

# PRIMEFOCUS

Tri-Valley Stargazers

June 2002



## Meeting Info:

### What

*Eyepieces: The other half of your telescope.*

### Who

Rich Combs

### When

June 21, 2002  
Conversation at 7:00 p.m.  
Lecture at 7:30 p.m.

### Where

Unitarian Universalist  
Church in Livermore  
1893 N. Vasco Road

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## June Meeting

### Eyepieces: The other half of your telescope.

Rich Combs

Eyepieces have undergone 350 years of development, but most of us are still in the dark when it comes to understanding the “other half” of our telescope. Huygens, Erfle, Ortho, Plössl, Kellner, Naglers. These are just a few of the different types of eyepieces available to us, but what’s the difference between them?

Rich, a TVS past-president, will cover eyepiece history, function, aberrations, use and abuse. He’ll debunk a few myths about how our eyes and eyepieces work to form images, and he’ll show that the worst thing you can do to your telescope is to put in an eyepiece! And just how do you pronounce ‘Huygens’ anyway? Come to the meeting and find out!

## News & Notes

### New Members

May brought forth quite a few new members. A big welcome to **Daniel Luevano**, **Taiki Murakami**, **Sunil Mehta & Family**, **Chris Patel**, **Ric Roque & Family**, and **David Russ & Family**. Please say hello to these folks the next time you see them at the lecture meeting.

### 2002 TVS Meeting Dates

Below are the meeting dates for 2002. The lecture meetings are held on the third Friday of the month, with the Board meeting on the Monday following the lecture meeting. The *Prime Focus* deadline applies to that month's issue (e.g., the July 7th deadline is for the July issue).

Lecture Meeting	Board Meeting	Prime Focus Deadline
June 21	June 24	June 9
July 19	July 22	July 7
Aug. 16	Aug. 19	Aug. 4
Sep. 20	Sep. 23	Sep. 8
Oct. 18	Oct. 21	Oct. 6
Nov. 15	Nov. 18	Nov. 3
Dec. 20	Dec. 16	Dec. 8

### Newsletter Costs

Did you know that a third of our budget goes to the printing and mailing of this newsletter? It costs just under \$14 per person per year to mail *Prime Focus* to members. And with the cost of postage going up 3¢ per stamp on June 30th, the cost to the club will increase.

So what can you do to help? Subscribe to the web version in place of the printed *Prime Focus*! What's the difference between the print and web-based newsletters? The web version is a color PDF (you can get a free PDF viewer at [www.adobe.com/products/acrobat/readstep2.html](http://www.adobe.com/products/acrobat/readstep2.html)); you'll receive an e-mail notification when it's available for download before the paper version ever reaches your mailbox; and, of course, you'll be saving TVS money.

If you are receiving the paper version and would like to switch to the web version, contact **Mike Anderson** at [andersonm@prodigy.net](mailto:andersonm@prodigy.net).

### Ooops

In the May issue of *Prime Focus*, the editor mistakenly wrote that the new Hubble camera is a 16 million megapixel camera. It should have been just 16 megapixels. A big difference. Bad editor, bad editor!

Another correction that needs to be made is in reference to the February newsletter. We recently received an e-mail from Ron Miller of Bonestell Space Art wanting us to clarify that the images used in *Prime Focus* are copyrighted by Bonestell Space Art. So, to make it official, all the Chesley Bonestell images used in that issue belong to, and are copyrighted by, Bonestell Space Art.

### Money Matters

At the May Board meeting, treasurer **Mike Anderson** sent word of the current balances (as of May 20, 2002) of our various accounts:

Checking	\$1,316.00	
CD #1	\$3,867.54	matures 08/17/02
CD #2	\$2,378.16	matures 05/27/02
CD #4	\$2,031.49	matures 07/16/02

## Calendar of Events

### Classic Sci-Fi Film Series Chabot Space & Science Center

Chabot continues its Sci-Fi series by showing the following movies at the Tien MegaDome Theater. Tickets are \$5 per person and are available at the door, at [TicketWeb.com](http://TicketWeb.com), or the Chabot Box Office, 510-336-7373.

