

For INSAP 2022

Sunstar
The Colorful Solar Spectrum Beamed from Mt. Wilson

Dan Kohne
Mount Wilson Institute
Jay M. Pasachoff
Williams College and Carnegie Observatories



Sunstar casting the spectrum onto mist atop Mount Wilson

Solar Beacon 2012



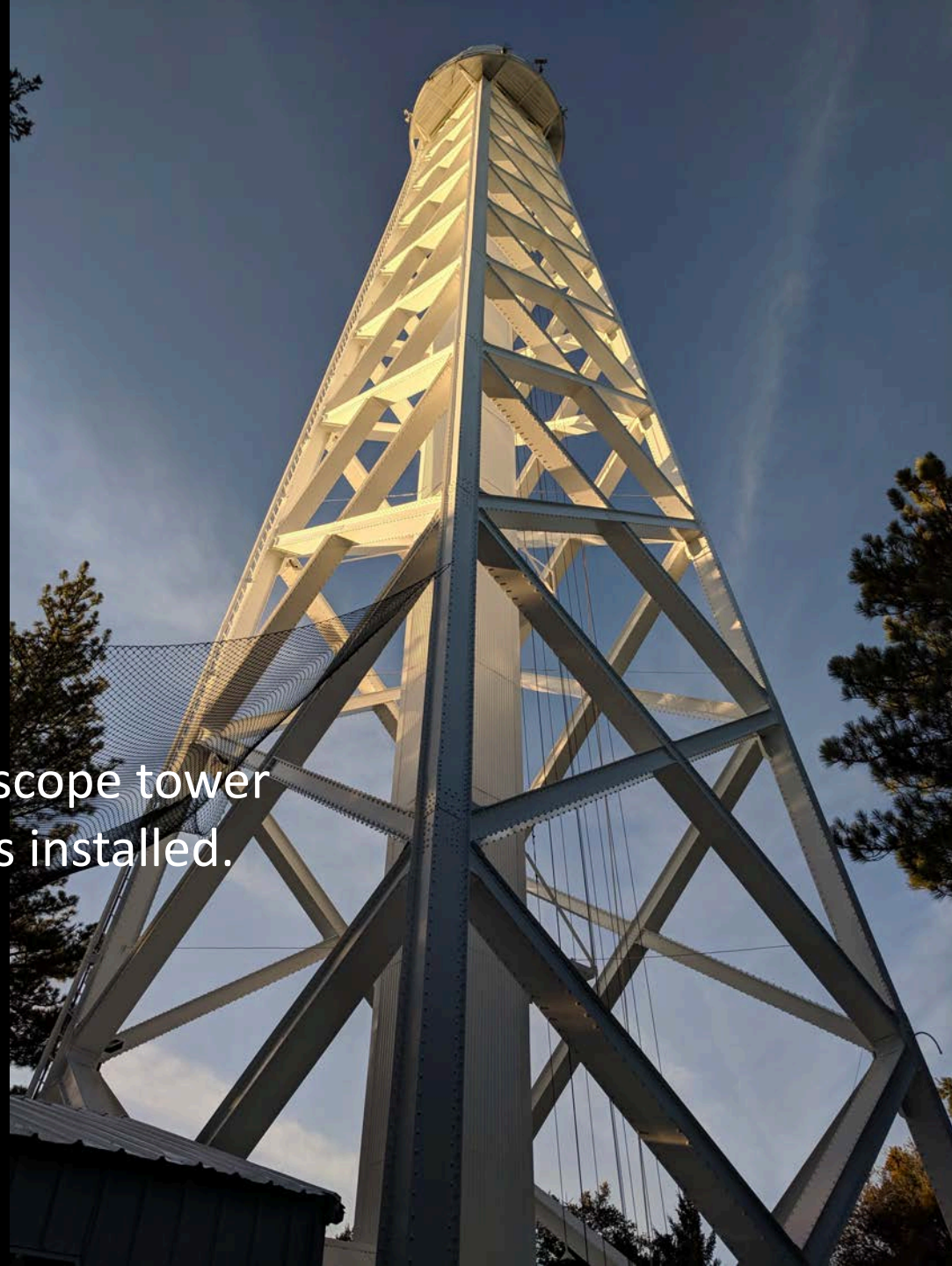
The precursor, Solar Beacon, atop the Golden Gate Bridge towers, in celebration of the bridge's 75th anniversary.

Solar Beacon on GG Bridge and Sather uses mirrors and projects white light.



