



# Special Newsletter of the Everglades Astronomical Society



Naples, FL

## Solar Eclipse 2017 Edition

**Officers: President:** Denise Sabatini ([dsabatini2@embarqmail.com](mailto:dsabatini2@embarqmail.com)); **VP/Secretary:**

**Treasurer:** Victor Farris ([vfarris01@gmail.com](mailto:vfarris01@gmail.com)); **Newsletter Editor:** Jackie Richards ([jmrichards2005@yahoo.com](mailto:jmrichards2005@yahoo.com))

**Mailing Address:** P. O. Box 1451, Marco Island, FL 34146

**Fak Coordinator** & information on viewing: Mike Usher ([usher34105@earthlink.net](mailto:usher34105@earthlink.net))

**Home Page:** <http://naples.net/~nfn19284/eas/> **Webmaster:** Mike Usher ([usher34105@earthlink.net](mailto:usher34105@earthlink.net))

## SOLAR ECLIPSE

## AUGUST 21, 2017



First Contact.  
Photo by Armando Merlo



Second Contact.  
Photo by Bob Francis



Third Contact  
Photo by Bob Francis



Fourth Contact.  
Photo by Bob Gurnitz



Photo of Totality by Armando Merlo



Photo of Baily's Beads by Bob Gurnitz.



Photo of the diamond ring effect taken by Rick Piper.

# Eclipse Experiences by Club Members

## Jackie Richards' Eclipse Experience

I feel privileged to have spent the 2017 solar eclipse with great friends/EAS Members, Rick and Lori Piper, Mike Usher and his lovely family, Chuck Pavlick and Bob Francis in Greenville, SC. Mike Usher picked out the town, the hotel, and the eclipse viewing location, Butler Springs Park. We set up scopes to view the eclipse and to show others at the park. Mike reserved a pavilion at the park with shelter from the sun, electricity and bathrooms. There were only about 100 people and we were thankful for a nice, quiet location. We faced no traffic jams. We were all prepared to take photos and what amazing photos we did get.

When the sun was disappearing from the sky and in between photographing the different phases, we encountered the eclipse through little pinholes between the leaves in the tree above us which formed little crescent suns all over the ground as shown in the below photo.



Photo by Jackie Richards of the eclipse shining through pinholes in between the leaves of the tree above us.

Rick Piper had this idea to spell out "EAS" (our club acronym) with little pinholes punched into the side of a cardboard box to show "EAS" in eclipses as seen in the photo on this page. Awesome!

Then as totality approached, we watched and continued photographing...and then the final moment: TOTALITY!! The crowd cheered and clapped. Everyone was in amazement. We continued watching and photographing for two minutes. Then, the diamond ring effect appeared, and I was frozen, paralyzed, and nothing else in the world was apparent at that time. The only way I can describe it is that it looked to me

like a glossy, liquidy burst of light that shined in the sky for many seconds. Then it was over. I realized that from the moment the diamond ring effect began, I forgot to continue taking photos because I was so mesmerized. Bob Francis also had a similar experience...but different. He kept changing his ISO between shots but forgot to take photos. Chuck Pavlick got awesome photos (including the photo of first contact with sun spots shown on page 4) but ran out of memory on his card and missed the diamond ring effect. But not Rick Piper. He got several great shots of the diamond ring effect (and others) as shown in the photo on page one.

This newsletter consists of photos and experiences by various club members, so please read on and enjoy.



Photo by Jackie Richards of EAS taken in a box with pinholes punched into the side spelling out EAS. So cool!

## Rick Piper's Eclipse Experience

Monday morning, August 21<sup>st</sup>, we woke up in Greenville, SC. A few EAS members were meeting at Butler Springs Park. Thanks to some early research by Mike Usher, we found the park to be a great place to observe. Bathrooms were 30 feet away. Everyone chipped in for the rental of a gazebo, picnic tables, etc.

