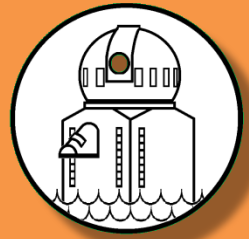


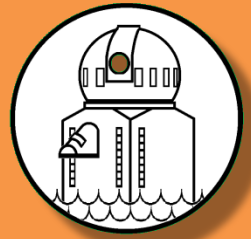
Big Bear Solar Observatory



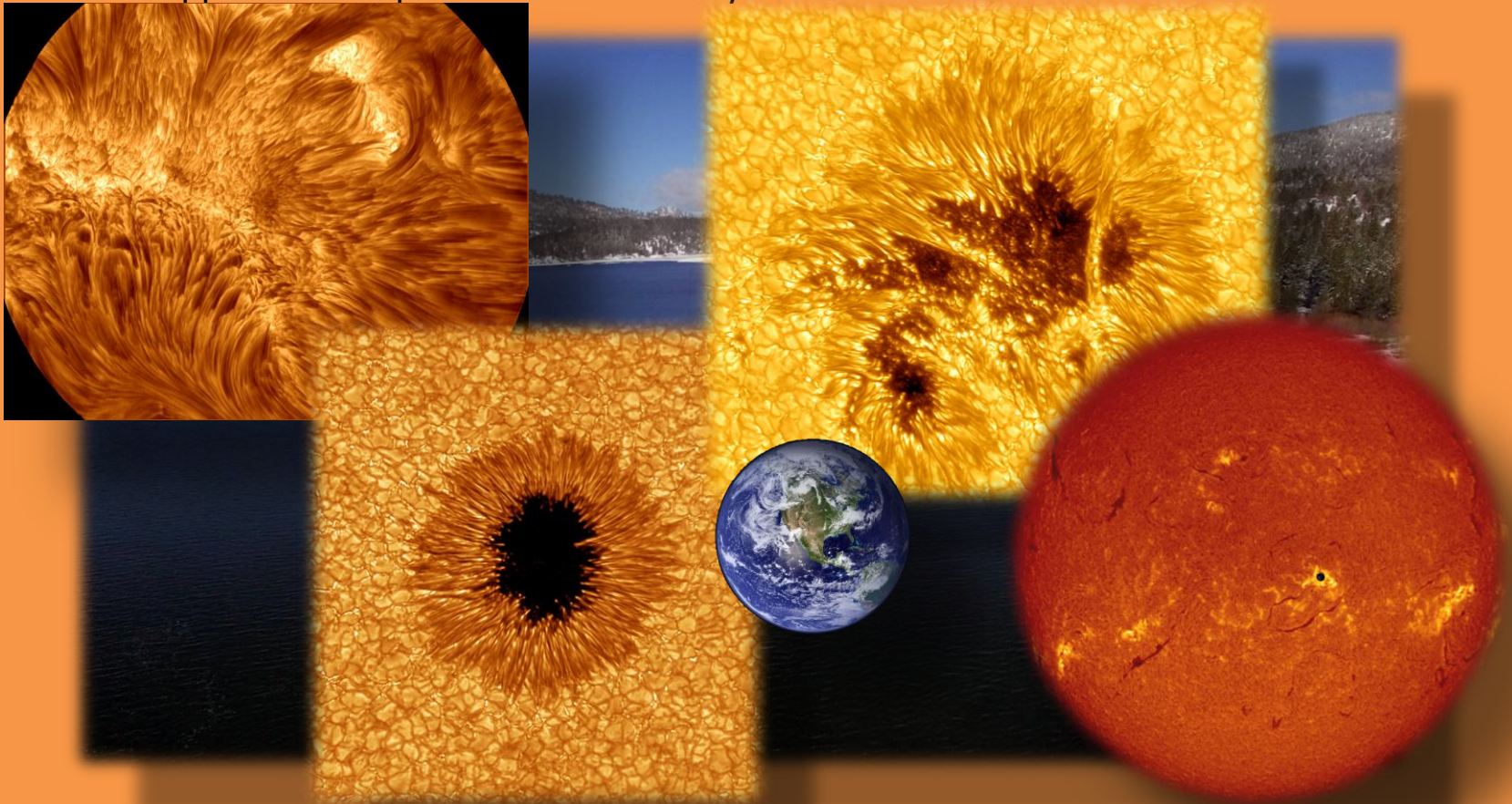
- The Sun is vitally important to all life on Earth and provides an ideal laboratory for understanding our star and its effects on life on Earth.
- Big Bear shares the good “astronomical seeing” and weather statistics found at other SoCal mountain observatories such as Mt. Wilson, Mt. Palomar and Mt. Laguna.
- Lake water has been found to stabilize the daytime “seeing” by suppressing near-ground atmospheric turbulence caused by heating thermals that plague most solar observatories.



