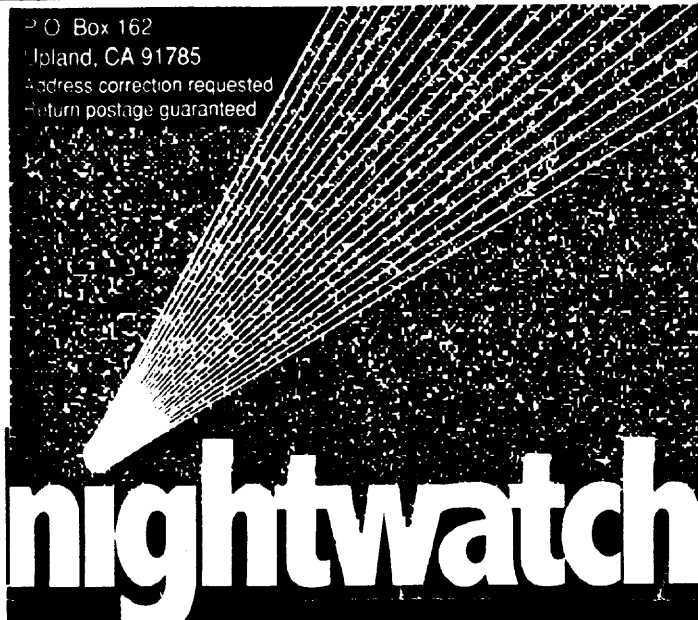


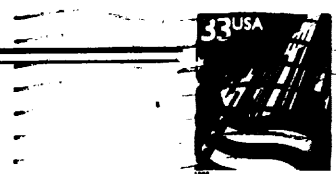
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# nightwatch

Newsletter of the Pomona Valley Amateur Astronomers

Amateur  
 astronomers  
 just get better  
 looking . . .



Volume 19 Number 6

nightwatch

June 1999

## President's Message

The season of astronomical delights is upon us. The heavens are strewn with stars commingling with the diaphanous Vail of the Milky Way. As always, your hard working president is beating a path to the doors of celestial knowledge, mirth and merriment. Behold as I regale you all with these baubles of astronomical piety.

The public star party is being held at the First Baptist Church on Eighth Street in Upland on June 19<sup>th</sup>. Please help us make the evening a success by bringing your telescope and PVAA spirit to the event. Members are advised to be there by 7:30 to allow half an hour for set up before the public arrives. Please call your president or call the hot line for details. At the general meeting I will update the Palomar trip status with ( hopefully ) dates and activities. Also, the trip to Big Bear Solar Observatory may still materialize and enter the club activity schedule later this summer. Attend and be informed.

The star party for the month will be held at Cottonwood Springs Campground in Joshua Tree National Park on 6/12/99 ( this is a Saturday ). In order to give the spirit of exploration a whirl, this location was selected based on some of our board members experience. To get there, go east on interstate 10 until you get to Cottonwood Springs Road. This turnoff is about 15 miles beyond Indio ( don't quote me on exact mileage but it should be very obvious when to turn off the interstate ) and when you get to the turn off , go north. The campground will be on the east side of the road about 6 miles in. Use your judgement on picking a campsite cause this is a public camp loaded with NORMAL PEOPLE ( keepers of lamps, fires, and weird questions ). Remember that you are in a national park and will be forced to pay for entry and camping. The time for starting the selection process for next year's

leadership of the club is now at hand. Please consider donating part of your time and skills to the club. Patrick Nicholson has donated his time and creativity to the club for many years, serving as secretary of the club for at least the last half decade. The time for him to pass the office to another has unfortunately arrived. And I am very hopeful that one of you reading these words will feel that this will be an opportunity to help our fellow members. Remember, we can only be as good as our members, who we draw our leadership and direction from.