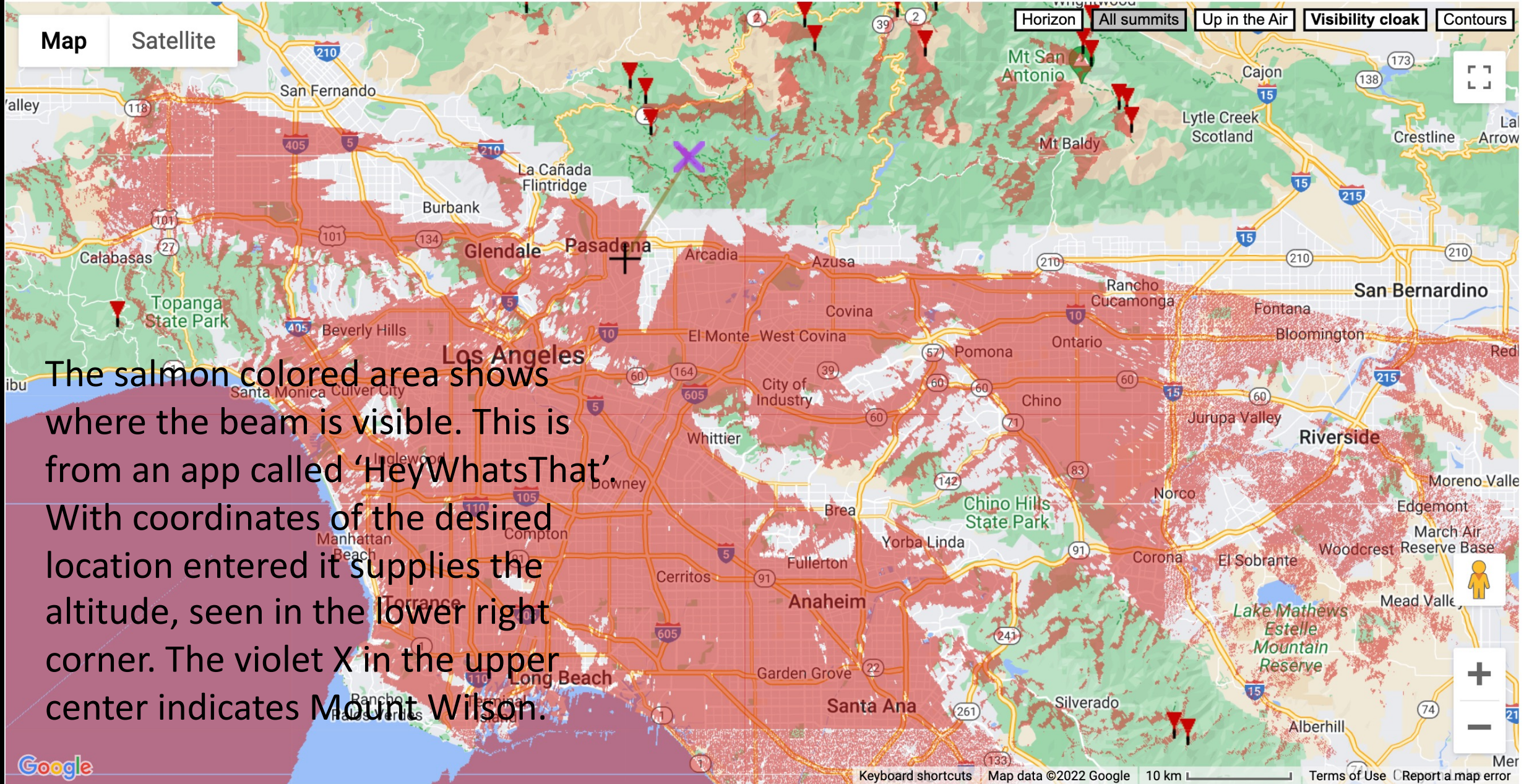
www.solarbeacon.org

The 150-foot solar telescope tower
atop of which Sunstar is installed.



A panoramic view from the catwalk of the solar tower.
The beam can project into the basin below.





The salmon colored area shows where the beam is visible. This is from an app called 'HeyWhatsThat'. With coordinates of the desired location entered it supplies the altitude, seen in the lower right corner. The violet X in the upper center indicates Mount Wilson.

34.135687 N 118.126234 W 234m bearing 212° 12 km alt -7.59° [compute LOS](#) Click [here](#) to re-center map on Mount Wilson 150-foot solar tower catwalk 1780

English
 Metric
 DD.DDDDDD°
 DD° MM.MMMM'
 DD° MM' SS.SS"

decimal places (0-6) Pan to or find

Installing Sunstar's
mechanism on a
platform of
salvaged film
equipment.




The artist Liliane Lijn on a visit in 2017. Her collaborator in the creation of Sunstar is John Vallerger, Research Physicist at UC Berkeley's Space Sciences Laboratory.



The mechanism, an array of six 2" by 12" mirror-backed prisms, facing southeast.