Big Bear Solar Observatory

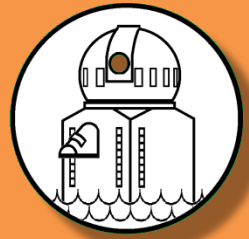


- The BBSO New Solar Telescope (NST) is currently the most powerful solar telescope in the world and is unmatched in image quality.
- The BBSO is part of a world wide of network of Earth and space-based telescopes that collaborate in solar research.
- The National Solar Observatory is developing the \$360M DKIST in Hawaii which the NST will support when operational in the early 2020s.

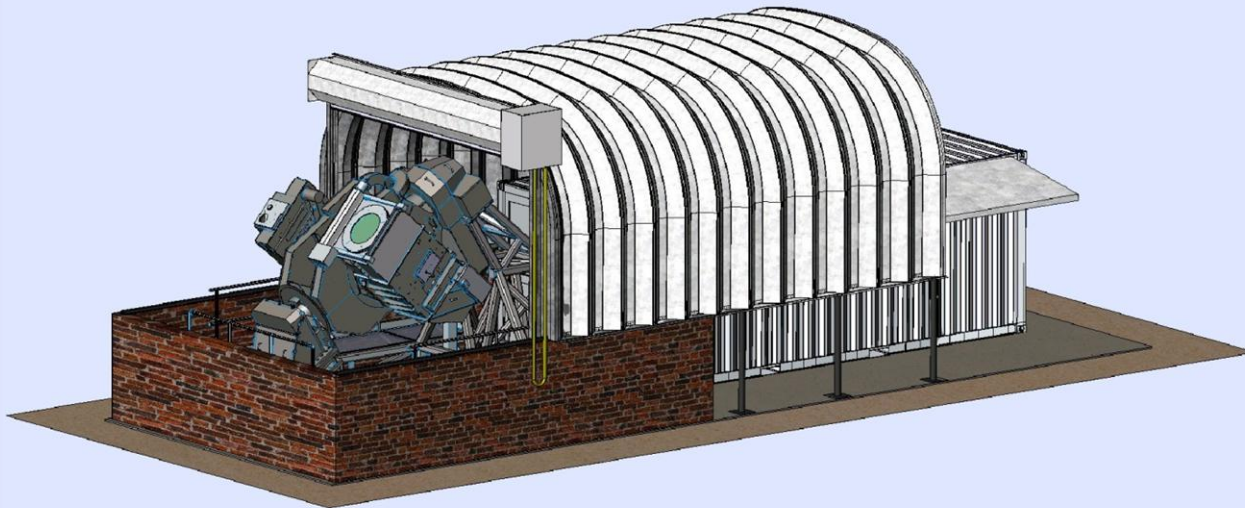


SOLIS

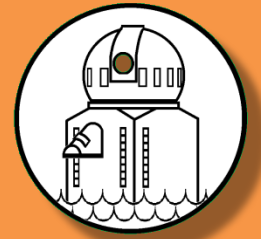
Synoptic Optical Long-term Investigations of the Sun



- Developed by the **N**ational **S**olar **O**bservatory (NSO) in Tucson, AZ
 - ✓ BBSO collaborates with NSO on many projects and SOLIS would be another
- Three instruments for solar observations on a single tracking mount.
 - ✓ **V**ector **S**pectro **M**agnetograph (VSM) giving magnetic maps of the solar surface.
 - ✓ **F**ull **D**isk **P**atrol (FDP) full Sun multi-wavelength imager.
 - ✓ **I**ntegrated **S**unlight **S**pectrometer (ISS) “Sun as a star” spectra of the Sun.



