

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:

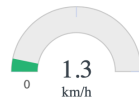
1,025.7 mb

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

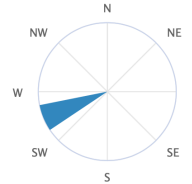
Wind Speed

Geissberger Observatory Tower



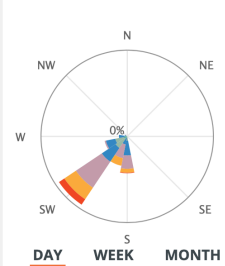
Wind Direction

Geissberger Observatory Tower



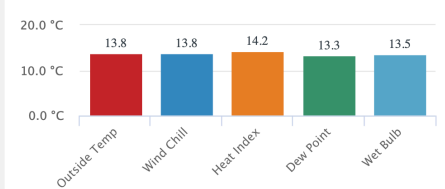
Wind Rose

Geissberger Observatory Tower



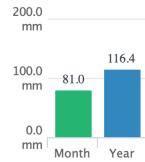
Temperature

Geissberger Observatory Tower



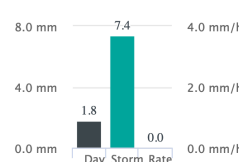
Total Rain

Geissberger Observatory Tower



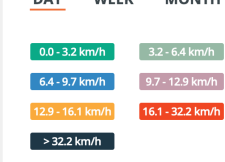
Current Rain

Geissberger Observatory Tower



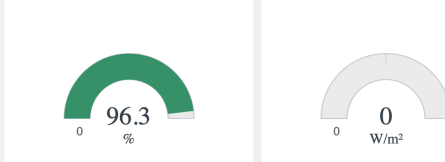
Humidity

Geissberger Observatory Tower



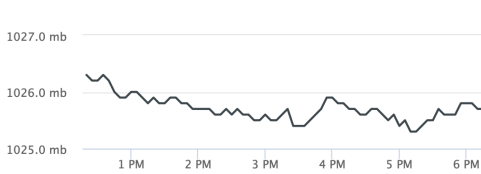
Solar Radiation

Geissberger Observatory Tower



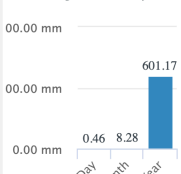
Barometer

WeatherLink Live



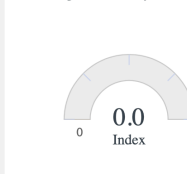
ET

Geissberger Observatory Tower



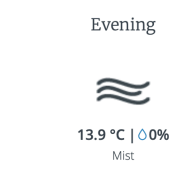
UV

Geissberger Observatory Tower



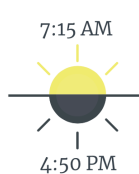
Local Forecast

WeatherLink Live



Sunrise/Sunset

WeatherLink Live



Moon Phase

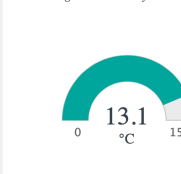
WeatherLink Live



Full Moon

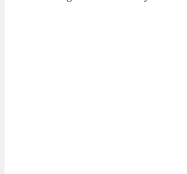
THSW Index

Geissberger Observatory Tower



THW Index

Geissberger Observatory Tower



[Current Conditions](#)

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

Back to Barcoft!





