



Peninsula Astronomical Society

February 2020

February Events

- ★ **8 Saturday – FULL MOON** at 11:34pm PST – a **SUPERMOON!**
 - ★ **14 Friday – PAS MONTHLY MEETING – “Planetary Geomorphology”** by **BRIAN DAY** of **NASA/Ames SSERVI**. Meeting will be in room #5015, the FORUM Building at 7:30pm. Park in Lot 6. It should be a great meeting!
 - ★ **19 Wednesday – PAS Board Meeting:** Foothill College Observatory at 7:30pm. Members are welcome to attend.
 - ★ **23 Sunday – NEW MOON** at 7:33am PST.
 - ★ **29 Saturday – LEAP DAY!**
-

March Events

- ★ **8 Sunday – Daylight Savings Begins** Set your clocks ahead one hour.
- ★ **9 Monday – FULL MOON** at 9:49am PDT – a **SUPERMOON!**
- ★ **13 Friday – PAS MONTHLY MEETING – “TBD”** Meeting will be in room #5015, the FORUM Building at 7:30pm. Park in Lot 6.
- ★ **18 Wednesday – PAS Board Meeting:** Foothill College Observatory at 7:30pm. Members are welcome to attend.
- ★ **19 Thursday – EQUINOX** at 8:49pm PDT
- ★ **24 Tuesday – NEW MOON** at 1:29am PDT.
- ★ **28 Saturday – OAK RIDGE PRIME NIGHT – A PAS MEMBER-ONLY Star Party** at our observatory property in the Santa Cruz Mountains above Los Gatos. Details next month.

PAS Club Information and Foothill Observatory Hours

Foothill College Observatory is open to the public every **clear** Friday evening from 9:00 pm to 11:00 pm. The Observatory is also open for solar observing through a special Hydrogen- α filter every **clear** Saturday morning from 10:00 am until Noon. These programs are **FREE** and everyone is welcome to attend. There is a \$3 charge for parking.

Check out the Club's Web Site at: <http://www.pastro.org>



LIKE us on FACEBOOK: <https://www.facebook.com/PeninsulaAstronomicalSociety>

Peninsula Astronomical Society, PO Box 4542, Mountain View, CA 94040

PAS Directors

Officers

President **Gary Baker**
Foothill Observatory
 (650) 424-2620
 gary.j.baker(at)lmco.com

Vice President **Rick Baldrige**
Newsletter Oak Ridge Chair, Publicity
 (408) 315-5263
 rickbaldrige(at)comcast.net

Sect./Treasurer **Rick Rodgers**
 (650) 493-2098
 judrick557pa(at)comcast.net

Board members

Membership, Webmaster, Yosemite Chair **William Phelps**
 (650) 302-2468
 wm(at)usa.net

Telescope Loans **Taurus Fey**
 (408) 373-9420
 sundance82_99(at)yahoo.com

Programs Chair **Terry Terman**
 (650) 967-0223
 terry(at)termanweb.net

Jim Terman
 jim(at)termanweb.net

Galina Sokolova
 gsokolova(at)gmail.com

Maria Cordell
 mcordell(at)gmail.com

Read Your Mailing Label (if you still get one)

The following applies only to PAS members that are not registered on our web site. If you get your newsletter online, you can find the latest Oak Ridge combos there as well, on the "Oak Ridge Access" page under the "Observatory" tab.

The mailing label on your newsletter includes the current Oak Ridge Road gate combination, the PAS driveway combo, and the membership expiration date. All are printed on the top line of the label. The Oak Ridge Road gate combo is first, the combo for the PAS driveway chain is next and the expiration date is last. If the label says "Dues Expired!" or "(No Disclaimer)" on the top line, then read on.

"Dues Expired!" - your membership in the PAS has expired. If you wish to renew, dues are \$25 per year for Senior and Family member-ships, and \$10 per year for Junior (16 years of age and under) memberships. Make checks payable to Peninsula Astronomical Society and mail to the address below. **Add \$5 for a mailed copy of this newsletter.**

"(No Disclaimer)" - we have not received an Oak Ridge Road Site Use Disclaimer form from you. To get a copy, please send a self-addressed stamped envelope to the club at the address below along with a note asking for the Disclaimer form, and we'll send you one. If we receive your dues and/or your completed Disclaimer form before the next PAS Board Meeting, you should find the Oak Ridge combination on the label of your next copy of *nite skies*. The club's formal business and mailing address is: →

Oak Ridge Road Gate and Driveway Chain Instructions

PAS Members with a valid Oak Ridge Disclaimer on file may and paid the Oak Ridge Use Fee may obtain the current Oak Ridge combos from the "Oak Ridge Access" page on the club web site.