Well that's the most part of what I want to say for this month's column. Come on by the general meeting and hear about Wolf-Rayet stars, what's up in the June sky for your celestial searches and listen to the ever entertaining and informative Wayne ( Mr. Galaxy ) Johnson.

*Roy Schmidt*

### A 2000 YEAR OLD PUZZLE

In the southeastern Anatolian town of Adiyaman, visitors from all over the world come to visit a burial site 2000 years

### PVAA Events Calendar

Month	Star Party	General Meeting	Board Meeting
June	12	4	25
July	10	2	23
August	14	27	6
September	11	24	3

after it was constructed. The site is located at the summit of Mt Nemrut in southeastern Turkey at an elevation of 4000ft. The remains of King Antiochos 1, who was a member of the Kommagene dynasty that ruled eastern Anatolia nearly 150 years (80 BC to 72 AD), still lie there untouched.

King Antiochos's father Mithradates was a descendant of Persian king 1.Darius, and his mother Laodike was a relative of Alexander the Great. These two rival kingdoms had engaged in a deadly struggle to control the known world approximately 2300 years ago. Antiochos's body was buried in a pyramid formed from stones the size of a fist. The tumulus, is a pile 50 meters high and 150 meters wide. A courtyard carved into the rock formation on the mountain surrounds this tumulus on three sides. The courtyard houses several statues of gods, goddesses and both Macedonian and Persian ancestors. His dual cultural identity has made him to bring both Persian and Hellenistic gods and goddesses together in front of his tumulus.

In the center of the god figures there is an unusual stone carving: a lion. (See Image of Lion) Its body is decorated with nineteen stars and there is a crescent moon on the breast. From the three larger stars on the lion's back, sixteen rays emerge as opposed to the smaller stars, which have only eight rays each. These three larger stars are identified in writing as Jupiter, Mercury, and Mars. What we see here is a picture of the world's oldest horoscope.

It was originally believed that the horoscope referred to Antiochos's birth date and astronomer Paul Lehmann, announced that July 17, 98BC was the date when these planets were seen in this constellation. The only problem was the position of the Moon. Since it is facing downward the date must be early summer. He simply preferred to ignore this "detail" because rest of the planetary positions satisfied him.

On the other hand, on one of the carvings the birth date of the king was recorded as 16 of Audnaios. When we convert the Macedonian calendar to current Gregorian, this date corresponds to either December or January. In order to get rid of the 7 months difference, Puchstein concluded that this horoscope must show another important period king Antiochos's life: the date his mother became pregnant. So he derived a challenging conclusion: king Antiochos must have been born as a 7 months old, premature baby.

Actually for one moment let's forget that we are 20 century people and try to think as a Macedonian: If we believe horoscopes and supernatural forces is it wise to put our personal horoscope in such an open place? If we can learn about our future by reading the horoscope, our enemies can do that too! So it is a great risk to display our horoscope that way. This is why during ancient times horoscopes were kept a secret

So we have to rethink what the real date of this horoscope might be.

Archaeologist Otto Neugebauer and astronomer von Hoesen carried out a new study to predict planetary positions. Their calculations showed, 16 of July 98BC. In that year, from the beginning of June, Mercury, Mars and Jupiter approached Regulus and finally on 7of July the Moon was also seen on the constellation. The astrologers of the Kommagenaen king must have been watching this conjunction on the western horizon with great enthusiasm, because Regulus was known as the king star and one by one bright celestial bodies approached Regulus to pay their respects. This was the most sacred moment for him to be the king. They interpreted the situation as a celestial signal to honor Antiochos's accession to the throne. The Roman general Pompeios who was conquering eastern Anatolia in the name of Emperor Vespasian had appointed Antiochos to the throne exactly at this date. Lets check the sky for the date, 7 July 98 BC:

By erecting this lion figure the king wanted to show future generations that the gods had planned his appointment to the throne and the date was emphasized with a spectacular show. (See Sky Map for July 7, 98 BC). German archeologist Doerner believes that this horoscope is the basic horoscope of the monument. He says Antiochos never saw Pompeios as his