Many photos were taken as the eclipse progressed. Things turned often at about 90% coverage. The remaining sunlight projected an unreal copper color on everything. Oohs and aahs came from about 40 or more people standing in our area. The crowd grew as people gathered to look through our scopes, and cheers broke out as the event went total. This escalated as the diamond ring effect popped. I've seen eclipses before but a total eclipse was so incredible. I can only describe it as the most incredible astronomical event I have ever witnessed.

Thanks to a little coaching from Chuck Pavlick, I am very pleased with the pictures I took. I used a Canon EOS Rebel T5i. I used a 600 mm Tamron lens pulled back to 150 mm at f/5.6. I started my shutter speed at 1/4000 after experimenting just before the eclipse. This worked well from first contact to about half coverage. Then I moved to 1/3200; then to 1/2500; then 1/1600 at approximately 90% coverage; then 1/1250. As the eclipse neared totality, I decreased the shutter speed quickly almost with every shot from 1/1000 all the way to 1/15 at totality. Then during totality, I shot at 1/15, 1/6, 1/4, 0/3, 1/5, 1/15, 1/30, 1/60, 1/125, 1/250, 1/400, 1/500, 1/640, all giving a different perspective of the corona. When the diamond ring popped out, I got shots at 1/500 and 1/640. All shots were at 100 ISO and as an amateur, I think they are great.



Photo by Lori Piper of people getting ready for totality in Greenville, SC.

## Bart Thomas' Eclipse Experience

I was with my wife (Colleen), daughter (Karianna), and granddaughter (Kate) at Wild Dunes Resort in Isle of Palm, SC, where I gave a presentation on the eclipse. The weather was mostly cloudy with partial sun. Fortunate for us, an opening allowed us to see the last 10% of the sun eclipsed, totality, and the diamond ring. After that, it was partly cloudy with an on-and-off view of the latter part of the eclipse.



Photo of lights coming on during totality taken by Bart Thomas' daughter, Karianna.



Photo of Bart Thomas giving a presentation on the eclipse at Wild Dunes Resort in Isle of Palm, SC.

## Lou Tancredi's Eclipse Experience

We had an absolutely fantastic time observing the eclipse from Rexburg, Idaho. Weather was excellent, not a cloud in the sky. The town had a smaller crowd than they expected so we had plenty of room to set up and still be near many other observers.

It was exciting for me since it was the first time observing a total eclipse and first time photographing. I made my own solar filter for the Canon camera as well as solar "glasses" for my family members.

The unexpected event for me was driven by Murphy's Law. I had been shooting prior to totality and was anxious to see totality. As it got close, I remembered to remove the solar filter from camera. At totality, as I started to look thru the camera to make sure all was in view, I could not see anything. WHAT?!!...I looked up and the eclipse was eclipsed by a tree!!! AGHHHHH!!! ....A Double Eclipse!!!! I quickly moved the tripod, reset camera and started shooting again while observing the totality as well. All was over in a flash.

Rest of the trip was wonderful with my family, Yellowstone and Teton National Parks plus Jackson, Wyoming.

Looking forward to the next eclipse.



Photo of Lou Tancredi (right) and his family in Rexburg, Idaho.

## Mike Usher's Eclipse Experience

I was in Greenville with most of my family plus the EAS members Jackie, Rick, Chuck and Bob. I took no photos, leaving that to the EAS experts. I was prepared for all of the eclipse phenomena except the dimming of the light. I knew of course the light would grow dimmer with time, but I never thought about it much. The effect turned out to be really strange, but I couldn't quite place the reason. It turned out to be that the color of the light was wrong. When it gets dark normally the light has a reddish tinge, or a blue tinge if the sun is hidden behind a cloud. During the partial eclipse the light was the normal color, just rapidly dimming. It felt exactly as if I had a neutral color pair of sunglasses on - a pair that kept getting a shade darker every few seconds.