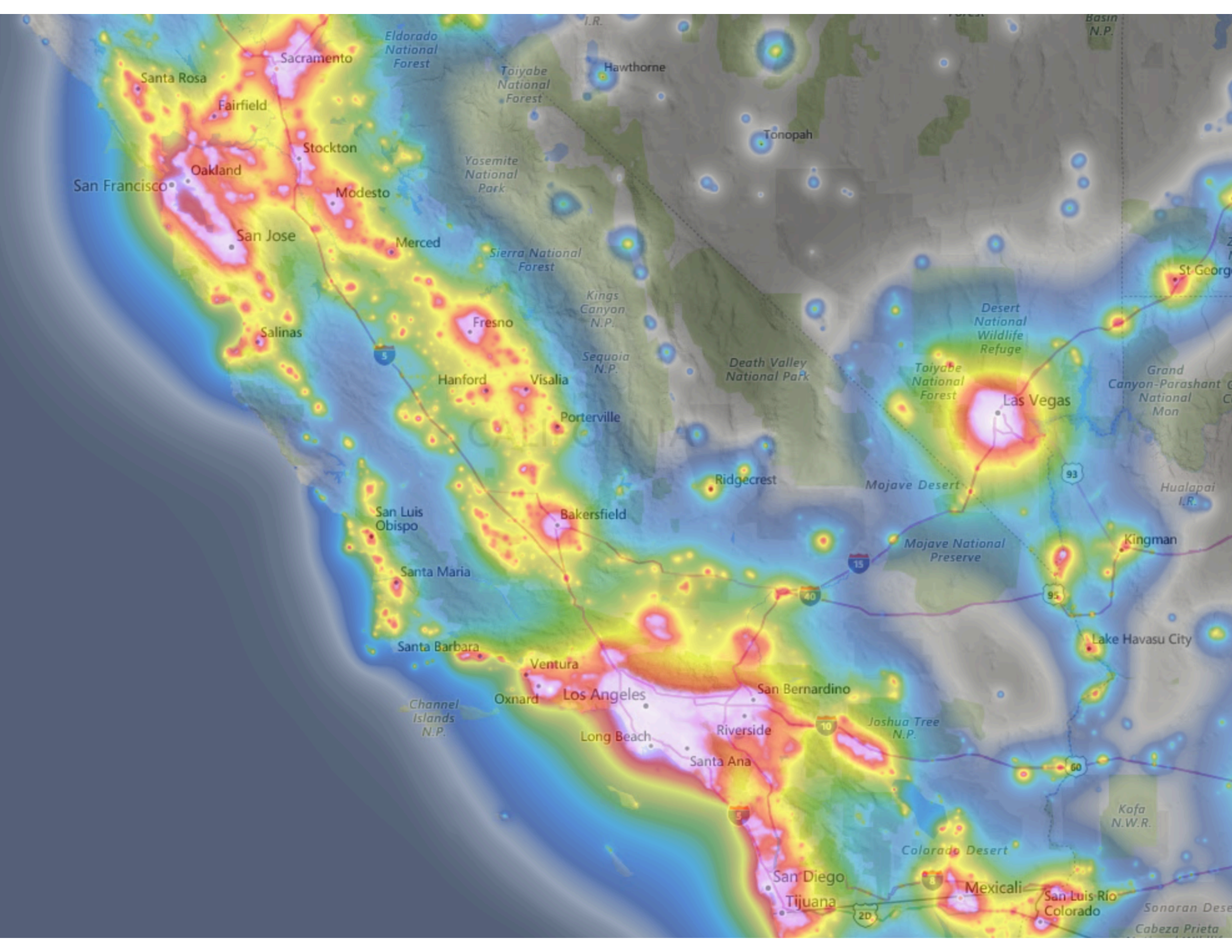


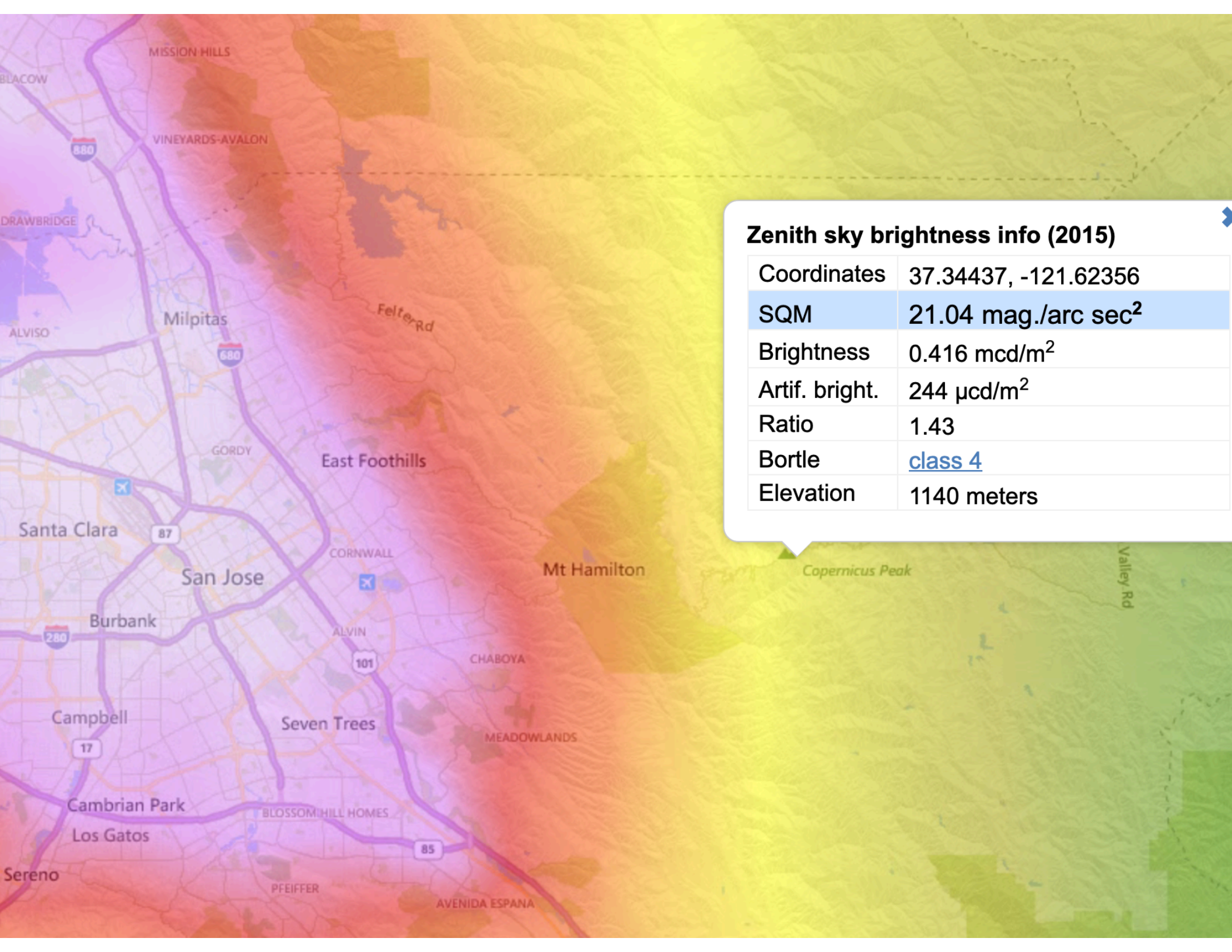
Exoplanet Detection with Small Telescopes at Deep Springs

