



# The Observer

SAN BERNARDINO VALLEY AMATEUR ASTRONOMERS

Member of The Astronomical League

<http://sbvaa.org/>



Volume #60, Issue 12

Since 1958

December, 2018

## Meeting:

December 1, 2018

## Location:

Shakey's Pizza  
836 W. Colton Ave.  
Redlands, CA

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## Program

# Annual Holiday Gathering Members & Families

**Saturday, December 1st**

**between 3 and 5 pm.**

Shakey's Pizza  
836 W. Colton Ave.  
Redlands, CA 92373  
909-793-5993



**Seasons Greetings**

There will also be a **Gift exchange**. For those wishing to participate please bring a nice wrapped gift..... 'value not to exceed \$15.00, unless of course you're feeling some extra holiday spirit in which case the sky's the limit.

## SBVAA Officers

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Secretary - Educational Outreach: Chris Clarke  
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## Calendar of Upcoming Events

*Jan 5, Star Party, Pioneer Town*

*Jan 19, Club Meeting*

*Jan 20, Outreach, County Museum*

*Feb 2, Star Party? Location TBD*

*Feb 16, Club Meeting*

*Mar 2, Star Party, Oak Glen*

*Mar 23, Club Meeting*

*Apr 6, Outreach, White Water*

*May 4, Outreach, Oak Glen*

## The Lowly Prism Star Diagonal

By Jim Sommer



One of the first things I did when I bought my Celestron C6SE was to box up the stock “cheapo” prism and replace it with a high quality dielectric mirror diagonal. Like many of us, I had heard and read that the prism diagonals that come with many small, inexpensive refractors and with a number of SCTs were just “trash” and should be replaced as soon as possible. Just last week, while reading about diagonals (mirror vs. prism), I found that when actually tested the lowly, inexpensive prism diagonal tested quite well — for its

intended purpose, that being, in scopes f/7 and slower, and specifically for planetary viewing. The problem, it seems, is that while the glass of the prism is okay the alignment within the body is not. The article suggested to place a piece of paper or an end cap over the nose piece (center marked) and shine a laser collimator through the prism to see where the dot fell. I used an end cap. When I shined my laser through the red dot fell near the outside edge at about the 8:00 position. Again taking a clue from the article, I disassembled the diagonal to see if I could re-shim it. Indeed I could! There is a bit of “fuss factor” in doing this but I was able to successfully move the red dot very close to the center. Last night at an outreach I tried it out on the Moon, Mars and Saturn. Low and behold the view was better than that

using the much vaunted dielectric mirror diagonal. What I saw seemed to confirm what the article said; prisms work better in long focal length scopes on planets. DSOs, however, still are better viewed using a quality mirror diagonal regardless of scope design.

As with most things in your optical train, you have to find what works best for you. A bit of research and experimentation can sometimes yield a surprising result. So if you have a long focal length scope and an old, neglected prism diagonal laying around unused, you might benefit from a bit of tinkering. The re-shimming I did was a very simple procedure. I was able to use the materials already in the unit. My unit was the basic Celestron 1 1/4" prism (not Amici). Celestron uses a simple thin metal leaf spring as a shim. Simple but effective and easy to move around to center the light path. My only experience is with the Celestron unit. Those of other manufacturers may vary.

It's really nice to be able to salvage what was thought a piece of "junk" and put it to good use!

## Another Successful Outreach

Wednesday, November 14, saw club members Tom, Bob, Gerald and your editor at Lincoln School in Colton. Lincoln has always been a good venue for outreaches because of the good behavior of the students. A near-first quarter Moon, Mars and Saturn helped provide the entertainment. There were four scopes there:



A 6" and 8" SCT, a looooong refractor and a pair of large binoculars. The students' parents, grandparents, younger and older siblings all had a great time as measured by the "oohs" and "aahs" we heard throughout the event.

Through outreaches we are able to affect the future in a positive way — something we need more of these days.