..PVAA 24 HR. Hotline.  
Get the latest news on the star party, club meetings, special events and astronomy happenings.call 909/985-1684  
Visit or website at:  
<http://www.cyberg8t.com/patrick/PVAA.htm>

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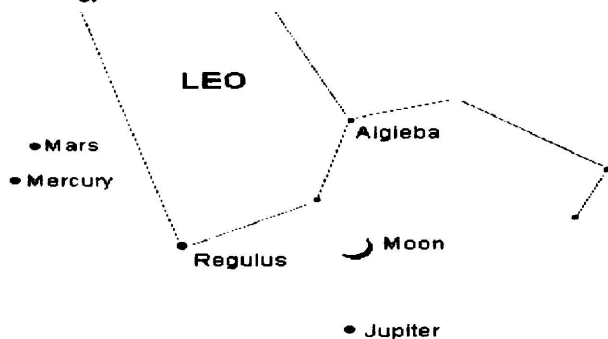
equal. He, Antiochos, was forced to make an agreement, which brought him no honor. In no part of his kingdom is there another sign of it. So there was no reason for him to display the horoscope to such a central place between the gods.

According to Doerner, Regulus represents the King Antiochos and the Moon represents his kingdom. Antiochos is at the center of the mighty lion and the planets. Since this figure is between other god figures Doerner believes that this horoscope shows the date when Antiochos founded this monument and declared himself a god.

This year hundreds of people will crowd Mt Nemrut to watch the last solar eclipse of the millenium. They will see this beautiful lion carved on the limestone, that either represents the king's accession to the throne or his rise to a new status: a god.

For those interested in pursuing the archeological findings in detail, more information on Mt Nemrut can be found on the following sites:

[http://www.vicnet.net.au/~focus/civcty/nemru\\_00.htm](http://www.vicnet.net.au/~focus/civcty/nemru_00.htm) <http://www.umay.com.tr/Turkey/bagdev/turkiy/heritage/nemrut/nem1.html> <http://www.learningsites.com/NemrudDagi/nemdagi.htm> <http://www.itu.edu.tr/ISTANBUL/PLACES/archeology.html>



*Alper Ates*

## May Star Party

High winds hampered efforts to observe the sky Saturday, May 15-16. The wind was not the strongest I have seen at Yesterday Ranch, but it was too windy to set up the Star Splitter.

I did my observing through 20 X 80 binoculars and Joe Hillberg's home made 10 inch Dobsonian. PVAA members, Lee Collins and John Jacobs were also there along with Tom Desy. John and Tom were studying Venus and Mars with John's 10 inch Coulter. Joe, Lee and I searched for the 16 hour old Moon right after sunset, but failed to find it in the thin clouds of the western sky. After dark we looked at some of the brighter galaxies through the binoculars. Binoculars give a different perspective to observing familiar objects.

At about 10:30 PM John, Tom and I gave up hope that the wind would calm down, and headed home. Joe and Lee stayed all night. Joe had some shopping to do at the outlet stores near Barstow in the morning.

The June 12-12 star party is at Cottonwood Springs Campground in Joshua Tree National Park. This site has a very dark sky (nearly as dark as Death Valley). It may be hot during the day, but should be comfortable at night. There is an 8 dollar fee per campsite and a 5 dollar fee per vehicle to enter the park. Seniors with a Golden Age Passport get in free and camping is half price. One can save a little money by sharing a campsite with someone else. The campground shouldn't be very crowded this time of the year.

To get to Cottonwood Springs, take I-10 to Joshua Tree National Park exit 29 miles east of Indio. I hope to see many of you there.

*Ron Hoekwater*

## Mars at Opposition

As Mars approached opposition it seemed a good time to read *Lowell and Mars* by William Graves Hoyt. Percival Lowell was a dedicated Mars observer and did more to spark interest in and popularize the red planet than any other individual. My curiosity was aroused and now is the opportunity to satisfy it.