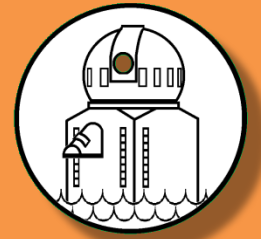
Siting SOLIS at BBSO



- Preference is to co-locate SOLIS next the GONG instrument.
 - ✓ Minimizes overall facility footprint.
 - ✓ Clear horizons without need for tree removal.
 - ✓ Better astronomical “seeing”
 - Takes advantage of the daytime lake effect.
 - Natural airflow not disturbed by trees.



Siting SOLIS at BBSO

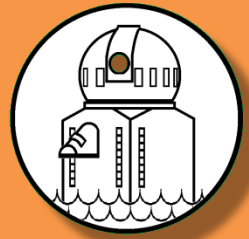


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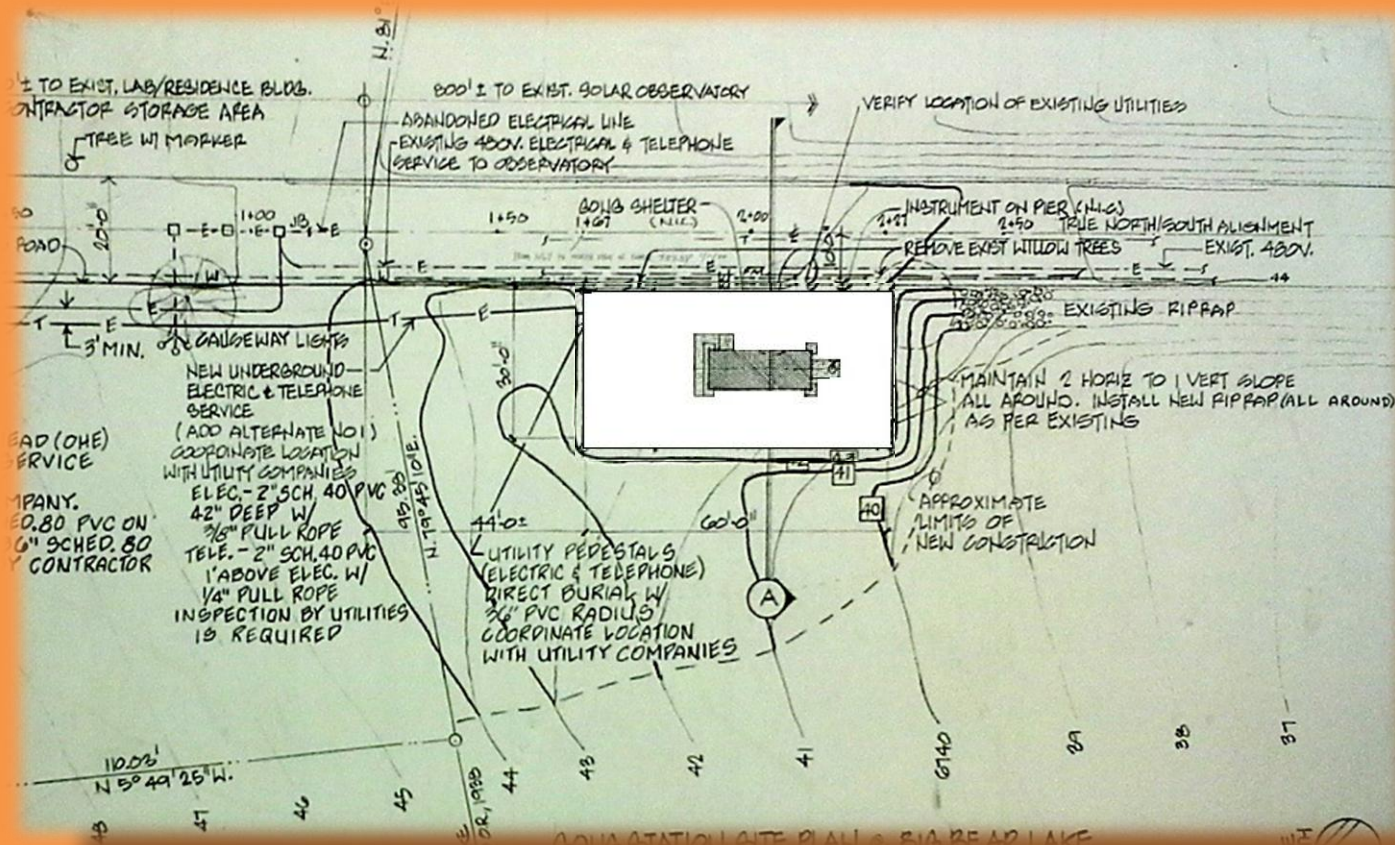