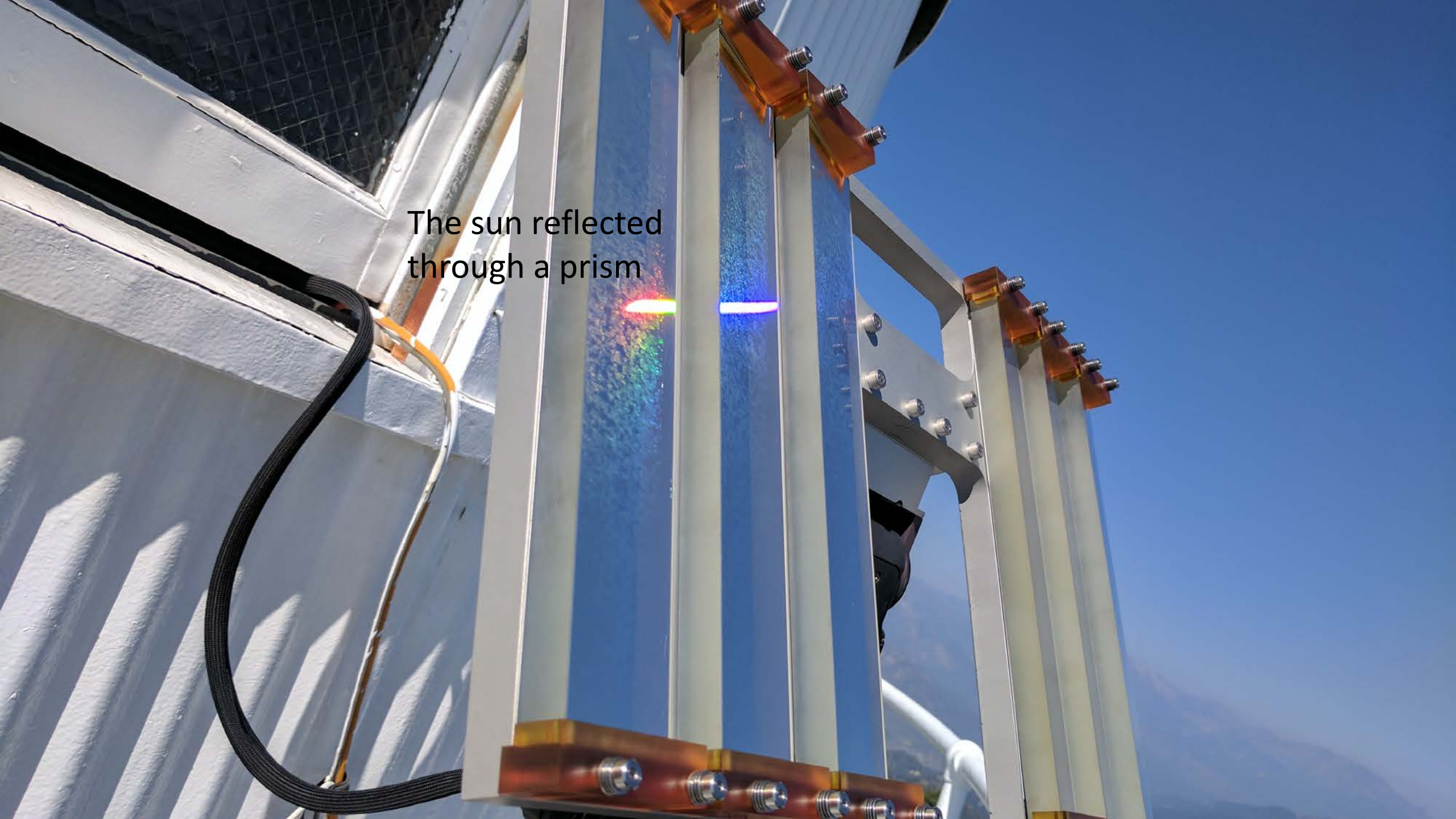


Facing southwest.
The cables are
connected to a
computer inside
the upper housing
of the tower.

The back of the prism array
and its weathered pan and
tilt mechanism.



The sun reflected
through a prism



Close-up of the sun
reflected through a prism



The spectrum cast upon
the 60-foot solar
telescope tower, a
distance of approximately
150 feet.



From the ground
about 300 feet away.