## Chuck Pavlick's Eclipse Experience

WOW what an unforgettable experience. This has to be my #1 experience with nature in my lifetime. The surreal light that it produced made me feel like I was at a Pink Floyd concert. I wish someone would have been playing Dark Side of The Moon. I didn't expect it to get that dark at totality, I could not see my camera buttons. I was able to get a shot of totality but made a terrible mistake of not cleaning pictures off of my camera memory card and missed a pic of the Diamond ring. I was glad to hear that Rick was able to get the shot. I looked up after giving up trying to erase pics off of my card to enjoy the rest of the eclipse and saw Venus off to the right shining brightly. I remember yelling, "There's Venus." I think I have eclipse chaser fever. I can't wait for the next. It was great to share this experience with Bob, Jackie, Lori, Rick and Mike and his family.



First Contact (with sunspots) by Chuck Pavlick.

On Sunday morning, Bob Francis and I went to the Roper Mountain Science Center in Greenville. It was a great place for astronomers and people that love nature. They have a planetarium, butterfly gardens, nature exhibits and hiking trails up mountain to the observatory where there is a Clark 23" refractor. They had a 6" scope setup with a Daystar Ha filter for viewing the sun.

The Clark 23" refractor is available to the public on Friday evenings. If you are up in this area, you have to check it out.



Photo by Chuck Pavlick of the Clark 23" refractor at the Roper Mountain Science Center in Greenville, SC.



Totality photo by Chuck Pavlick (overexposed and it appears that you can see the details of the moon).

## Emilio Robau's Eclipse Experience

My wife (Michelle Robau), and I (Emilio Robau) traveled diagonally across the country to witness the event in Madras, Oregon. The weather was not going to prevent the viewing! We flew into Seattle, and visited our son before we rented an RV in Everett, Washington to travel to Madras, Oregon. We traveled back and forth across the Cascades weaving around snowcapped heavily forested volcanoes, and through the high arid areas of Washington and Oregon. We camped at the Madras Municipal Airport, which housed three separate Woodstock-like camping venues, Solar Town, Solar

Port and Solar Fest. All of these viewing areas were sponsored by the City of Madras, Oregon with a population of 6,729 people, which apparently hosted somewhere around 100,000 viewers.

The day before the eclipse the weather was clouds with smoke. A lot of people were kind of freaking out, but the locals, all three that we encountered were not worried. The forecast predicted clearing through the night. The morning brought clear skies with smoke on the horizon along the cascades, and high clouds in the distance. These conditions turned out to be just about perfect. There was just enough haze to enhance the 360 degree sunrise/sunset effect.

We watched in awe as the shadow of totality overtook Mt. Jefferson, a 10,500 foot snowcapped volcano 30 miles to the northwest of our viewing location. About twenty seconds after that, totality hit, and it was an overwhelming experience. I froze, and my wife took our only record of the event, a phone video. I don't know how she kept composed enough to film it all. The video reveals the full event with me mumbling in the Background: "Look at the mountain. Wow, here comes the shadow! Look at the corona! Look at the solar prominences, I think they are prominences. Look at the mountain. Wow, here comes the sun!" Some people claim time stops, but for me it went by as a fleeting second of time. It was an overwhelming experience. Everyone around us was stunned.

Thereafter, back to reality. We participated in the largest traffic jam known to mankind. From hippy-colored, peace-branded vans, to high end diesel pushers, and everything in between. We were all humbled once by the eclipse, and a second time by the traffic jam leaving the venues. I could have ridden a bicycle faster to Portland. All I could think of was, if the big apocalypse ever hits, I am staying home. There were people on the side of the road, which just gave up. Once we hit the forested areas women started flocking from the vehicles into the woods of fir and cedar. Men did not care, they hit the fence lines even in the desert with no cover at all. People in Class C, and above RVs were thanking their lucky stars. We left Madras at 11:00 am, and finally made it to Rhododendron, Oregon, under the shadow of Mt. Hood, 73.2 miles away from Madras, at 9 pm where we called it a day under a grove of western cedar and fir trees. Ten hours to travel about 73 miles.

Everything is still sinking in. I would do it again without hesitation and am starting the planning for the next viewing.

