PTICAL SOCIETY OF SOUTHERN CALIFORNIA

Meeting Announcement

October 14, 2015

IEEE Advancing Technology for Humanity

The Lunar Laser Ranging Experiment

Hildreth (Hal) Walker, Jr.
Co-Founder, A-MAN, Inc. STEM International Science Discovery & Learning Center

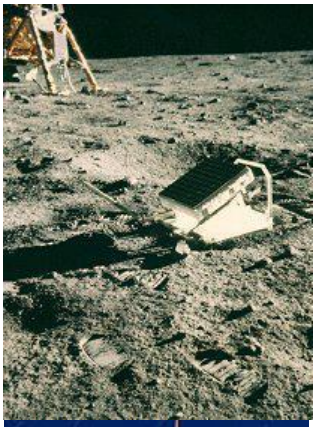
Hosted by LA Southwest College. Co-sponsored by IEEE Region 6

Abstract: On the afternoon of July 20, 1969, Apollo 11 astronauts Neil Armstrong and Edwin "Buzz" Aldrin explored the surface of the Moon for two and a half hours, collecting samples and taking photographs while Michael Collins orbited in the command module Columbia. On July 21, about an hour before the end of their final moonwalk, they left an experiment on the lunar surface which, after 45 years, continues to work as well as it did the day it got there.

Called the lunar laser ranging experiment, it studies the Earth-Moon system and returns data to scientific centers around the world, including NASA's Jet Propulsion Laboratory. The experiment consists of an instrument called the lunar laser ranging reflector, designed to reflect pulses of laser light fired from the Earth. The idea was to determine the round-trip travel time of a laser pulse from the Earth to the Moon and back again, thereby calculating the distance between the two bodies to unprecedented accuracy. Unlike the other scientific experiments left on the Moon, this reflector requires no power and is still functioning perfectly after 35 years.

This milestone is honored by a special exhibit on lunar laser ranging at the National Museum of American History, Smithsonian in Washington, D.C. in the Permanent exhibit “Science in American Life, The New Moon.” Hal Walker’s picture and remarks are included along with actual components from the Korad K-1500 Ruby Laser System.

This talk will cover operations from Lick observatory and laser system pre- preparations necessary to successfully complete this historical first ever interplanetary lunar laser ranging experiment. In addition, Russian lunar laser ranging activities along with other sites across the world will also be discussed.



Hildreth (Hal) Walker, Jr. is honored in an exhibition “Science in American Life”, which opened on April 27, 1994 at the Smithsonian Institution National Museum of American History in Washington, D.C. Walker led the manufacturing, testing and operation of the ruby laser system which completed the first successful Apollo 11 Lunar Ranging Experiment in 1969. Walker, a veteran of 35 years in the aerospace industry, is retired from the management team of the Hughes Aircraft Company and presently serves as president and CEO of TECH PLUS, a laser technology consultant group. Hal is board chairman and co-founder, with his wife Dr. Bettye Walker, of the African-American Male Achievers Network, Inc., (A-MAN), a non-profit corporation founded in 1991 is dedicated to the nurturing of young African-American students and other underserved children with particular emphasis in science and mathematics. A-MAN also is established in the country of South Africa at the invitation of President Nelson Mandela in 1998.

Wednesday - October 14, 2015

Los Angeles Southwest College

Imperial & Western Ave, Los Angeles, CA

FREE Networking, Reception, & Tours: 6:00- 7:00 pm

Dinner: 7:00 – 8:00 pm ($35 for registration before Oct. 10 and $40 after, free for OSSC Student members registered before Oct. 10 and $10 after.)

Presentation starts at 8pm and is free

Register on-line at www.ossc.org

Sponsorships Available – Tables, Students

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