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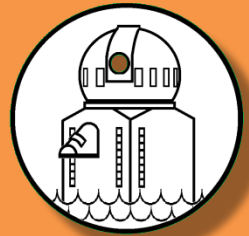
Siting SOLIS at BBSO



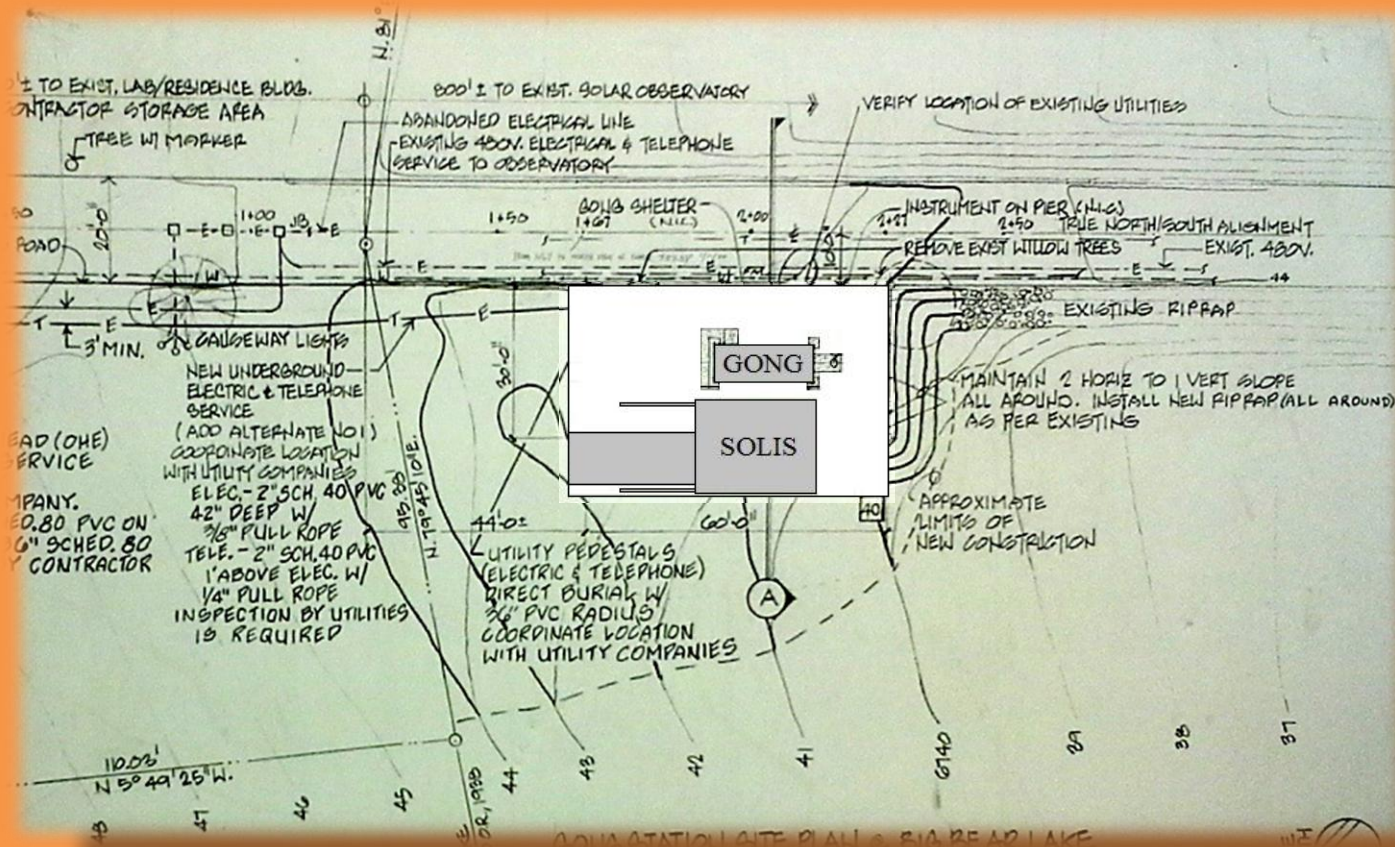
- Preference is to co-locate SOLIS next the GONG instrument.
 - ✓ Minimizes site preparation.
 - Only adds a small extension to the GONG fill.
 - Shares electrical and data services.
 - Uses existing access road.