I. Large Surveys and Small Telescopes

II. Saint Mary's College Milestones

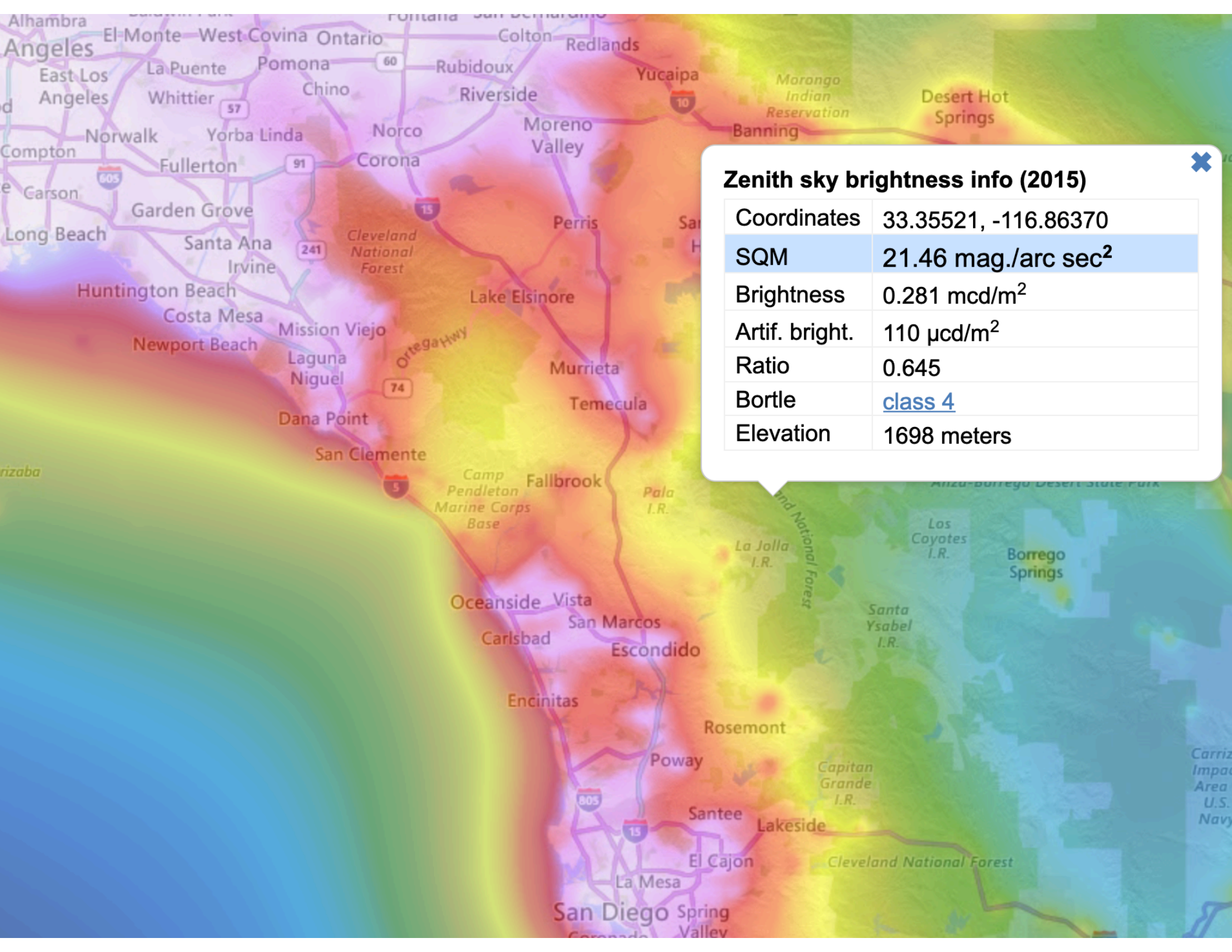
