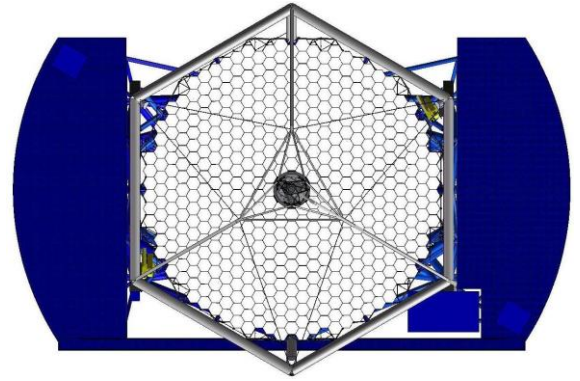


May 11, 2016

OSSC Meeting A Technical Overview of the Thirty Meter Telescope (TMT)

Virginia G. Ford
Senior Optomechanical Engineer
Thirty Meter Telescope



This presentation will describe the subsystems of the Thirty Meter Telescope observatory, with a focus on the technical aspects. Large observatories have similarities and differences that depend on science goals and design choices. Unique technical solutions are selected for the subsystems of each observatory to create one-of-a-kind complex assemblies to support the desired astronomical observing goals. The subsystems that will be covered will include: the observatory dome; environmental control within the dome; the telescope, including its motion control components, M1 system, M2 system, M3 system, Adaptive Optics system, calibration, Nasmyth platforms, and first light instruments; facilities for mirror cleaning, coating and handling; facilities for maintenance and repair of subsystems; and an overview of software architecture. Some of the technical choices that influence the final astronomical capability of the Thirty Meter Telescope will be revealed.



About our speaker: Since 2009, Virginia Ford has worked in the Thirty Meter Telescope Optics Group managing the Secondary and Tertiary Mirror Systems. This role involves writing requirements, interface control and procurement documents; managing a Chinese engineering team working on the Tertiary Mirror System; and designing interface and handling equipment.

Before joining TMT, she was the General Manager of Atomate, a nanotechnology equipment company from 2006-2009 and worked at Jet Propulsion Laboratory where her focus was opto-mechanical engineering of space science instruments from 1986 to 2006. While there, she was lead mechanical engineer on Multi-Angle Imaging Spectral Radiometer flying on the Terra satellite, the Microwave Limb Sounder flying on the Aura satellite, the Cloud Profiling Radar flying as part of the CloudSat mission, and the 10 cameras used on each of the Mars Rovers Curiosity and Opportunity. She held project management roles on the Terrestrial Planet Finder Coronagraph study and the Advanced Mirror Demonstration project. She led 2 research projects resulting in shape memory alloy mechanisms used in space missions. From 1979 to 1986, Virginia worked at Texas Instruments on visible and infrared optical systems.

Wednesday, May 11, 2016

Reception: 6:00; Dinner: 7:00; Talk: 8:00

Cost: \$30. After May 8, \$35.

OSSC Student Members: free. After May 8, \$10.

**Location: Jet Propulsion Laboratory
Von Karman Auditorium**

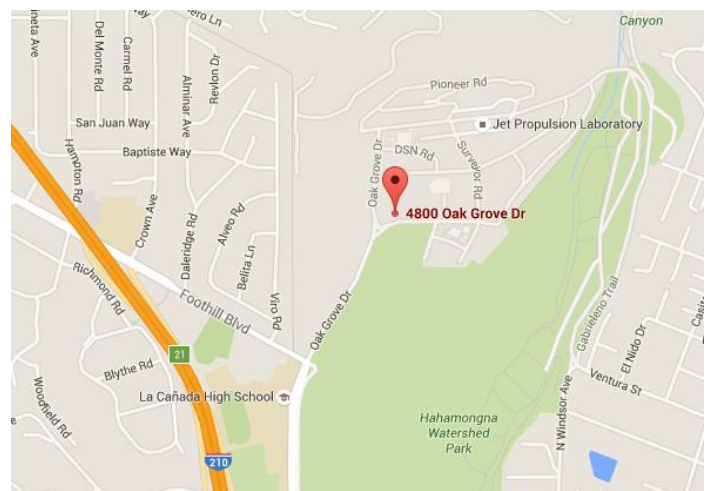
*(Inform the guard station that you are
attending the OSSC meeting in Von Karman)*

4800 Oak Grove Dr., Pasadena, CA 91109

On-line Registration: www.osscc.org or

Contact: Bo Wang, Events@osscc.org,

714-420-8234



Please post this notice and invite your friends & colleagues to attend!