



Sunrise Civinotes

ISSUED MONTHLY BY THE



SUNRISE CIVITAN CLUB OF SPARTANBURG CHARTERED JUNE 11, 1965

Meets Each Thursday, 7:00 AM Mary Black Hospital Spartanburg, SC

OFFICERS

2016 ~ 2017

DIRECTORS

President	Robert Coronado	Pat Davis.....	2015-17
President Elect.....	Cathy Terrell	Bill Hunsinger	2015-17
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	...Dick Sprang		



2016 - 2017 Sunrise Civitan Committees

<u>Membership /Retention</u> Robert Coronado* Dick Sprang Sylvia Stahley Tom Murray	<u>Fund Raising</u> Bill Hunsinger (Fruitcake) Jane Clemmer (Golf) Pat Davis (Golf) Paul Fleischer Bob Reynolds (CandyBox) Everette Lineberger (Pancake Day)	<u>Community Service Projects</u> Bob Reynolds* Gail Brown (The Haven) Paul Fleischer (Adopt A Highway)	<u>Nominating</u> Ken Norton* Doug McKenzie Jane Clemmer
<u>Fellowship/Attendance</u> Dale Kibler* Larry Kibler Rose Mabry William Mabry	<u>Programs/Entertainment</u> Robert Coronado* Dick Conn Rick Sprang	<u>Publicity</u> Cathy Terrell* Robert Coronado Joan Moore	<u>Budget/Finance</u> Ken Norton* Paul Fleischer Bill Hunsinger Ralph Wessinger
<u>Awards</u> Cathy Terrell* Paul Sargent	<u>Communications</u> Ralph Wessinger* web Kathie McKenzie - Sunrise Civinotes	<u>Constitution/By-Laws</u> Ken Norton* Pat Davis Everette Lineberger Doug McKenzie	<u>Youth Service</u> Ken Norton* Jamie Gregory Kim Kotecha Bob Scherer *Committee Chairperson

Sunrise Civitan P. O. Box 632 Spartanburg, SC 29304
 Web Site "www.sunrisecivitan.com"



August Events

- August 3 Hope Remains Ranch
Bring items for The Haven - check or cash acceptable
- August 7 Board Meeting
- August 10 Paula White - Area 12 Special Olympics
- August 12 Sunrise Civitan Party - Carolina Country Club picnic area
3pm - bring toiletries for Total Ministries
- August 17 At Total Ministries - 976 S Pine St - bring toiletries
- August 24 Junie White - Mayor Spartanburg -
candidate
- August 28 Board Meeting (none on Labor Day)
- August 31 Plan Golf Tournament -
September 22, 2017



Lt Col Wallace Storey - WWII



Todd Horne -
Mayoral candidate



Paul Sargent, you'll be truly missed by all your brothers and sisters at the Sunrise Civitan Club. You earned your wings down here on earth, now fly among the other angels that have gone before you.

See back for opportunity to donate to Paul's memory

Birthdays

- 08/08 - Dick Conn
- 08/16 - Kathie McKenzie
- 08/24 - Jane Warner



Anniversaries

- 08/07 - Robin and Bill Hunsinger
- 08/15 - Lori and Dick Conn
- 08/16 - Ann and Everette Lineberger



SUNRISE CIVITAN CLUB OF SPARTANBURG

Weird Things Happen with a Total Solar Eclipse

Everyone talks about how visually stunning it is when the darkened Moon *fully* covers the face of the Sun in a total solar eclipse. And indeed, it is! But there are other unusual *truly strange* happenings that occur when the Moon passes in front of the Sun. If you aren't prepared to look for them, some of these weird phenomena are so fleeting that you can miss them. Following are descriptions of a number of those novel occurrences to be looked for on August 21st.