#### Movies:

*The Right Stuff*, July 5 – 7

*October Sky*, August 2 – 4

#### Showtimes:

Friday - Sunday on the first two weekends of each month.

Fridays – 7:30 p.m.

Saturdays – 4:30 & 7:30 p.m.

Sundays – 4:30 p.m.

**Newsletter header image:** Globular Cluster NGC 5139 (Omega Centauri). To the naked eye, the largest and brightest globular cluster in the sky looks like a diffuse 4th magnitude star. It was Edmond Halley who discovered the true nature of this object. With approx. 5 million solar masses, NGC 5139 is also the most massive and luminous of all known globular clusters in our Milky Way.

Instrument: Vixen R200SS 8" f/4 Newtonian w/coma corrector  
Mount: Vixen Super Polaris DX  
Guiding: ST-4 autoguider  
Film: Kodak PJ400, hypered  
Date: 15 Feb. 2002, 00:03 - 00:31 UTC  
Site: Campground near Sesriem Canyon, Namibia  
Photo and text: Axel Mellinger

## Calendar of Events *continued*

### June 29–September 15

**What:** *The Lost Spacecraft: Liberty Bell 7 Recovered*

**Where:** Chabot Space & Science Center

**Cost:** General Admission price

See the actual spacecraft that sunk to the bottom of the ocean in 1961 and learn about its recovery 30 years later. Climb inside a capsule, watch rocket launches, experience centrifuge-training, pilot a remote-controlled vehicle, and learn about the history and technology of space flight.

### July 19–20

**What:** *The Davis Starshow*

**Where:** Veteran's Memorial Center,  
203 E. 14th Street, Davis, CA

**Cost:** Free

The Davis Star Show, a festival of astronomy and related sciences, is a public celebration of our universe. They'll have speakers talking about exciting new discoveries in astronomy, a trade show featuring instruments and accessories appealing to a wide range of amateurs, an exhibit hall with displays and activities for all ages, daytime viewing of sunspots and other solar activity, a planetarium for the kids, astronomy club booths and demonstrations, a teacher/educational literature table, workshops, a lunar observing party at night on the 19th and a public star party at night on the 20th.

Among the guest speakers are **Andreas Albrecht** (U.C. Davis: *What do we know about the Universe?*), **Steven Stahler** (U.C. Berkeley, Radio Astronomy Group: *How Stars are Made*), **Phil Plait** (Sonoma State University & BadAstronomy.com: *Bad Astronomy: The Moon Hoax*), **Stephen James O'Meara** (contributing editor, Sky & Telescope Magazine: *The Trials and Tribulations of a 19th-*

*Century Astronomer living in the 21st-Century* and *Volcano Moon: Does the Moon's Gravity Affect Volcanic Eruptions?*), **Tony Hallas** (Hallas Digital Systems: *Astrophotography from the Foothills of the Sierra*), **Robert Naeye** (editor, ASP Mercury Magazine: *Solving the Universe's Mysteries Through Extra Dimensions*), **Kent Cullers** (SETI Institute: *SETI and Astronomy from DC to Daylight*).

If you've got a scope and are interested in helping with the public star party on Saturday night, please contact Jane Smith at [jessmith@ucdavis.edu](mailto:jessmith@ucdavis.edu) or 530-758-4104 evenings/weekends.

There is a lot going on during the two days, so visit [www.DavisStarShow.org](http://www.DavisStarShow.org) to view the schedule of events.

### September 28–29

**What:** *The ASP's 2002 Annual Meeting*

**Where:** Various Bay Area locations

**Cost:** \$35, \$30 ASP members, \$25 students

Is life widespread through the cosmos, or is Earth a lonely oasis? The Astronomical Society of the Pacific cordially invites you to learn more about this fascinating topic by attending its 114th Annual Meeting. The theme of this year's meeting is "The Cosmic Thread: From Stars to Life."