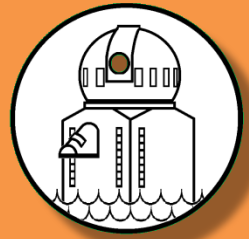
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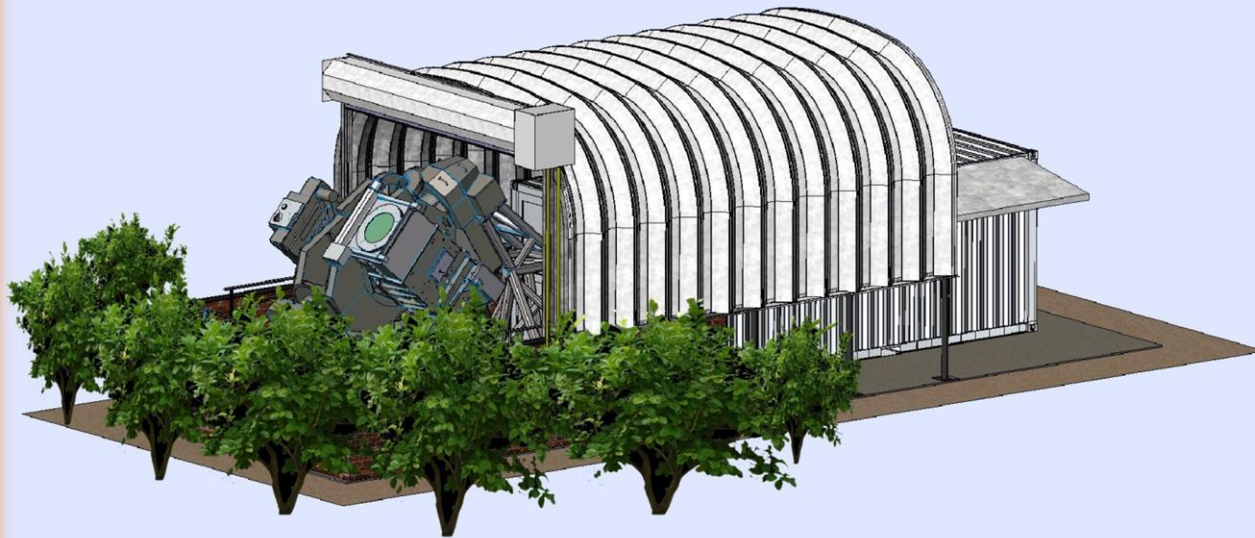
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Siting SOLIS at BBSO



- Preference is to co-locate SOLIS next the GONG instrument.
 - ✓ Minimal visual impact.
 - Not visible from North Shore Ln or the Forestry campground.
 - Easily blended to the surroundings by planting natural shrubs as a visual block.
 - ✓ Eliminates a need to remove any trees.



Thank You!

