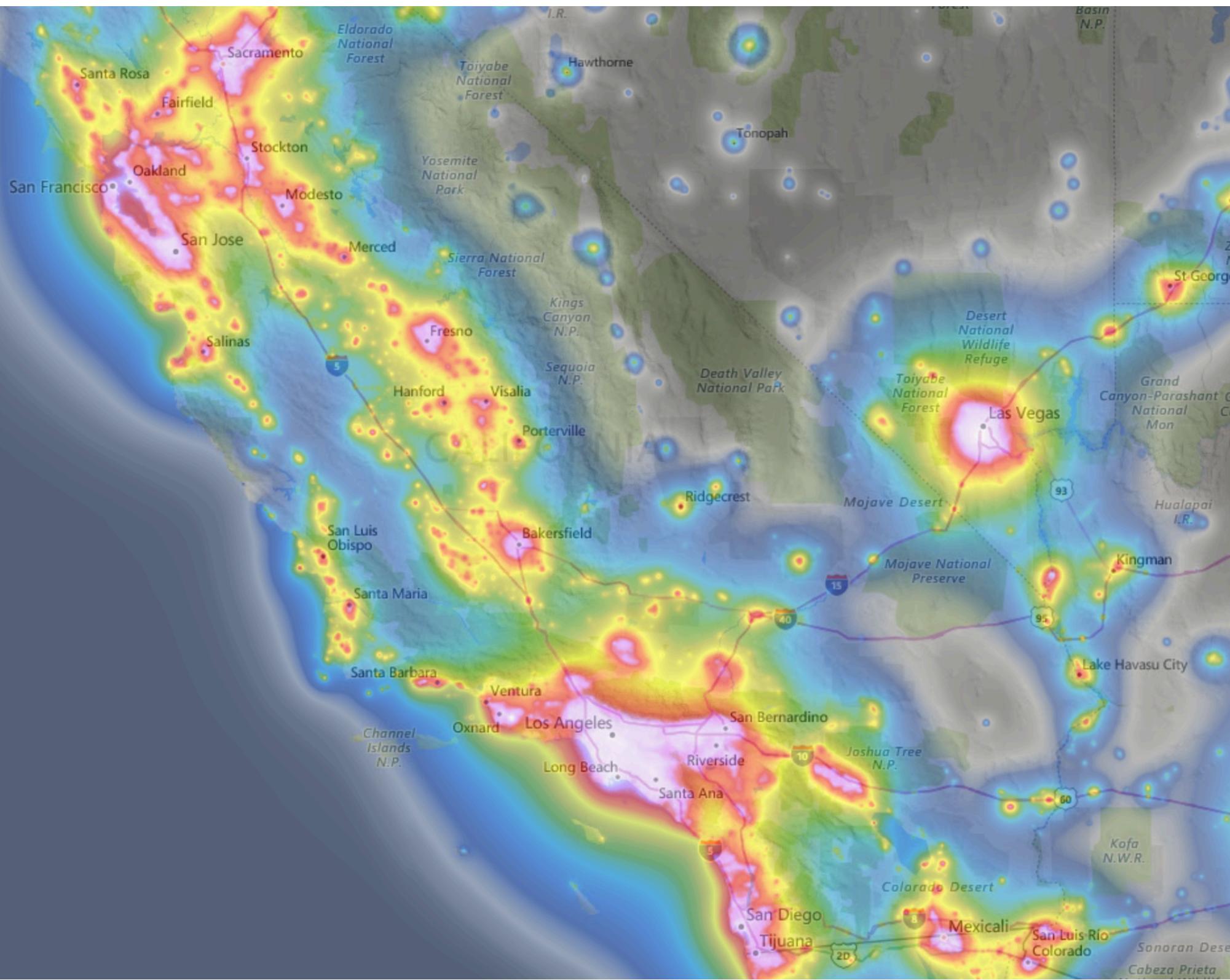
**III. Astronomy at Deep Springs College**











|                                    | <b>UC Lick</b>                    | <b>Caltech Palomar</b>          | <b>Deep Springs</b>            |
|------------------------------------|-----------------------------------|---------------------------------|--------------------------------|
| <b>Elevation</b>                   | 1283m<br>4209'                    | 1712m<br>5617'                  | 1593m<br>5225'                 |
| <b>Clear Days</b>                  | 160 days/yr<br>GHCN San Francisco | 263 days/yr<br>Palomar Mountain | 201 days/yr<br>GHCN Bishop, CA |
| <b>Turbulence<br/>(aka Seeing)</b> | 1.5"                              | 1.3"                            | 3"                             |
| <b>Darkness</b>                    | Bortle 4                          | Bortle 4                        | Bortle 1                       |

NOAA Global Historical Climate Network (GHCN)