Carnegie Observatories

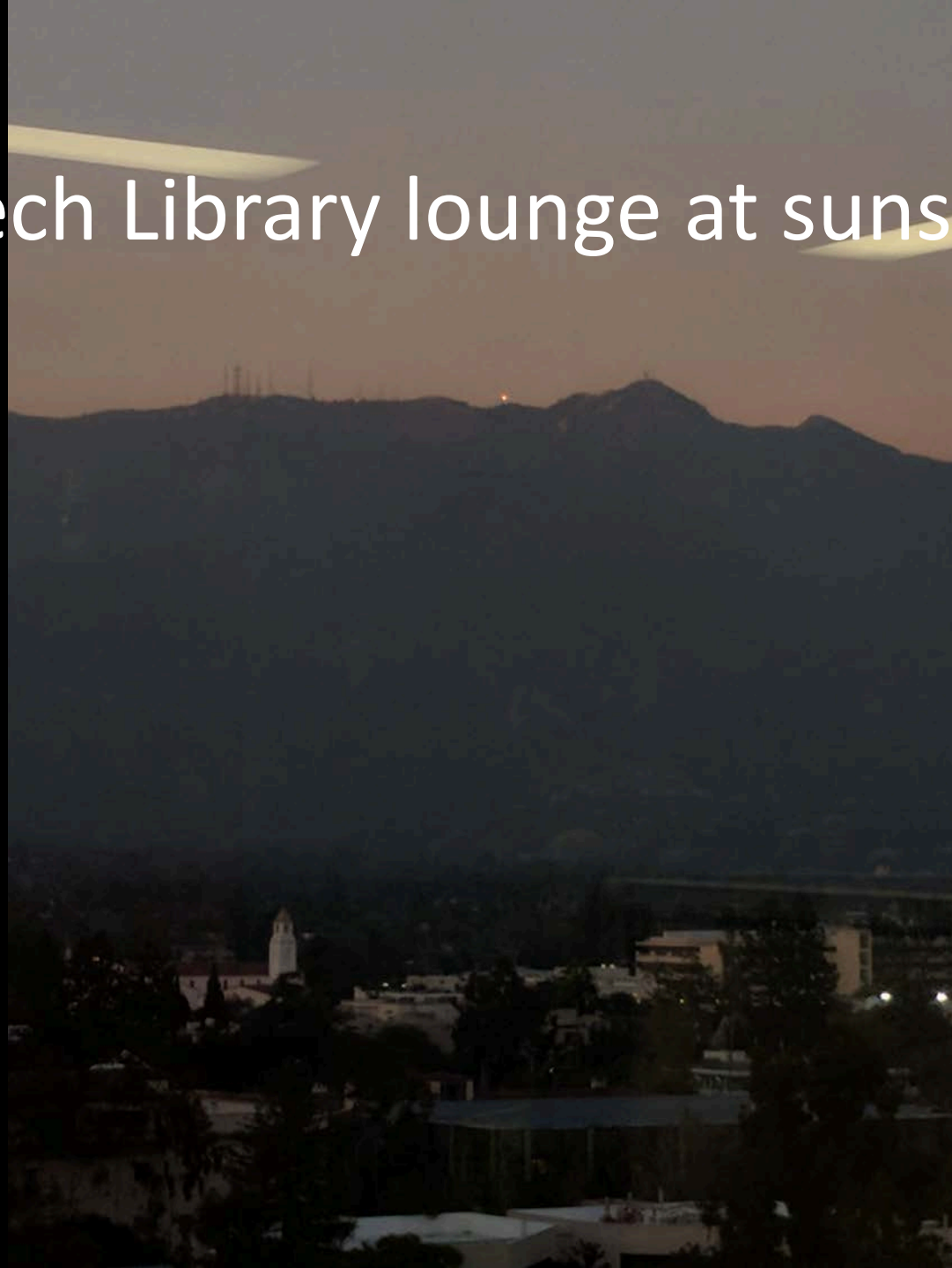
6 mi



Caltech Library webcam 7 mi



Caltech Library lounge at sunset



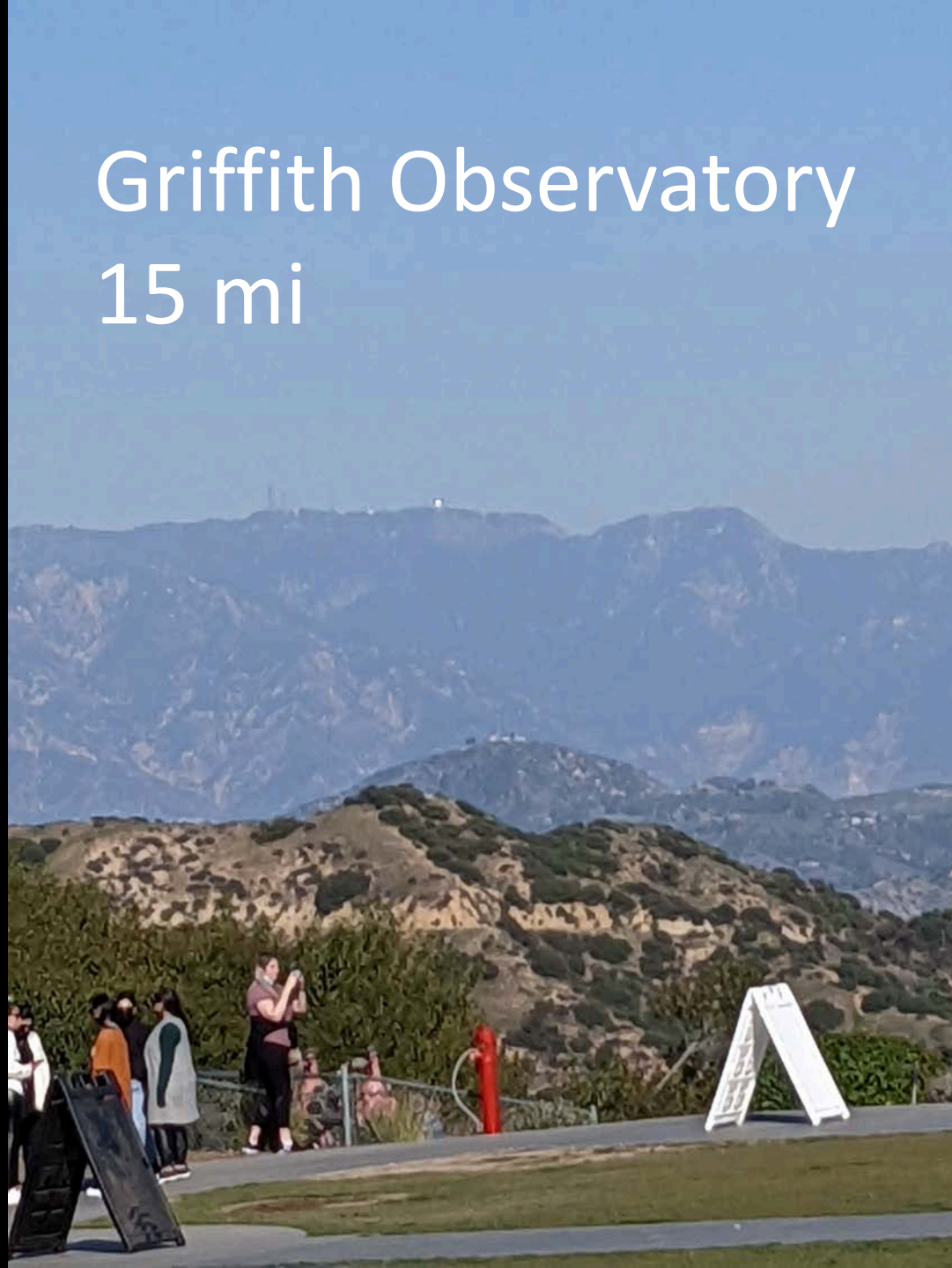