III. Astronomy at Deep Springs College





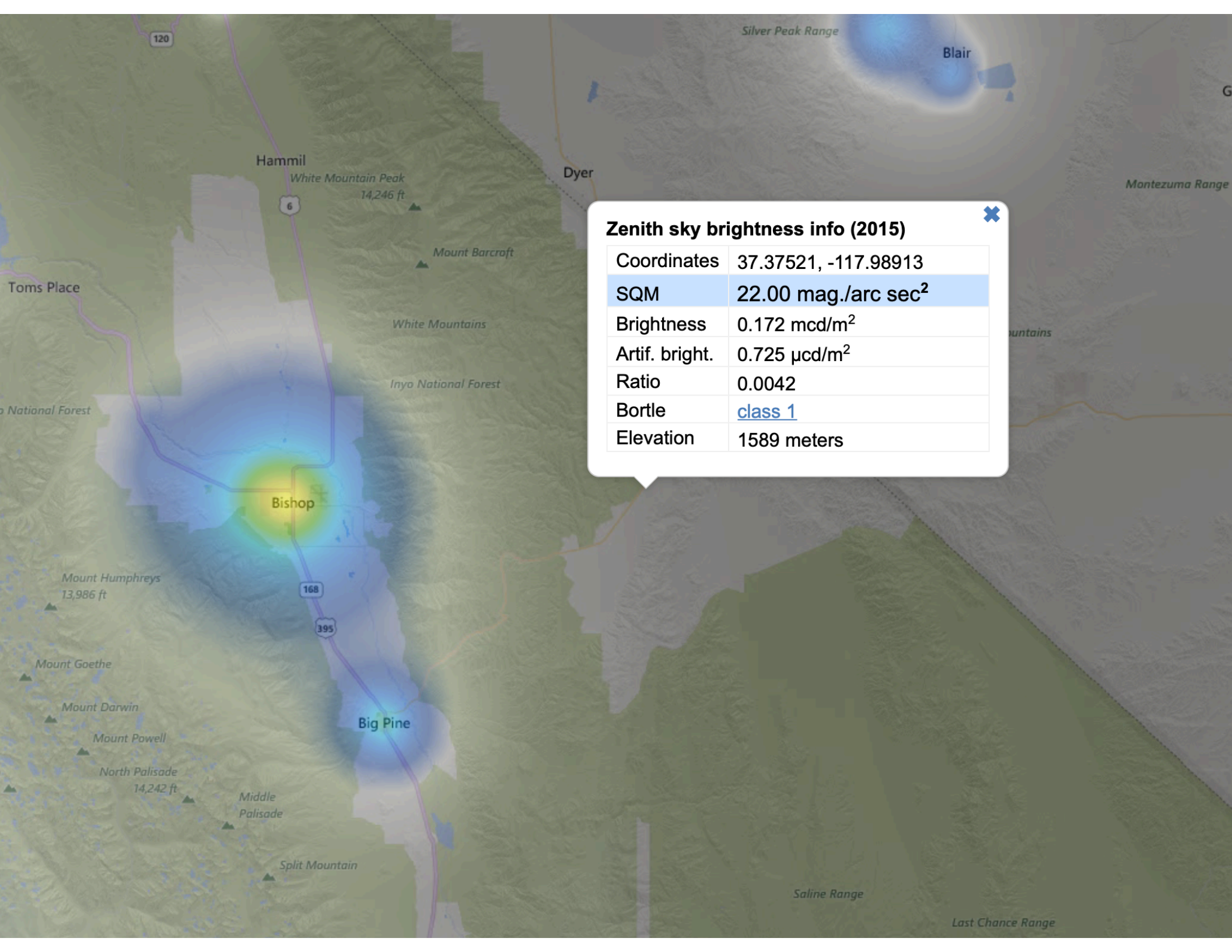
Zenith sky brightness info (2015)