Bortle Class 4 = Rural/Suburban Transition

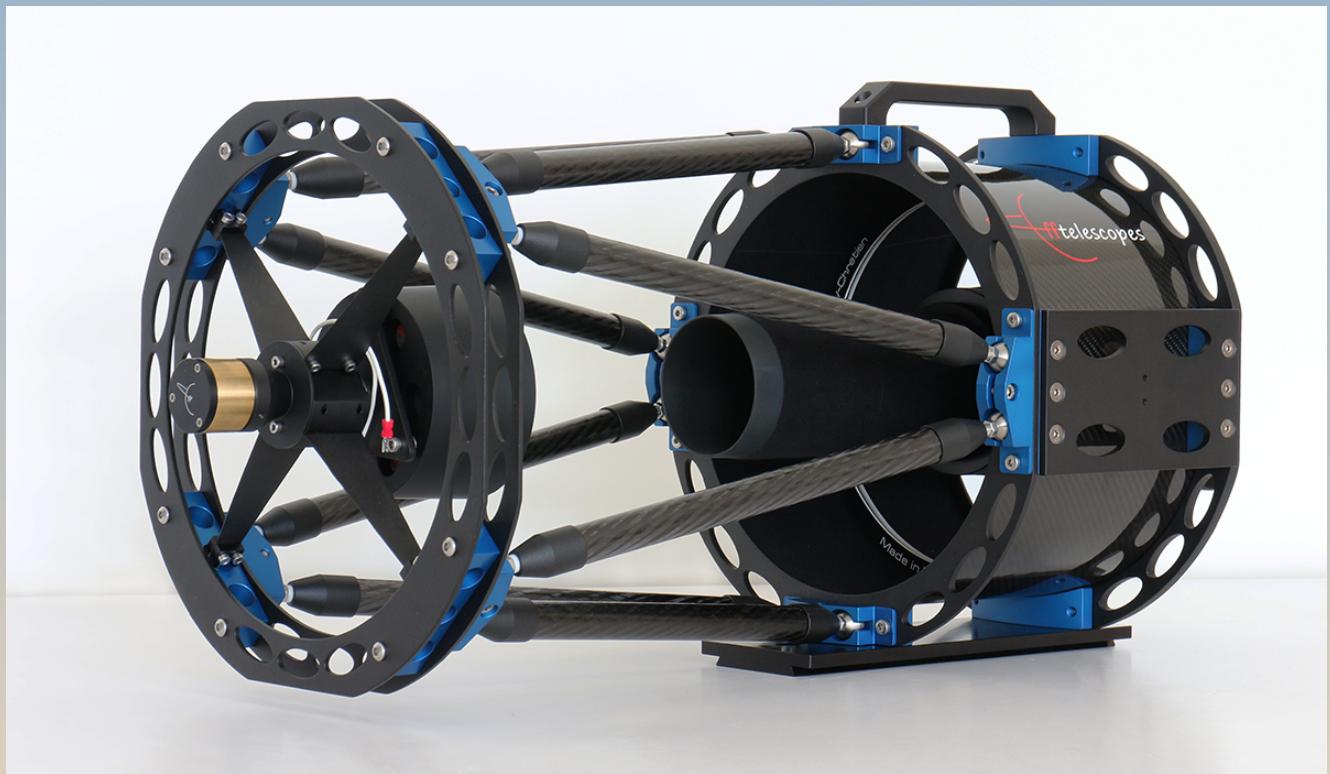
Bortle Class 1 = Excellent Dark Sky Site

Bortle Scale, Global Bortle Map



StellarVue SV130T  
130mm Apochromatic  
Refractor (~5")

CFF RC250 f/8  
250mm Ritchey-Chretien  
Reflector (~10")



# Student Involvement in Projects

- **Establishing a simple temporary site** for observing
  - Such a site could consist of little more than a long extension cord and some concrete or stone pads that allow quick and repeatable setup and tear-down of equipment.
- **Upgrading the site** so that equipment can be set up and left for weeks or months without harm from wind, rain, and pests.
  - There are various ways of achieving this ranging from small pre-fabricated domes to custom outbuildings.
  - These would have all the complexities and considerations of designing and building any other outbuilding, *including plans for dismantling it should it eventually be determined to not be an asset to the campus.*

# Observatory



v 1.0



v 2.0?

# Student Involvement in Projects

- **Patient data-taking** over many long, cold hours multiple nights per month
  - This is the bread and butter of observational astronomy.
- **Analysis of data** and submission to international databases that collate it for use by other researchers.
  - This involves use of fairly complex software packages, and following protocols accurately so that other researchers can be confident in the submitted data.
- **Authoring software** for high-speed data taking and for data analysis
  - Such software exists but is ripe for improvement.
  - This requires creativity and a heavy commitment of time.