Long before totality (when the Moon is only covering part of the Sun's face), go to a nearby tree and look in the shade of the tree's shadow. You will see *hundreds* of crescent images of the partially covered Sun all over the ground. In fact, this is a safe way to view all the partial phases of the eclipse without harming your eyes. Where do all these many images come from? The gaps between the tree's leaves act like a pinhole camera by projecting the Sun's image on the ground. Here is a photo that was shot of such a tree shadow during a previous solar



Image credit and copyright Elisa Israel

Anywhere from closely look at may see a very

bands may be seen racing back and forth across the surfaces. These shadowy lines are caused by sunlight peeking around mountains and through valleys around the outer rim of the Moon, while turbulence in the air makes them appear to shift position. To see a video of eclipse shadow bands, go here:

60 to 90 seconds before totality or just after totality ends, any flat light-colored or white surfaces around you. You strange sight. At such times, dark lines called **shadow**

https://www.youtube.com/watch?v=f_XMnU7Ad40

In the minutes before totality, all of your surroundings will appear dimly lit in a very strange and different way from what you experience at sunrise or sunset. Everything will seem somewhat similar to what you see when you wear very dark sunglasses, but with a kind of surreal sheen that can't be described adequately.

As soon as the Moon entirely covers the Sun and causes the sky to completely blacken, the air will instantly chill – perhaps by as much as 20 degrees Fahrenheit. Animals will become confused. Bats may fly around thinking it is night. Birds may go to roost. Crickets or cicadas may begin to chirp.

If the land is flat for miles around your location or you are on a mountain top, you will be able to see the darkest part of the Moon's shadow (called the umbra) racing across the ground towards you just before totality and away from you afterwards. Here is a video of the approaching and leaving umbra as seen from an airplane:

<https://www.youtube.com/watch?v=InUONyIpdM>

An instant before the Sun's disk is completely covered by the Moon, you should experience the visually stunning **diamond ring effect**. The slight bit of Sun remaining will give the impression of a brilliant diamond with the ring being a faint glow around the darkened Moon. Some images of the diamond ring effect can be seen at this link: <https://sunstopper.wordpress.com/tag/diamond-ring-effect/>

IMPORTANT NOTE: The brief few minutes of totality is the only time it is safe to look directly at the Sun with no eye protection. If you are wearing special eclipse glasses, take them off when the Moon completely covers the Sun. But be sure to put them back on if you continue looking at the sun as soon as totality is finished.

Continued on back

It will become dark as night during totality. The stars will pop out and you will see two very bright points of light near the Sun. They are really the planets Venus and Mercury. Most people never get to see Mercury because it is usually so close to the Sun that is blotted out by the Sun's glare.

Mars and Jupiter will make an appearance. Those two planets will seem to be near the Sun, when in reality they will be much farther away on the far opposite sides of their orbits. In total, 4 of the 5 planets that don't require a telescope can be seen during the eclipse.

Sirius, the Dog Star, will show itself as the very bright star to the southwest of the Sun. In fact Sirius is the second brightest star in our sky after the Sun.

If we are lucky, there will be eruptions from the Sun that cannot be seen at any other time. These eruptions are called **prominences** and will glow a bright beautiful ruby red color. Go here to see a photo of red prominence eruptions during an eclipse: <http://county10.com/will-wildlife-be-fooled-into-bedding-down-for-the-night-during-the-eclipse/>

The bluish white glowing **corona** (outer atmosphere of the Sun) is made of charged hydrogen atoms; AKA **plasma**. During totality, the corona allows us to see the beautiful structure of the Sun's powerful magnetic field as the plasma is pulled by magnetism into graceful curving field lines. Check out this gorgeous corona photo: http://www.zam.fme.vutbr.cz/~druck/eclipse/Ecl2013g/TSE_2013wa_ed/0-info.htm As pretty as this image is, no photo can capture the almost ethereal fluorescent hue that you will see when looking directly at the corona. Also, notice that you can see red prominences in this image near the bottom of the Sun.

I hope this description of strange eclipse phenomena has piqued your interest and raised your excitement level about the upcoming total solar eclipse. Remember that the Anderson Jockey Lot will have the longest running totality period of any location along the I-85 corridor and US Highway 29. See you there!

For more information contact me (Rick Boozer) by email at topastro@singularsci.com.

<http://astromaven.blogspot.com/>

Rick Boozer, astrophysicist,
SCC



Please donate to Paul Sargent's memory. Write a check to Sunrise Civitan (tax deductible). Ken will collect them and will write one check to New Day Clubhouse (one of Paul's favorite charities) in Paul's Memory.