Rose Bowl through binoculars

7.5mi

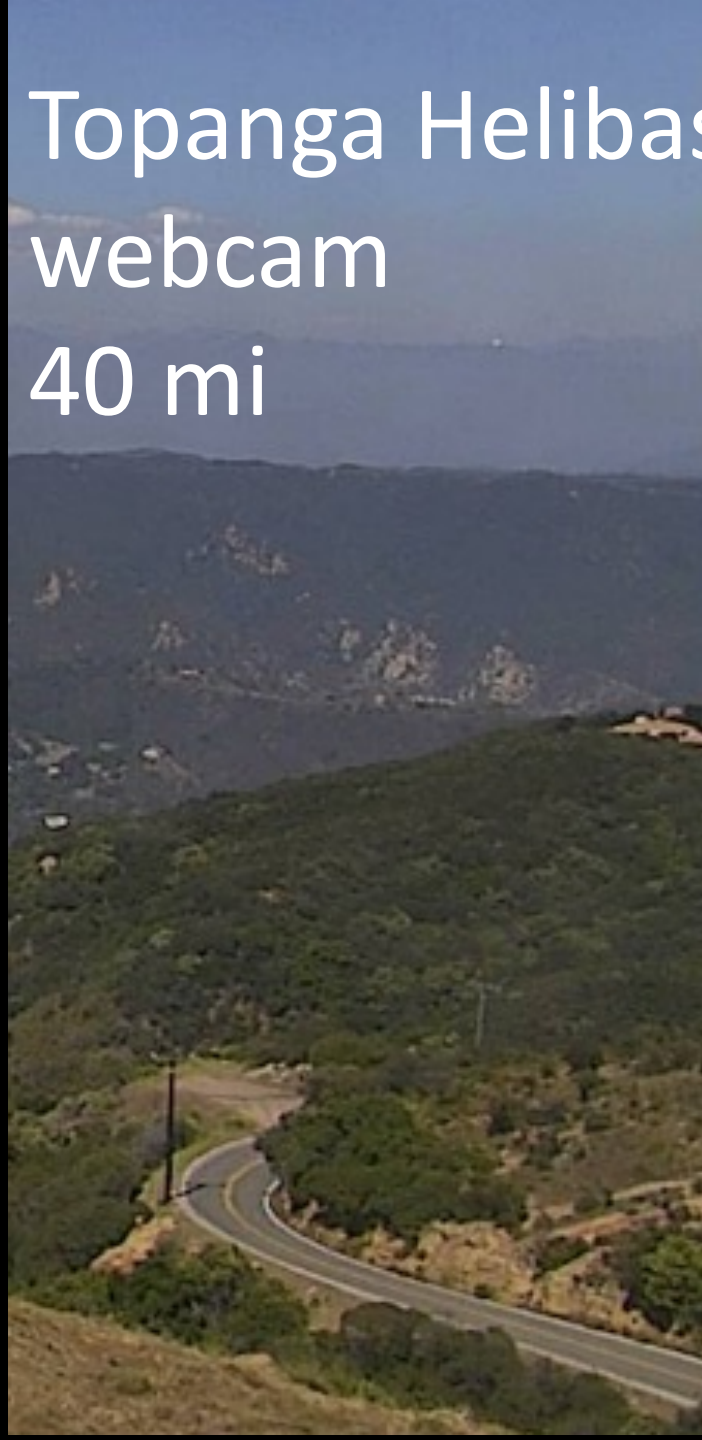


Griffith Observatory

15 mi



Topanga Helibase 69
webcam
40 mi



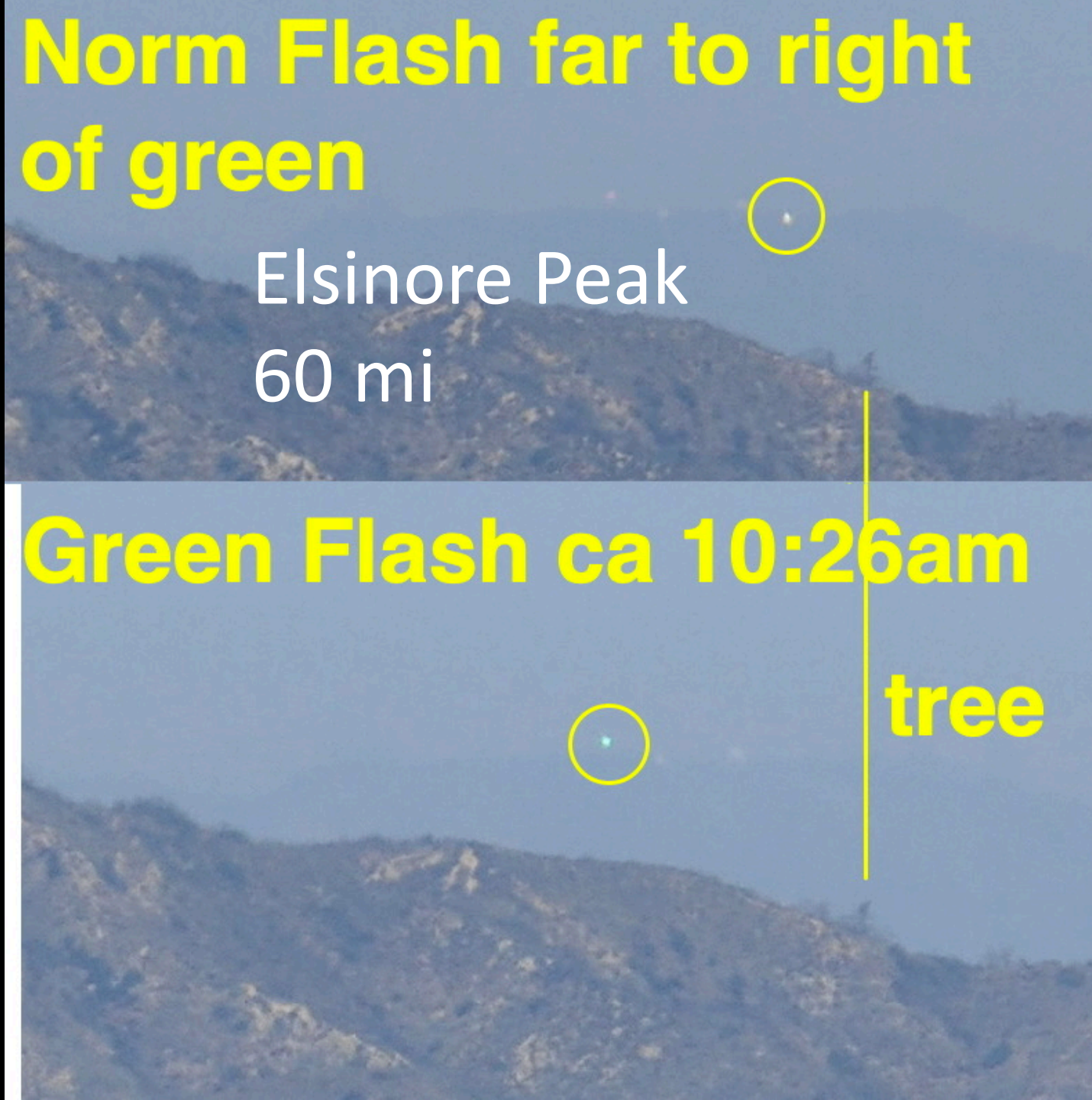
**Norm Flash far to right
of green**

Elsinore Peak
60 mi




Green Flash ca 10:26am

tree



Art at Mount Wilson
Observatory: Concerts
in the 100-inch
telescope dome.