Coordinates	37.34437, -121.62356
SQM	21.04 mag./arc sec ²
Brightness	0.416 mcd/m ²
Artif. bright.	244 μcd/m ²
Ratio	1.43
Bortle	class 4
Elevation	1140 meters



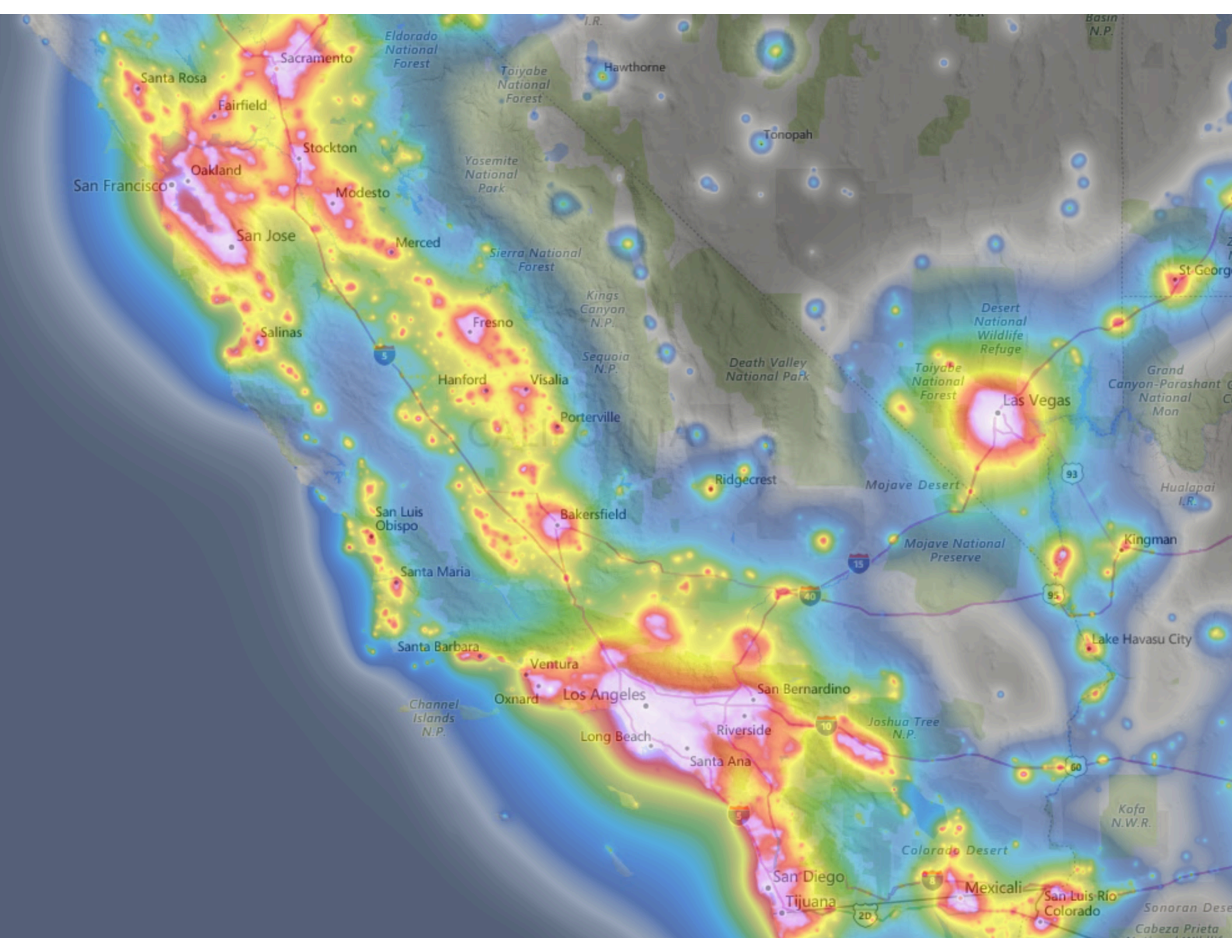
Zenith sky brightness info (2015)