## Eric Uthus' Eclipse Experience

On Sunday, Aug 20, I was with my daughter, Amy, just south of Des Moines, IA. We were looking at weather apps trying to figure out the best place to see the eclipse. We were willing to go up to 9 hrs east (Nashville) or 9 hrs west (North Platte, NE). In the end we settled on Columbia, MO, just 3 ½ hours south. We ended up at the Columbia Regional Airport. When we arrived (about 9:45 am), there were about 20 cars there. By the time the eclipse started, there were maybe 60+ cars. There were high, thin clouds but they did not prevent us from seeing anything important. However, some heavier clouds moved in

later, so we missed maybe the last 20 minutes of the eclipse. The airport location was great as there were perhaps 100 other people to share the experience. Also, there was a bathroom! Looking at eclipse maps (Sky Safari Eclipse) it looked like we were only a few hundred yards from the centerline. The eclipse was amazing – totality hit in an instant – the complete ring around sun was breathtaking. The diamond ring was incredible. A huge diamond (my wife would be jealous)!! It got really dark during totality and the temperature dropped (according to lady next to us) from 93 to 83. It was an amazing experience – one I will never forget. It was awesome to have my daughter with me to share this experience.

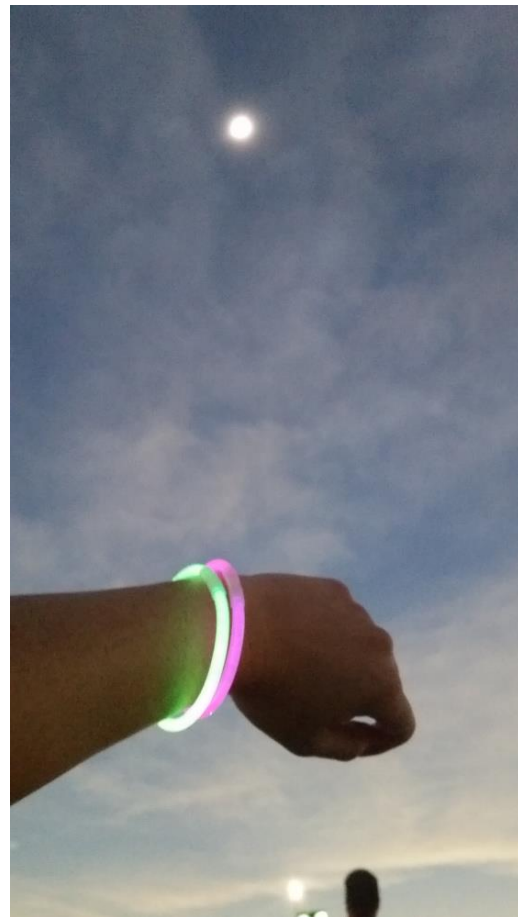


Photo of glow rings on Eric Uthus' daughter's wrist during totality. Can't see moon over sun; taken w/cell phone

## Chris & Jill Conyers' Eclipse Experience

My wife (Jill) and I were in Nashville at the Gaylord Opryland Resort. We found a perfect little private south-facing hill. Some large bushes separated us from the big pool party. First, the street lights came on and Venus appeared when the sun was about 80% covered. The excitement grew. There's no way a first timer can be prepared for totality. When that last sliver of sun disappeared, I took my glasses off and all my plans were instantly forgotten. No pictures, no looking for stars, or Mars, Jupiter, and Orion as planned. It was dazzling. The sun/moon combo appeared to triple in size. We had diamond rings at the beginning and end of totality. The crowd behind us was making sounds of wonderment. I heard Jill saying, "Crickets."

They were loud, but I hadn't noticed them. As gorgeous as the corona was, the blackness at the center was what I was transfixed on. It was the deep glowing and brilliantly shining black moon that stole the show for me.

2024. Niagra Falls. See you there!

## Doug & Joan Peters' Eclipse Experience

We were so excited to be living in the path of totality for the eclipse. However just before totality a large dark cloud came between us and the sun and cleared just seconds before totality was over. So I am sending you some pictures that I got by holding my camera up to our telescope but they aren't all that I was hoping for. It was still a spectacular event. Hopefully we will be around for 2024. We won't have quite the front-row seat that we had this time but still, we will be close.