On Saturday, September 28, the Society will be sponsoring a free public astronomy lecture by renowned comet discoverer and author **David H. Levy**. The lecture will be held at 7:30 p.m. in the amphitheater near the summit of Mt. Tamalpais in Marin County. Levy's talk is entitled "From Stars to Life: Suppose You Had to Design a Universe?" A free public star party, sponsored by the San Francisco Amateur Astronomers (SFAA), follows Levy's talk. Don't worry about bringing a telescope; SFAA members will be out in force!

*continued next page*

#### **Officers**

##### **President:**

Chuck Grant  
[cg@fx4m.com](mailto:cg@fx4m.com)  
925-422-7278

##### **Vice-President:**

Gary Steinhour  
[steinhour1@juno.com](mailto:steinhour1@juno.com)

##### **Treasurer:**

Mike Anderson  
[andersonm@prodigy.net](mailto:andersonm@prodigy.net)

##### **Secretary:**

Maggie Halberg  
925-736-8627

##### **Board of Directors**

Alane Alchorn, Jim Alves, Dave Anderson, Dennis Beckley, Paul Caswell, Rich Combs, Debbie Dyke, Gert Gottschalk, Kathleen

Kelley, Signe McIntire, Dave Rodrigues, Frank Rogue, Mike Rushford, Debbie Scherrer, Al Stern, John Swenson, Norm Thomas, Phil Waide

##### **Volunteer Positions**

##### **Librarian:**

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925-634-0220

##### **Newsletter Editor:**

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##### **Program Director:** unfilled

##### **Loaner Scope Manager:**

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##### **Webmaster:**

Chuck Grant

##### **Observatory Director/**

**Key Master:**

Chuck Grant

##### **School Star Party Chair:**

Rich Green (unofficially)  
[richgreen@pacbell.net](mailto:richgreen@pacbell.net)  
925-449-2190

##### **Public Star Party Chair:**

Rich Green (unofficially)

##### **Historians:**

Paul Caswell & Debbie Dyke

##### **Addresses**

**Mailing:**  
Tri-Valley Stargazers  
P.O. Box 2476  
Livermore, CA 94551

##### **Lecture Meeting:**

Unitarian Universalist Church  
1893 N. Vasco Road, Livermore

##### **Board Meeting:**

Round Table Pizza  
1024 E. Stanley Blvd., Livermore

##### **Web & E-mail**

[www.trivalleystargazers.org](http://www.trivalleystargazers.org)

[tvst@trivalleystargazers.org](mailto:tvst@trivalleystargazers.org)

##### **Eyes on the Skies**

Eyes on the Skies is a robotic solar telescope run by Mike Rushford ([rushford@eyes-on-the-skies.org](mailto:rushford@eyes-on-the-skies.org)). You may access it by visiting [www.eyes-on-the-skies.org](http://www.eyes-on-the-skies.org).

April membership: 126

## Calendar of Events *continued*

On Sunday, September 29, the Society will host a full day of lectures by some of the world's leading astronomers. The lectures will run from 9:00 a.m. to 5:35 p.m. at Pimentel Hall on the U.C. Berkeley campus. Scheduled speakers include **Alex Filippenko** (ASP President, U.C. Berkeley), **Geoff Marcy** (U.C. Berkeley), **Chris McKay** (NASA's Ames Research Center), **David Morrison** (NASA's Ames Research Center), **Jill Tarter** (SETI Institute), **Chris Impey** (University of Arizona), **Ben Zuckerman** (U.C.L.A.), and **Seth Shostak** (SETI Institute).

From 7:00 to 10:00 p.m. the ASP will be hosting a reception at the U.C. Berkeley Faculty Club, followed by a dinner banquet in the Heyns Room. Award-winning author and journalist **Timothy Ferris** will speak at the banquet. Following Ferris's talk, the ASP will present its 2002 Annual Awards, including the Society's prestigious Bruce Medal for lifetime achievement in astronomical research. Banquet seating is extremely limited, so please sign up now! Admission to the reception and banquet is \$60.00.

For more details and for registration information, please visit the Society's web site at: [www.astro-society.org/events/meeting.html](http://www.astro-society.org/events/meeting.html)

## Star Parties

The summer star party season is just starting up. Check the club's web site for updates and more information.

