



# The Observer

SAN BERNARDINO VALLEY AMATEUR ASTRONOMERS

Member of The Astronomical League

<http://sbvaa.org/>



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Since 1958

February, 2017

## Meeting:

February 11, 2017

### 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.,**

**Pepper Steak**  
**Restaurant**  
**26589 Highland**  
**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

### Invisible Universe Revealed: Hubble's 25th Anniversary

For over 25 years now, the Hubble Space Telescope has expanded the boundaries of human knowledge. Using it to peer deep into space and back in cosmic time with unprecedented clarity, astronomers learned that galaxies formed from smaller patches of stuff in the early universe and that massive galaxies typically harbor supermassive black holes at their centers.

While the scientific achievements of the HST are without question, the space telescope's global popularity surely arises, from the spectacular images it has produced. Photos of glittering galaxies, softly glowing nebulae, and the wreckage of shattered stars have awed millions for over a quarter century. In this 2015 documentary cosmic scenes assembled by Zoltan Levay and his colleagues at the Space Telescope Science Institute will remind us once again of the awesome majesty of the universe.



## 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

Feb 2, Outreach, Alice Birney School

Feb 7, Outreach, Franklin School, Redlands

Feb 11, Club Meeting

Feb 25, Star Party, Pioneer Town

Mar 7, Outreach, Wilson School, Colton

Mar 11, Club Meeting

March 25, Star Party, Oak Glen

## Club Dues are Due

Our esteemed treasurer wants you to know that club dues are due in January. Still just \$30. Make check out to SBVAA.

Don't make him send his collector to find you!



## Club Meeting Dates in 2017



February 11  
March 11  
April 8  
May 13  
June 10  
July 8 (Summer Social at Sizzler)  
August 5 (Club Barbecue)  
September 9  
October 7  
November 4  
December 2, Holiday Party at  
Shakey's, Redlands

**SBVAA Calendar of Scheduled Events  
2017**

February 2, Outreach, Alice Birney School

February 7, Outreach, Franklin School,  
Redlands

February 25, Star Party, Pioneer Town

March 7, Outreach, Wilson School, Colton

March 25, Star Party, Oak Glen

April 4, Outreach, Dominguez School

April 6, Outreach, Mentone School

April 29, Star Party, Pioneer Town

May 7, Outreach, Pioneer Town

May 20, Outreach, Oak Glen

**June 23 - 25, GRANDVIEW Star Party**



July 8, Summer Social at the Sizzler

July 22, Star Party, Oak Glen

August 5, Annual Club BBQ

September 16, Outreach, Oak Glen

**September 22 - 24, GRANDVIEW Star  
Party**

October 28, Outreach, Pioneer Town

November 18, Star Party, Pioneer Town



As promised, the Calendar of Scheduled Events has been updated. Wildlands Conservancy has confirmed with Chris & Rue.

There are a lot of outreaches! Our club is developing a reputation for quality public programs and requests are at an all time high.

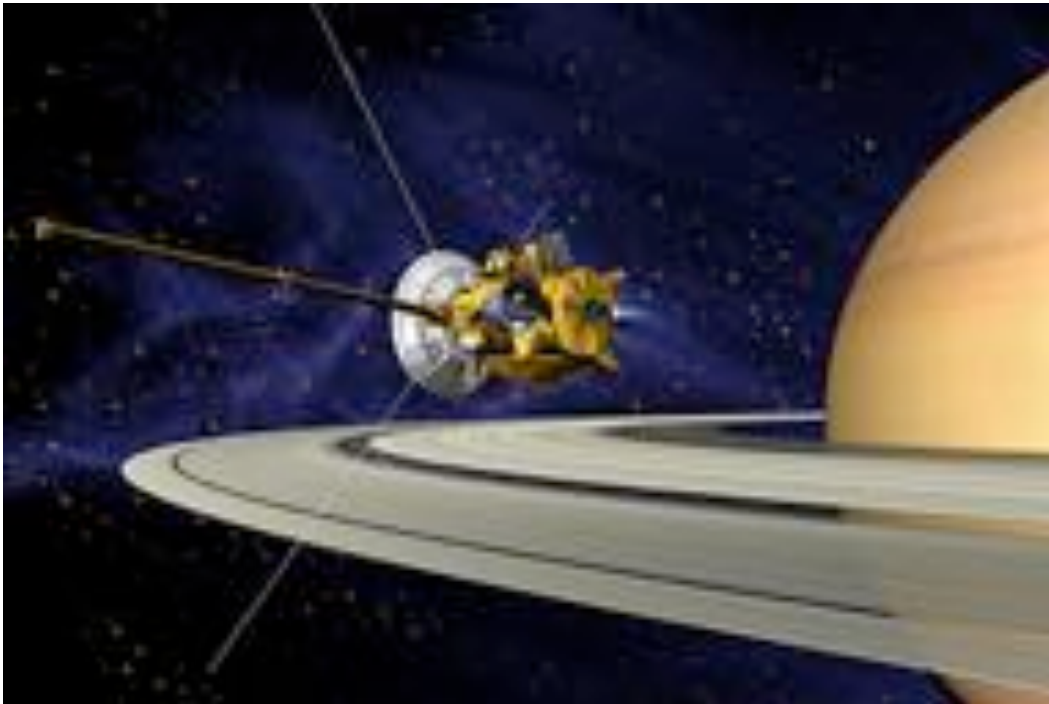
Be proud my fellow members.

# Cassini

## The Mission, Not the Man

Orbiting the ringed planet Saturn and its numerous moons, the Cassini spacecraft has been and continues to be a keystone of exploration of the Saturnian system and the properties of gaseous planets in our solar system.

A joint endeavor of NASA, the European Space Agency, or ESA, and the Italian Space Agency, Cassini launched in 1997 along with ESA's Huygens probe. The spacecraft contributed to studies of Jupiter for six months in 2000 before reaching its destination, Saturn, in 2004 and starting a string of flybys of Saturn's moons. That same year it released the Huygens probe on Saturn's moon Titan to conduct a study of the moon's atmosphere and surface composition. Now in its second extended mission, which goes through 2017, Cassini will make the first observations of a complete seasonal period for Saturn and its moons.



However, due to the spacecraft's dwindling fuel resources for further orbital corrections, it is currently planned to be destroyed by diving into the planet's atmosphere in September 2017. This method of disposal was chosen to avoid potential biological contamination of Saturn's moons.

As of November 30, 2016, *Cassini* will enter the final phase of the project. *Cassini* will dive through the outer ring of Saturn 20 times, once every seven days. The spacecraft will enter areas that have been untouched up until this point, getting the closest look ever at Saturn's outer rings. The first pass of the rings took place on December 4, 2016.<sup>[6]</sup>