LCOGT Sites and Facilities

John Martinez
Las Cumbres Observatory Global Telescope Network
LCOGT telescopes

2.0m Telescope

1.0m Telescope

0.4m Telescope
Faulkes 2.0m telescopes

Faulkes Telescope South

Faulkes Telescope North
Dual 0.4m Telescope Enclosure
Site Services Building
Domes: Ash Manufacturing Co.
Dome paint reflectance

Hemispherical Reflectance (Specular + Diffuse) of Various Materials

- P&L Enducryl Z8621 (BPL Dome Paint, TEST-XX-008 D+S)
- Black flocked paper - S+D
- Sharpie on both sides of index card - S+D
- Limone Black Anodize - S+D
- Black masking tape (Opaque, S+D)
- Al 6061-T6 Rolled Finish Cleaned - S+D
- Bead Blasted Al (TEST-XX-010 D+S)

λ[nm]
R[%]
Telescope enclosure requirements

- Wall systems are pre-fabricated at our facility for quality assurance and cost control.
- Modular components for easy field deployment
- Withstand 180kph winds when closed
- Be able to safely close in 70kph winds
- Light-tight enough to allow daytime calibrations
- Opening/closing time of less than 90 seconds
- Be able to withstand lightning strikes
- Accessible electrical wiring for easy maintenance
- And lots more…………..
Typical LCOGT site layout
Santa Barbara prototype site
The known LCOGT northern and southern ring network node locations, listed west and east of Greenwich, respectively. Not listed are potential sites in Asia and Western Australia.

<table>
<thead>
<tr>
<th>Site Designation</th>
<th>Latitude, Longitude, Altitude</th>
<th>Location</th>
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</thead>
<tbody>
<tr>
<td>LCOGT- TFN</td>
<td>28.133650° N, 16.511619° W, 2390m</td>
<td>TO, Tenerife, Canary Islands, Spain</td>
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<tr>
<td>LCOGT- LSC</td>
<td>30.167500° S, 70.805000° W, 2153m</td>
<td>CTIO, La Serena, Chile</td>
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<tr>
<td>LCOGT- ELP</td>
<td>30.680072° N, 104.014883° W, 2029m</td>
<td>McDonald Obs., UT, Texas, USA</td>
</tr>
<tr>
<td>LCOGT- OGG</td>
<td>20.707058° N, 156.257375° W, 3034m</td>
<td>HO, IFA, UH, Maui, HI Islands, USA</td>
</tr>
<tr>
<td>LCOGT- CPT</td>
<td>32.380694° S, 20.809797° E, 1759m</td>
<td>SAAO, Sutherland, South Africa</td>
</tr>
<tr>
<td>LCOGT- COJ</td>
<td>31.271767° S, 149.061692° E, 1144m</td>
<td>SSO, ANU, Siding Spring, Australia</td>
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</tbody>
</table>
CTIO site progress…
SAAO site progress...
McDonald Observatory site
Teide Observatory site
Site development schedule

- Prototype site at Santa Barbara office currently up and running with 0.4m and 1.0m telescopes.
- CTIO site infrastructure & foundations are complete. Facilities to be installed Q2 2011. First 1.0m telescope by Q3 2011.
- SAAO infrastructure and foundations are complete. Facilities to be installed by Q3 2011. First 1.0m telescope by Q4 2011.
- McDonald, Teide, and SSO site work to be completed end by of 2011. Facilities and first telescopes in 2012.
- Remaining sites are in negotiation with site hosts
Dr. Yasushi Suto said….

• Darkness is the key to understanding the universe

**LCOGT WILL KEEP YOU IN THE DARK!**