### **June 15, July 20, Aug 10, Sept 7 Sycamore Grove Star Party, Livermore**

TVS, in conjunction with the LARPD, puts on public star parties at Sycamore Grove in Livermore. If you'd like to help, contact Phil Waide at 925-455-6039 or contact the LARPD at 925-373-5770.

### **July 10-15 Shingletown Star Party**

For 5 days, from noon on Wednesday, July 10th through Monday noon on July 15, the Shingletown Airport will be closed to air traffic and open to astronomers. You may set up and leave your equipment, and camp if you wish, on the airstrip for the duration of your stay. There are other accommodations in town in case camping isn't your cup of tea. Shingletown is located approximately 40 miles east of Redding off of Hwy 44.

More info at [www201.pair.com/resource/resource-intl/spp.html](http://www201.pair.com/resource/resource-intl/spp.html) or contact Mark Wagner by e-mail ([mgw@resource-intl.com](mailto:mgw@resource-intl.com)) or telephone (408-356-1125).

### **July 12-13 Yosemite**

TVS will host a public star party at Glacier Point in Yosemite. For those who choose to participate in this

trip, you'll be provided with free park entrance and camping at the Bridalveil Creek campground in exchange for allowing the public to look through your telescope. To reserve a spot, contact trip coordinator **Dave Rodrigues** at 510-483-9191.

### **July 13 Fremont Peak**

Please mark your calendars for Rob Toebe Night at Fremont Peak – a special event to commemorate the life of Rob Toebe, a long time member of FPOA, board member, and dedicated observer. Information is available at [www.fpoa.net/toebe](http://www.fpoa.net/toebe). Please e-mail if you plan to attend: [toebenight@fpoa.net](mailto:toebenight@fpoa.net).

### **August 3, Sept. 28 H2O Open House**

If you've ever wanted to check out the club's dark sky site, this is your opportunity. Meet at the corner of Mines & Tesla at a time yet to be determined. There is a \$3 per car fee.

### **August 8-14 White Mountain Trip**

Our annual high altitude, low oxygen star party. Join other hardy souls in observing from the Barcroft High Altitude Research Station (altitude 12,400 feet) in the White Mountains east of the Sierras.

The trip begins on Thursday August 8 at the Grandview campground at 8,600 feet. This is an optional, but recommended, stay as the human body needs to get acclimatized to low oxygen environments in order to function properly. For those not fond of camping, an alternative is to stay at a motel at Mammoth, altitude around 7,500 feet.

On Friday, August 9, the trip up the mountain begins. The road takes you past the Bristlecone Pine Forest (elev. 10,000 feet), a nice place to stop and admire some of the oldest living things on this planet. It takes about an hour and a half to go the last 18 miles as you rarely go faster than 15 mph. The facilities at Barcroft are homey. There are men's and women's dorms (with lots of bunkbeds), a TV viewing area, a library/pool table/ping pong table room, and a dining room complete with oxygen tank. The food is prepared by a very good cook, and we are expected to help out with the clean up of the kitchen and dining room.

This year the cost is \$50 per person per night for TVS & EAS members, \$55 for non-members. The cost includes your meals. This is a very popular star party, so get your reservations in to **Dave Rodrigues** soon. Send your check to him at 1633 Graff Ct., San Leandro, CA 94577. For more info, you may contact him at 510-483-9191 or [davevrod@aol.com](mailto:davevrod@aol.com).

### **August 10 Fremont Peak**

The annual Fremont Peak Star-B-Que. For more info visit [www.aanc-astronomy.org/starbq.html](http://www.aanc-astronomy.org/starbq.html).

## What's Up *by Debbie Dyke*

All times Pacific Daylight unless otherwise noted.