OAK RIDGE ROAD GATE: There is a gate at the entrance to the Oak Ridge Road Observing site. An electronic keypad is located to the left of the gate. Enter the combination numbers in sequence from left to right, one at a time. Make sure to begin with the "#" sign! If you make a mistake, just try again. The general gate procedure is as follows:

- #1. Stop car over concrete pad in front of the gate.
- #2. Enter # TWICE, then combination on keypad.
- #3. Gate opens inward.
- #4. Drive through. Gate shuts automatically.

PAS DRIVEWAY CHAIN: The lock works the same as any Master Lock --

- #1 - Turn right (clockwise) three turns to the first number.
- #2 - Enter # TWICE, then combination on keypad.
- #3 - Turn right again directly to the third number

If you're the last to leave Oakridge, **PLEASE** make sure the chain is put back up and locked.

Foothill Parking Fee Reminder

A parking permit is required for all visitors, 7 days a week, from 7 am to 10 pm. Anyone attending our General Meetings will have to pay **\$3.00** for a parking permit or face the possibility of a parking ticket (at last check, \$45.00). Foothill College Observatory users will also have to display a parking permit. Permits are available from dispensers in the parking lots using **\$3.00 in quarters, cash (no change given) OR DEBIT CARDS.** **Do NOT park in any of the "Staff Parking" sections or you will get a ticket!**

Peninsula Astronomical Society
PO Box 4542
Mountain View, CA 94040



SILICON VALLEY SERIES TALK

On Wednesday, March 4, 2020 at 7 pm, **Dr. Phil Marshall**, of the SLAC National Accelerator Laboratory, Stanford University, will give a free, illustrated, non-technical talk on:

"The Biggest Sky Survey Ever Undertaken: Exploring the Universe with the Rubin Observatory"

in the **Smithwick Theater** at Foothill College, in Los Altos.

The talk is part of the Silicon Valley Astronomy Lecture Series at Foothill College, now in its 20th year.

The Vera Rubin Observatory, on a mountaintop in Chile, will house a survey telescope that will image the night sky faster and deeper than ever before. Its camera, at 3.6 Gigapixels, will be the biggest digital camera ever built. The Rubin Observatory will be able to image the entire visible sky every few nights, and build up, over 10 years, a 900-frame full color movie of the deep night sky. This will enable a wide variety of scientific explorations, from the outer reaches of our Solar System, through our Milky Way Galaxy and its dark matter halo, and out into the extra-galactic universe, where we hope to see new types of cosmic explosions and the weird effects of the mysterious Dark Energy. Dr. Marshall will give a guided tour of the Rubin Observatory, describe the planned sky survey, discuss the challenges of doing astronomy at petabyte scale, and show how we can all take part in Rubin's voyage of discovery.

Phil Marshall is Senior Staff Scientist at Stanford's SLAC National Accelerator Laboratory. His research interests are in observational cosmology using gravitational lensing: weighing galaxies, and measuring the expansion rate of the Universe. He is a member of several collaborations developing new methods to take advantage of the enormous flow of data from the Rubin Observatory's Legacy Survey of Space and Time (LSST). He

received his PhD from the University of Cambridge, where he first got interested in techniques for measuring astronomical objects that we may not be able to observe directly. He is currently Deputy Director of Operations for the Vera C. Rubin Observatory.

