



# The Observer

SAN BERNARDINO VALLEY AMATEUR ASTRONOMERS

Member of The Astronomical League

<http://sbvaa.org/>



Volume #61, Issue 3

Since 1958

March 2019

## Meeting:

March 23, 2019

## Location:

**First Christian Church**  
**2102 E. Foothill Dr.**  
**San Bernardino, CA**

**7:00 p.m.**

**Pre-meeting Dinner,**  
**5:00 to 6:30 p.m.,**

***Jenny's Family***  
***Resturant***  
***7750 Palm Ave.***  
***Highland, CA***

After the meeting telescopes will be set up for viewing and members will be available to answer questions. Bring your telescope to observe with us.

*No telescope is too humble,  
and beginners are always  
made welcome!*

## Program

# The Hubble Ultra Deep Field

Our program for March returns us to looking at HST images and gaining an understanding of what they mean. Each lecture in this series has taken us farther and farther into deep space. The last time we looked at Abell 2218 which acts as a massive gravitational lens. This time we will take a giant step and learn what we can from the HST's ultra-deep field images.



## SBVAA Officers

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## Calendar of Upcoming Events

Mar 14, Outreach, Wildwood School,  
Yucaipa

Mar 23, Club Meeting

Apr 6, Star Party/Outreach, White Water

Apr 20, Club Meeting

May 4, Star Party/Outreach, Oak Glen

May 11m Star Party/Outreach, Pioneer  
Town

May 18, Club Meeting

June 1, Star Party, Pioneer Town

## Could it happen again?

Frederick William Herschel, known simply as William Herschel, was a German-born British astronomer. On 13 March 1781, while making observations, he made note of a new object in the constellation of Gemini. This would, after several weeks of verification and consultation with other astronomers, be confirmed to be a new planet. Herschel, who was later knighted for his historic discovery, named the planet Georgium Sidus, or the “Georgian Planet,” in honor of King George III of England, who was the ruler at the time. However, German astronomer Johann Bode proposed the name “Uranus” for the celestial body in order to conform to the classical mythology-derived names of other known planets. Bode’s name won out. (Uranus was the ancient Greek deity of the heavens and was a predecessor of the Olympian gods. Alas, this noble name of Greek mythology has become the basis for ribald jokes in our day.

Will another planet be discovered? Evidence is mounting that something with a great gravitational influence is causing clustering of Kuiper belt objects and is perturbing the orbits of the outer gas giants. It is thought that it has a likely orbital semi-major axis of approximately 400 astronomical units (AU). One AU = approximately 92.9 million miles. The basis for the theory of “planet nine” consists of five points which are:

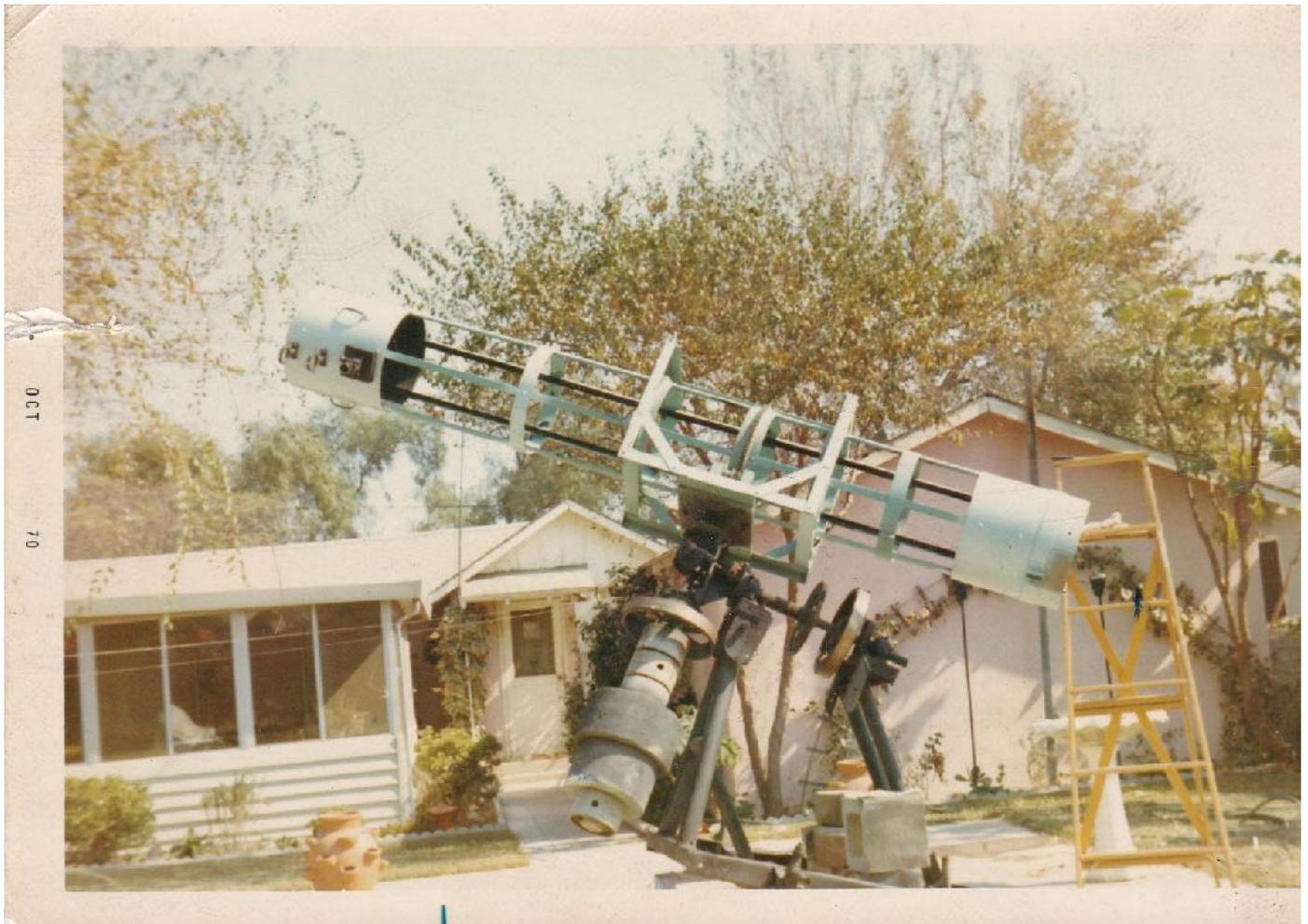
1. Six known objects in the Kuiper Belt, all of which have elliptical orbits that point in the same direction.
2. The orbits of the objects are all tilted the same way — thirty degrees downward.

3. Computer simulations that show there are more objects tilted with respect to the solar plane.
4. Planet Nine could be responsible for the tilt of the planets in our solar system; the plane of the planet's orbit is tilted about six degrees compared to the Sun's equator.
5. Some objects from the Kuiper belt orbit in the opposite direction from everything else in the solar system.

It may take centuries of research before we can be sure. Meanwhile, the adventure continues!

## Another Great Telescope For Sale

8'10" Open Tube Newtonian Reflector, 12 1/2 inch pyrex mirror, 100 " focal length. Equatorial mount. No motor and not computerized. Home built in 1948. Mirror redone and inspected by Infinite Optics in 2017, but unused and stored indoors in box. Asking \$400.00. If interested contact Dan 1-760-240-8256 in Apple Valley.





## **F4.5 Classic Obsession, \$2,950.00**

Ready to use and in very good condition. I am the original owner and bought it in August of 2005. Included are the installed Argo Navis digital setting circles, a Telrad, nylon light shroud, Astro systems heavy vinyl cover for the Upper Tube assembly, a total scope Astro Systems Cloth Cover with a drawstring at the bottom, a homemade truss tube case and battery box w/motorcycle battery, all instruction manuals and info sheets, wheel barrel handles and counter weight balancing tubes with lead shot mounted at the bottom of the mirror box. The mirror was made by Omni Torus and it doesn't disappoint. The DSC help you see more stuff and provide for a lot of fun. **Phone Steve Peeters at (909) 557-3112**

Add-On Options for you to consider:

A great 20 x 80mm optical finder by Stellarvue with a diagonal and mounting rings. You can see the dovetail for it on the UTA next to the Telrad. I loved this finder in addition to the DSC because I do some star hopping and enjoyed splendid views of large objects like the Pleiades. I bought this new about 7 years ago, my total cost was \$373.00. Yours for \$200.00.

An Astrocrumb Filter Slide made especially for this scope by Roger Green. It holds three filters at a time and comes with a second slide for a total of six filter options. It has one blank spot so you just slide back and forth from no filter to whatever filter you want! It comes with a wooden case to boot. My cost was \$244.00. Yours for \$125.00.

I've got a few other goodies that are included but not worth mentioning, so you'll be surprised.