

# The Observer

SAN BERNARDINO VALLEY AMATEUR ASTRONOMERS

Member of The Astronomical League

<http://sbvaa.org/>



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Since 1958

December, 2016

## Meeting:

December 3, 2016

## Location:

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

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## Program

## Annual Holiday Party

**Saturday, December 3th**

**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.'

## SBVAA Officers

President: Jamie “Rue” Countryman  
951-807-4344

Treasurer: Fidel Hernandez 909-864-0615

Secretary - Educational Outreach: Chris Clarke  
909-384-8539 Work  
909-754-3894 Home

Star Party Coordinator: Tom Lawson  
909-8828198

SBVAA Webmaster: Gerald Rezes 909-810-7217

Newsletter Editor: Jim Sommer 909-792-3587

Assoc. Editor: Megan Huynh (cel) 818-572-3554

## Calendar of Upcoming Events

Dec. 8, Outreach, Woodrow Wilson School

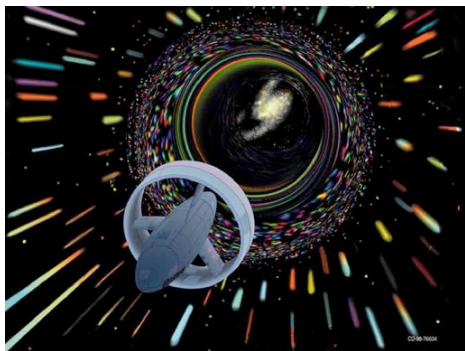
Jan. 28, Outreach, Whitewater

Feb. 2, Outreach, Alice Birney School, Colton

*Star parties, outreaches and other events for 2017, TBD*

## It's Not Dilithium Power but Mr. Scott Would Approve

An experimental propulsion system that seems to violate the laws of physics may actually work, a new study suggests. A controversial and puzzling engine design known as the EmDrive generated small amounts of thrust in a lab test, NASA researchers reported in the study, which has yet to be published or peer-reviewed but was recently leaked online.



The EmDrive, which was developed by British researcher Roger Shawyer more than a decade ago, generates thrust by bouncing microwaves around inside a cone-shaped chamber. According to

Newton's third law of motion — for every action, there is an equal and opposite reaction — this shouldn't work, because there's no exhaust expelled out of the EmDrive system. (Think about rockets, which get their oomph by blasting superheated gases and other material out of nozzles at high speeds.)

the new result is the latest in a series of apparent successes for EmDrive technology. Shawyer reported generating thrust with his version, as did Chinese researchers who tested their own variant in 2012. And White and his colleagues reported a positive result back in 2013 as well.

So this seemingly impossible engine may actually work — perhaps by somehow harnessing the energy of subatomic particles that are constantly popping into and out of existence, White and his team have speculated. (Shawyer has his own ideas about what's happening inside the EmDrive, and he doesn't think Newton's Third Law is being violated at all. Check out his explanation here: <http://emdrive.com/faq.html>.)

*(Story credit: Mike Wall, Space.com)*

## 2017 Calendars are Here!

Fidel has the new S&T calendars. He says they are going fast so if you want one, see Fidel ASAP.



## Pioneer Town Star Party Sept 3, 2016





# Outreach, Terrace View School

Grand Terrace, Nov. 10, 2016

*(Photo credit: Robin Hennen)*