Foothill College is just off the El Monte Road exit from Freeway 280 in Los Altos. For directions and parking information, see: foothill.edu/parking

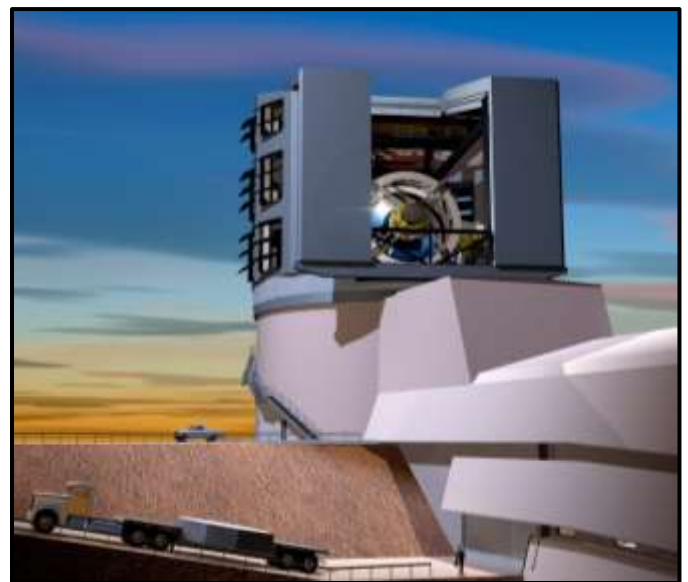
The lecture is co-sponsored by:

- * *The Foothill College Physical Science Division*
- * *The SETI Institute*
- * *The Astronomical Society of the Pacific*
- * *The University of California Observatories (including Lick Observatory).*

We get large crowds for these talks, so we ask people to try to arrive a little bit early to find parking. The lecture and parking in Lot #1 at the college are both free.

Past lectures can be found on YouTube at <http://www.youtube.com/SVAstronomyLectures>

Andrew Fraknoi
Emeritus Chair, Astronomy Department, Foothill
415-484-5350 (voice mail)
E-mail: fraknoiandrew@fhda.edu
Web site: www.fraknoi.com
www.facebook.com/Fraknoi



NOTE: This is not a PAS sponsored event.

MEMBER ASTROPHOTO GALLERY

The ROSETTE NEBULA



© Jian Yuan Peng Astrophotography

This amazing photo by **Jian Yuan Peng** was taken from DOWNTOWN Palo Alto! Hubble Palette (SHO) narrowband imaging with a William Optics GT81 + telescope, a 0.8x Reducer and a ZWO ASI1600 camera. Total exposure time 23 HOURS, 12 minutes. AMAZING!

>>> **PAS EVENTS CALENDAR FOR 2020** <<<**JANUARY**

- 10 **PAS ANNUAL Meeting and Board Elections, "One Giant Leap" by Geoff Mathews** of Foothill 19:30 (*)
FULL MOON at 11:22
- 15 Board Meeting and Officer Elections, Foothill Observatory (**), 19:30
- 24 New Moon at 13:43
- 25 LUNAR NEW YEAR (Rat)

FEBRUARY

- 8 Full Moon at 23:34
- 14 **PAS General Meeting** with *Brian Day* of NASA 19:30 **VALENTINE'S DAY**
- 19 Board Meeting, Foothill Observatory (OFC), 19:30
- 23 New Moon at 07:33
- 29 **LEAP DAY**

MARCH

- 8 *Daylight Savings Begins*
- 9 Full Moon at 09:49
- 13 **PAS General Meeting, (TBD)** 19:30
- 18 Board Meeting, Foothill Observatory (OFC), 19:30
- 19 **Spring Equinox** at 20:49
- 24 New Moon at 01:29
- 28 **OAK RIDGE PRIME NIGHT**

APRIL

- 7 Full Moon at 18:36
- 10 **PAS General Meeting, (TBD)** 19:30
- 12 Easter Sunday
- 15 Board Meeting, Foothill Observatory (OFC), 19:30
- 18 **OAK RIDGE PRIME NIGHT**
- 22 New Moon at 18:27 **EARTH DAY**

MAY

- 2 **ASTRONOMY DAY**
- 4 **STAR WARS DAY**
- 5 **CINCO DE MAYO**
- 7 Full Moon at 02:46
- 8 **PAS General Meeting, (TBD)** 19:30
- 13 Board Meeting, Foothill Observatory (OFC), 19:30
- 16 **OAK RIDGE PRIME NIGHT**
- 22 New Moon at 09:40
- 25 Memorial Day

JUNE

- 5 Full Moon at 11:13 Penumbra Eclipse (not visible)
- 12 **PAS General Meeting, (TBD)** 19:30
- 17 Board Meeting, Foothill Observatory (OFC), 19:30
- 20 New Moon at 22:42 ANNULAR ECLIPSE (not visible)
Summer Solstice at 14:43
OAK RIDGE PRIME NIGHT

