

Astronomy Open Night, Friday, September 1, 2017

ESS 001; 7:30PM

For more information: <http://www.astro.sunysb.edu/openight/opennite.html>

Frederick Walter

“America's Eclipse - The Total Solar Eclipse of August 21, 2017”

Whether or not you got to see it, it has been hard to avoid the hype surrounding the recent total solar eclipse. Its track crossed the country for 90 minutes, from Oregon to South Carolina, and was viewable from several major population centers.

I will recap the eclipse, starting with a history of solar eclipses. Eclipses are more than a visual spectacle; I will highlight the important scientific discoveries that have come out of them. Even in this age of large telescopes and orbital observatories, a total solar eclipse offers the unique opportunity to probe the inner solar corona.

Prof. Walter, a resident of East Setauket, studies star birth, stellar weather (including stellar coronae), and star death using the *Chandra* and *XMM-Newton* X-ray observatories, the Hubble Space Telescope, and telescopes in Arizona, Hawaii and Chile. He experienced the 1979 total eclipse in Montana as a graduate student. He has been a professor of Astronomy at Stony Brook since 1989.

World of Physics Open Night, Friday, September 8, 2017

ESS 001; 7:30PM

For more information: <http://www.physics.sunysb.edu/Physics/WorldsOfPhysics/2017-18/>

Laszlo Mihaly

“Why do you need Einstein's special and general relativity to find your way in NYC?”

The Global Positioning System (GPS) transformed the way we are traveling. We discuss how the system was developed and what the basic principles are behind it. It turns out that without properly implementing time corrections predicted by Einstein's special and general relativity the system would not work.

Professor Mihaly is a condensed matter physicist and former Chair of the Department of Physics and Astronomy.

Living World Open Night, Friday, September 15, 2017

NOT SCHEDULED

For more information: <http://life.bio.sunysb.edu/marinebio/livingworld/>

Geology Open Night, Friday, September 22, 2017

ESS 001; 7:30PM

For more information: <http://www.geo.sunysb.edu/openight/index.html>

Timothy Glotch

“New Insights into lunar geology from mid-infrared remote sensing measurements”

Since its insertion into lunar orbit in 2009, the Lunar Reconnaissance Orbiter Diviner Lunar Radiometer Experiment has provided continuous mid-infrared measurements of the lunar surface. These measurements have provided new insight into mineral composition of the lunar surface, and volcanic, cratering, and space weathering processes, among other advances. This talk will provide an overview of our new understanding of the Moon enabled by Diviner's measurements, particularly in relation to volcanism and space weathering.

Timothy Glotch is an Associate Professor in the Department of Geosciences at Stony Brook. His research is focused on using laboratory spectroscopic techniques and sophisticated light scattering models to enable more quantitative interpretation of spectroscopic data sets. This work includes using laboratory visible/near-infrared reflectance, thermal infrared emission, and Raman spectroscopies, both on remote sensing platforms and in the laboratory, to determine the composition of geologic materials on the surfaces of the Moon, asteroids, Mars, and its moons. He is a Co-Investigator on Diviner Lunar Radiometer Experiment, which has been orbiting the Moon since 2009. In 2012, he was awarded the National Science Foundation Early Career Award. He is the Principal Investigator of the \$5.5M Remote, In Situ, and Synchrotron Studies for Science and Exploration (RIS4E) team, which is part of NASA's Solar System Exploration Research Virtual Institute (SSERVI).

Directions to SUNY Stony Brook and ESS Building

- ⇒ from exit 62 of the Long Island Expressway (LIE, I-495) follow Nicolls Road (Route 97) north for nine miles. Pass the South and Main entrances to the University.
- ⇒ Enter the North entrance which will be on your left.
- ⇒ at the top of the small hill, turn right on Circle Road.
- ⇒ Proceed about 1 mile.
- ⇒ Turn left onto Campus Drive and then immediately turn left again onto John S. Toll Drive.
- ⇒ Proceed about 50 yards then turn right into the large paved parking lot.
- ⇒ The Earth and Space Sciences building is the large concrete building at the northeast end of the parking lot.

Map of campus is on the web at: <http://www.stonybrook.edu/sb/map/>

TEACHER IN SERVICE CREDITS

If your school requires you to have a sequence of educational opportunities in order to receive in-service credit, please advise them that during the fall 2017 semester we will provide attendance certification for each of the lectures attended. Please contact the respective department for more information.