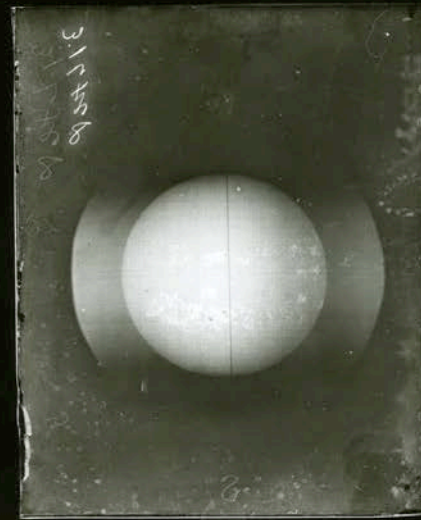
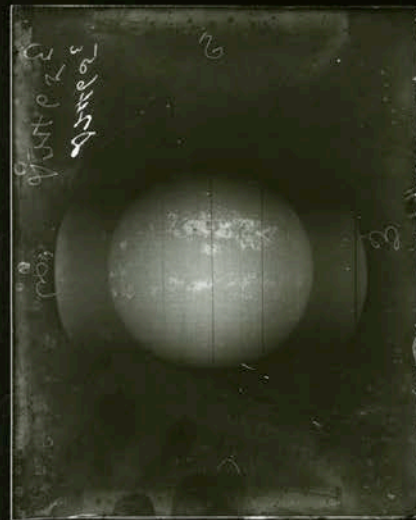
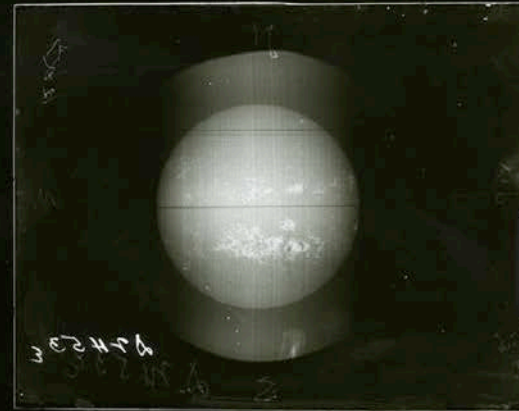
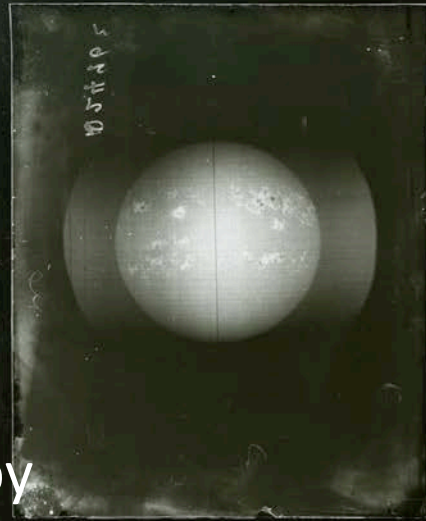
A large audience is seated in a lecture hall, facing a stage. A man in a suit is speaking at a podium on the stage. A large projector screen on the left side of the stage displays a black and white image of a celestial object, possibly a galaxy or nebula. The room has a high ceiling with exposed wooden beams and several windows. The audience is diverse in age and appearance, and many are looking towards the speaker.

Art at Mount Wilson: Dr. Ed Krupp, Director of Griffith Observatory, talks about celestial imagery on ceilings throughout history.