JULY

- 4 Full Moon at 20:45 Penumbra Eclipse (slight)
- 10 **PAS General Meeting, (TBD)** 19:30
- 14 Jupiter Opposition
- 15 Board Meeting, Foothill Observatory (OFC), 19:30
- 18 **OAK RIDGE PRIME NIGHT**
- 20 New Moon at 09:34
Saturn Opposition

AUGUST

- 3 Full Moon at 08:00
- 12 PERSEID Shower Peak
- 14 **PAS General Meeting, (TBD)** 19:30
- 15 **OAK RIDGE PRIME NIGHT**
- 18 New Moon at 18:43
- 19 Board Meeting, Foothill Observatory (OFC), 19:30

SEPTEMBER

- 1 Full Moon at 21:23
- 7 Labor Day
- 11 **PAS General Meeting, (TBD)** 19:30
- 16 Board Meeting, Foothill Observatory (OFC), 19:30
- 17 New Moon at 03:01
- 19 **OAK RIDGE PRIME NIGHT**
- 22 Autumnal Equinox at 06:30
- 26 **FALL ASTRONOMY DAY and Inter. Observe the Moon Night**

OCTOBER

- 1 Full Moon at 13:06
- 9 **PAS General Meeting, (TBD)** 19:30
- 14 Board Meeting, Foothill Observatory (OFC), 19:30
- 16 New Moon at 11:32
- 17 **OAK RIDGE PRIME NIGHT**
- 31 Full Moon at 06:50 **BLUE MOON** on HALLOWEEN

NOVEMBER

- 1 *End Daylight Savings Time*
- 13 **PAS General Meeting, (TBD)** 19:30
- 14 New Moon at 21:08
- 17 LEONID Shower Peak
- 18 Board Meeting, Foothill Observatory (OFC), 19:30
- 30 Full Moon at 01:31 Penumbra Eclipse – ALL VISIBLE

DECEMBER

- NO PAS Meeting** for December
- 13 GEMINID Shower Peak
- 14 New Moon at 08:18 **TOTAL SOLAR ECLIPSE**
Argentina and Chile (none visible here)
- 16 Board Meeting, Foothill Observatory (OFC), 19:30
- 21 **Winter Solstice** at 02:02
- 25 Christmas Day
- 29 Full Moon at 19:29
- 31 New Year's Eve

Times are given in Military Time (0-24) to avoid confusion with AM or PM times. Times are shown as Pacific Standard Time (PST) or Pacific Daylight Time (PDT) which are -8 hours and -7 hours from Greenwich Mean Time respectively. (*) **PAS GENERAL MEETINGS** are generally held on the 2nd Friday of each month, normally begin at 7:30pm and are open to the public. (**) **BOARD MEETINGS** are typically the Wednesday following the General Meeting and held in the Observatory at Foothill at 7:30pm -- PAS Members are welcome to attend. **OAK RIDGE PRIME NIGHTS** are MEMBERS-ONLY star parties at our club site in the Santa Cruz Mountains. Moon phase and sunrise/sunset times are from www.SunriseSunset.com by Steve Edwards.



PAS "Dinner with the Speaker" in January at Hong Kong Restaurant in Palo Alto. From far-left going clockwise around the table – Terry Terman, Jim Terman, Galina Sokolova, speaker and Foothill Astronomy Professor Geoff Mathews, Allen Frohardt, Ed Ching, Oliver Barrett and William Lockman.

Peninsula Astronomical Society
PO Box 4542
Mountain View, CA 94040

February 2020

PAS GENERAL MEETING

Friday the 14th of February at 7:30pm
Los Altos Hills, Foothill College, ROOM 5015

PLANETARY GEPOMORPHOLOGY – a tour of planetary landscapes in our Solar System

with **BRIAN DAY** of NASA/AMES

Meetings are free and open to the PUBLIC.
\$3 Foothill Parking Fee required. **Park in Lot #6.**
PLEASE, do NOT park in spaces marked STAFF.



Inside:

- ★ SILICON VALLEY SERIES TALK ON MAR 4th
- ★ PAS 2020 EVENTS CALENDAR
- ★ MEMBERS ASTROPHOTO GALLERY