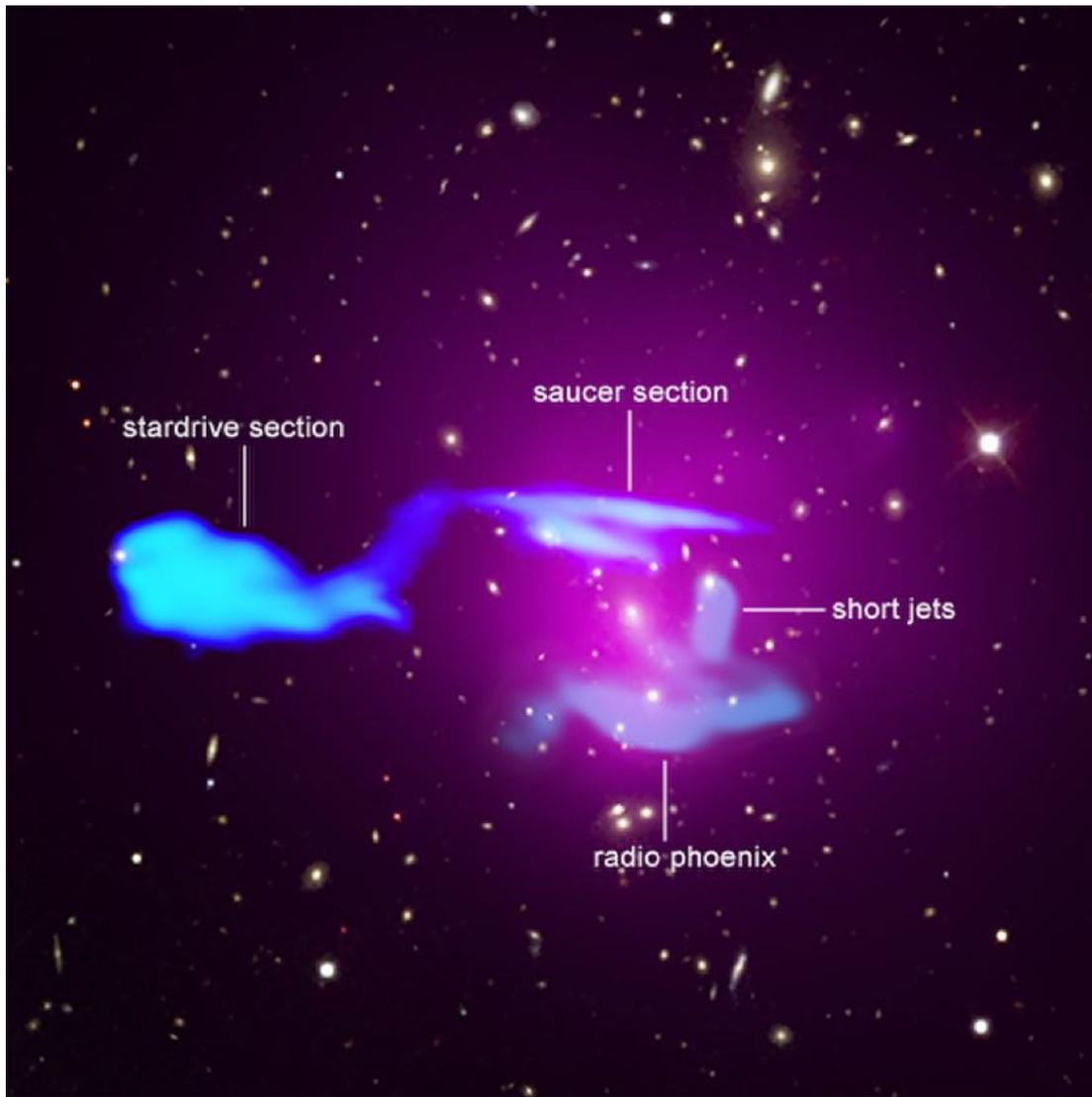
## 2019 Membership Dues



January is just around the corner and that means it's time to renew your club membership. Dues are still only \$30 per person or \$30 for an entire family.

Please give your check to Fidel at the January meeting. (He did say, though, that he will accept cash.)





### Is that the USS Enterprise blurring as it makes the jump to warp speed?

Well, no. But a new photo of the galaxy cluster Abell 1033 certainly does call the famous "[Star Trek](#)" starship to mind.

The image, which was released Thursday (Nov. 15), is a composite that combines observations in optical light as well as X-ray and radio wavelengths, the latter two of which are represented by the colors purple and blue, respectively.

The optical data was gathered by the Sloan Digital Sky Survey, the X-ray by NASA's [Chandra X-ray Observatory](#) and the radio by the Low-Frequency Array network in the Netherlands.

Abell 1033 lies about 1.6 billion light-years from Earth. The object is actually two galaxy clusters coming together in a dramatic, hugely energetic smashup that's generating shock waves and other forms of turbulence in this patch of space-time.

For more information go to [space.com](#). (Credit: X-ray: NASA/CXC/Leiden Univ./F. de Gasperin et al; Optical: SDSS; Radio: LOFAR/ASTRON, NCRA/TIFR/GMRT)