### June

- 10 Mon **New Moon** 4:46 p.m.
- 12 Wed Jupiter just 2° S of the very thin crescent Moon at 9:00 p.m.
- 13 Thur Venus 3° S of the Moon at 9:00 p.m.  
1831 James Clerk Maxwell born.
- 16 Sun **Father's Day**  
1963 Valentina Tereshkova becomes the first woman in orbit.  
1977 Werner von Braun dies.
- 17 Mon **First Quarter Moon** 5:29 p.m.
- 18 Tues 1983 First U.S. woman in space, a mere 20 years after the USSR sent Valentina into space.
- 19 Wed Moon at perigee (228,971 mi) 12:00 a.m.
- 21 Fri **Summer Solstice** 6:24 a.m.  
Mercury at greatest elongation W (23°) 8:00 a.m.  
**Tri-Valley Stargazers general meeting.** 7:30 p.m. at the Unitarian Universalist Church,  
1893 N. Vasco Road, Livermore.
- 22 Sat 1675 Royal Greenwich Observatory founded.
- 23 Sun 1178 Five British monks observe an impact on the crescent Moon. They describe it as a cloud of "fire and hot coals". The 125,000-megaton explosion created the crater now known as Giordano Bruno.  
**Tri-Valley Stargazers discussion meeting.** 2:00 p.m. at the Round Table Pizza on 1024 E. Stanley Blvd., Livermore. Join regulars Chuck & Gert to chat about astro stuff.
- 24 Mon **Full Moon** 2:42 p.m.  
**Tri-Valley Stargazers Board meeting.** 7:00 p.m. at the Round Table Pizza in Livermore.  
1730 Charles Messier born. Celebrate by hugging your favorite fuzzy M object.  
1824 Lord Kelvin born.
- 29 Sat 1976 Viking 1 landed on Mars.  
1868 George Ellery Hale born.
- 30 Sun 1908 Something mysterious crashed near Tunguska in Russia – Scully & Mulder investigate. They discover it was only an asteroid that broke up and exploded over Siberia with the force of a hydrogen bomb.

### July

- 1 Mon 1967 Jocelyn Bell discovers the first pulsar.
- 2 Tues Moon at apogee (250,610 mi) 1:00 a.m.  
Mercury 0.2° S of Saturn at 5:00 a.m. right before sunrise.  
**Last Quarter Moon** 10:19 a.m.
- 4 Thur **Independence Day.**  
1054 Chinese astronomers observe the supernova that created the Crab Nebula. Native Americans also viewed this spectacle and recorded it in stone.  
1997 Mars Pathfinder lands on Mars.  
1868 Henrietta Swan Leavitt, discoverer of 2,400 variable stars, was born.
- 5 Fri Earth at aphelion (152,094 Mm) 9:00 p.m.
- 10 Wed **New Moon** 3:26 a.m.  
Venus 1.1° N of Regulus low in the west at 9:30 p.m.

# PRIMEFOCUS



Tri-Valley Stargazers  
P.O. Box 2476  
Livermore, CA 94551

## Tri-Valley Stargazers Membership Application

Member agrees to hold Tri-Valley Stargazers, and any cooperating organizations or landowners, harmless from all claims of liability for any injury or loss sustained at a TVS function.

Name \_\_\_\_\_ Phone \_\_\_\_\_ e-mail \_\_\_\_\_

Address \_\_\_\_\_

Choose one: \_\_\_\_\_ I wish to download *Prime Focus* from the web (an e-mail notification will be sent to me when it's available for download). I understand that a paper version will *not* be mailed to me.  
\_\_\_\_\_ I wish *Prime Focus* to be mailed to me.

Do not release my: \_\_\_\_\_ address, \_\_\_\_\_ phone, or \_\_\_\_\_ e-mail information to other TVS members.

Membership category: \_\_\_\_\_ \$5 Student \_\_\_\_\_ \$20 Individual \_\_\_\_\_ \$25 Family  
\_\_\_\_\_ \$20 Hidden Hill Observatory (H2O) refundable key deposit (key property of TVS)  
\$ \_\_\_\_\_ Tax deductible contribution to Tri-Valley Stargazers  
\$ \_\_\_\_\_ TOTAL – Return to: Tri-Valley Stargazers, P.O. Box 2476, Livermore, CA 94551

Membership information: Term is one calendar year, January through December. Student members must be less than 18 years old, or still in high school.