Mars reaches opposition every 26 months. This opposition occurred April 24 and Mars was at it's closest to Earth May 1-2. Favorable observing will continue through June.

I observe Mars with a 22 inch f4.5 Dobsonian telescope stopped down to f11. The eyepieces I use most often are 12mm and 9mm Naglers which yield 210X and 279X, respectively. I like the Nagler's wide field, but if your telescope tracks, you may prefer Plossels or orthoscopes. The color filter I use most is yellow #8. It brings out more detail, but still produces a natural looking image. Other color filters to

try are #23A light red, #58 green, and #21 orange.

Drawing Mars can help one to see more detail. It also aids memory and allows one to make comparisons. I place the planet at one edge of the field and let it slowly drift across. Usually, many minutes of observing are required for a few second of crystal clear seeing. Fortunately, Mars is bright enough to observe from your back yard.

Articles about observing Mars appear in the April 99 issues of both *Astronomy* and *Sky & Telescope*. *Sky & Telescope* includes a map of Mars with a table to determine which side of the planet is facing Earth.

Finally, I apologize. This article was to appear in last month's newsletter, but I didn't finish it in time. Don't let that stop you from using the time remaining to observe this fascinating planet.

*Ron Hoekwater*

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## NASSAU TELESCOPE ON LINE

An Earth-bound robotic telescope will give the whole world access to the stars and galaxies. Amateur and professional astronomers can access the 0.9-meter telescope at the Nassau Astronomical Station at Case Western Reserve University, Cleveland, by filing a viewing request at <http://astrwww.astr.cwru.edu/Nassau/nassau.html>.

Images can be viewed two ways. The primary viewing mode will use images taken with the telescope's main observing instrumentation. The second viewing mode lets the users see where the telescope is pointed as per the main observation request. The telescope will operate only on nights with good weather.

The telescope setup consists of the telescope, instrumentation (camera and finder-guider), weather station, weather camera, and power controls for the dome. Each has its own software that feeds the master control program. A computer-based scheduler at the university's Department of Astronomy will handle requests and return completed images and information to users.

A camera linked to the telescope, is aimed at Polaris (the North Star) in the direction of Lake Erie. If an all clear signal is generated from the monitor for 30 minutes straight, the master controller will open the dome. The weather will then be monitored every 2 minutes. The dome will close only in the event of extreme weather conditions such as high humidity, rain, snow,

extreme cold, and winds of 40 mph which could damage the telescopes mirrors.

Once all requested information is gathered, the telescope will send a message to the user that the observation is complete, with a link to a Web-accessible file of the images.

Later this year, users will also have access to a robotic spectrograph to obtain information such as the composition of stars, how fast a galaxy or star is moving, and the temperature of the viewed objects.

During the next year, area teachers will be using the telescope as part of the Lawrence Berkeley National Laboratory's Hands-On Universe science program, which teaches middle and high school students math and physics through astronomy.

**Machine Design, May 1999**

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## TRIVIA

If the Sun was the size of a basketball....  
....the Earth would be the size of an apple seed, located 100 feet away, and Pluto would be the size of a grain of sand, located a mile away.

Mars is the ONLY planet whose SURFACE we can see from earth ( with telescopes ).

If you stepped out onto the Martian surface without a spacesuit, your blood would boil up inside your veins.

The northern polar cap on Mars is made of water ice. The southern cap is made of frozen carbon dioxide. Scientists don't know why they are different.

### Loss of a Friend of PVAA

Deborah Dorsett was not a member of PVAA, but did occasionally attend our General Meetings and Star Parties. She has frequently supported our public events. Deborah was an environmental botanist with Jones and Stokes Associates, Inc., in Irvine. Her association with PVAA came to an end on April 29, when Deborah died in an automobile accident in Arizona, where she was working. She will be missed as a friend and supporter of PVAA.