Coordinates	33.35521, -116.86370
SQM	21.46 mag./arc sec ²
Brightness	0.281 mcd/m ²
Artif. bright.	110 μ cd/m ²
Ratio	0.645
Bortle	class 4
Elevation	1698 meters



Zenith sky brightness info (2015) ✕

Coordinates	37.37521, -117.98913
SQM	22.00 mag./arc sec ²
Brightness	0.172 mcd/m ²
Artif. bright.	0.725 μcd/m ²
Ratio	0.0042
Bortle	class 1
Elevation	1589 meters



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

NOAA Global Historical Climate Network (GHCN)

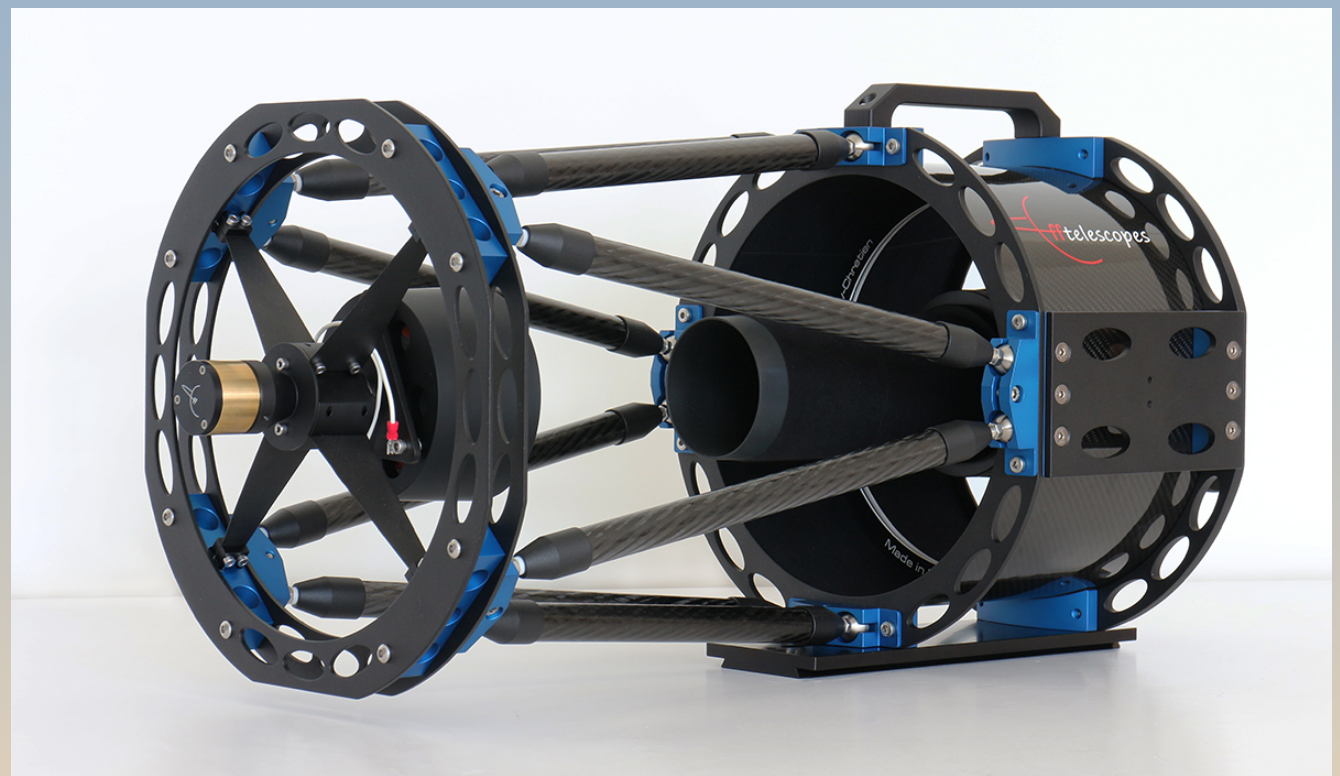
Bortle Class 4 = Rural/Suburban Transition

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.