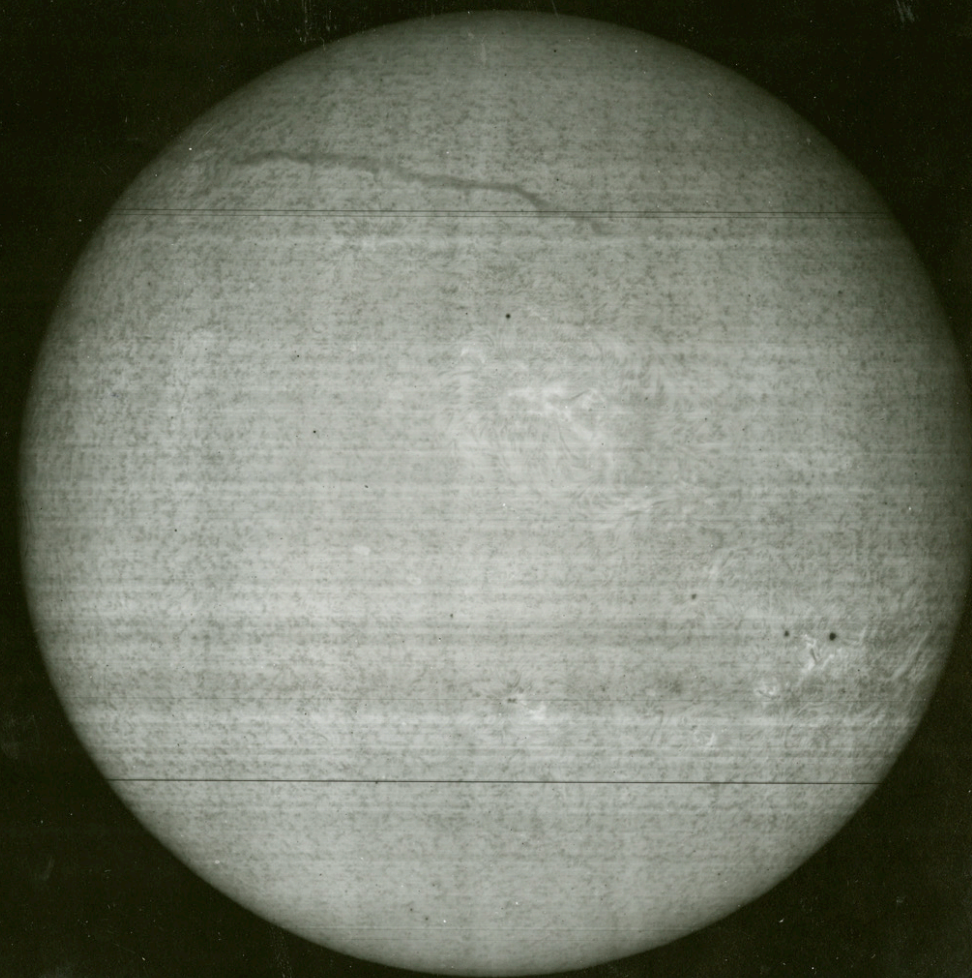
Art at Mount Wilson: a display of George Ellery Hale's photographic work, June 2018.



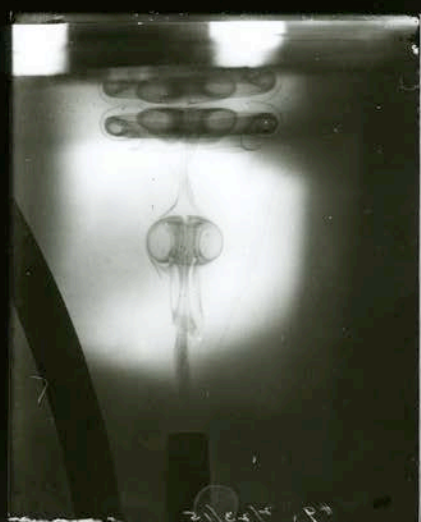
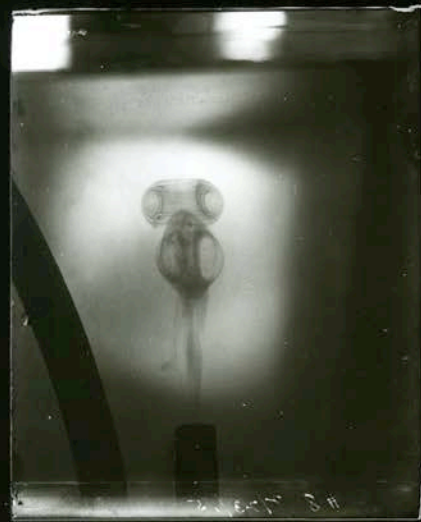
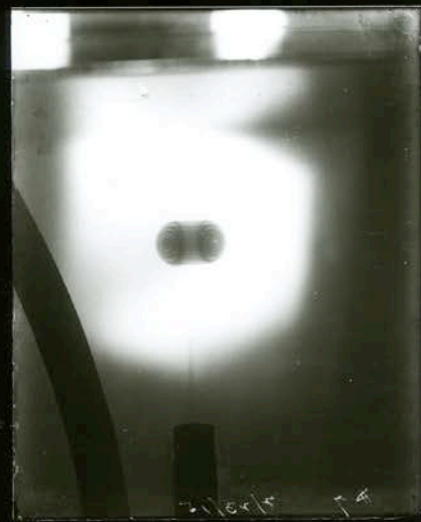
Art at Mount Wilson:
Spectroheliographs taken by
Ferdinand Ellerman at Hale's
Kenwood Observatory in
Chicago, 1893



Art at Mount Wilson:
the first h-alpha view of
the sun's hydrogen
atmosphere, taken on
the spectroheliograph
in the Snow solar
telescope, April 1908.



Art at Mount Wilson,
Hale's sunspot
studies, 'Vortex rings
in liquid', 1915





Art at Mount Wilson: sculpture by Paige Emery, September 2022