## Michelle Desouza's Eclipse Experience

Photos taken only with iPad camera in Nashville. Eclipse more visible in lens flare. We moved from the the planetarium at 12:00 pm to our condo patio. Eclipse glasses worked well. Perfect totality viewed from there at 1:25 pm-ish. The light was eerie and strange. The crickets started chirping. Everyone was awestruck. I got goosebumps.



Photo by Michelle Desouza of lights that came in during the eclipse in Nashville.

## Armando Merlo's Eclipse Experience

I had booked and prepaid a campground spot in Kentucky. However, at the last minute due to uncertainty in cloud cover I decided to drive from Toronto to Wyoming. At Starfest in July, I went to a lecture by Fred Espenak which became very useful in taking pictures and videos. As totality came, people went berserk I will never forget the moment the sky went suddenly dark and you could see the sun and its corona. Eventually, your eyes get used to darkness and you appear to be in a dark twilight. I feel sorry for people that were driving by during totality where I was. There were people from Holland and New Brunswick. I have a video of totality that I can show at the club in the Fall.

## John Pigman's Eclipse Experience

My wife and I traveled from northern Ohio to eastern Tennessee to view the eclipse. The weather was spectacular as was the total experience. We chose Fort Loudoun State Park as a viewing location because it is large enough to handle a huge crowd and promised almost 2 and a half minutes of totality.

Trying to beat the crowd, we arrived a few minutes before the park opened at 8 am. Attached is a photo of the line waiting to enter the park. (See page 7 for photo).

I cut up a pair of eclipse glasses and made a filter for my camera. I used an interval timer to photograph the totality so I could view the entire eclipse myself. The filter was removed at totality and the timer did the rest.

The totality photo (on page 7) was taken at around 2:45 pm. (1/15 sec, f/8, ISO 800, 200 mm lens with no filter). It has been processed slightly in Adobe Photoshop Lightroom because the original photo was slightly overexposed.

I can't estimate the crowd we were in but it must have been several thousand people. The park was located on a lake and many boats appeared after noon to watch the eclipse. When we reached totality, boat horns sounded and the crowd cheered. The strangest part of the experience was just as totality began, there suddenly arose a loud buzzing in the trees from hundreds of cicadas which was completely unexpected.

Looking forward to seeing everyone's eclipse photos.



Photo by John Pigman of the line of cars waiting to enter Fort Loudoun State Park, TN, to view the eclipse.



Photo of totality by John Pigman.

## John Fishwick's Eclipse Experience

We saw a perfect total eclipse in Greenville, SC. Fantastic.

## Ted Wolfe's Eclipse Experience

We just gathered the family on the driveway for our 70% eclipse here in upstate NY and showed them how to use 3 pairs of sunglasses at once.

## Bob Francis' Eclipse Experience

Chuck Pavlick and I drove up to Greenville, South Carolina, to view and photograph the Total Solar Eclipse on August 21, 2017. We joined up with EAS members Rick and Lori Piper, Jackie Richardson, Mike Usher and members of Mike's family. Mike had reserved a pavilion at a local park in a nice residential neighborhood which was an outstanding place to view the eclipse. The pavilion provided a shady place for everyone to sit and eat as a good size grill came with the rental space. The sky was picture perfect, nice and blue, and we

were joined by approximately 100 to 150 people who came over to talk about the eclipse and get a chance to look through the several telescopes we had set up with white light filters and a number of solar telescopes with Hydrogen-Alpha filters.

When the eclipse started, I attached a Canon Rebel T5i DSLR to an 80 mm refractor telescope and started shooting. The eclipse was an awesome sight and probably the most beautiful astronomical event that I have ever seen. As totality neared, everyone was wondering what shutter speed and ISO speed to set their camera at. It was then that I pulled another grand Bob Francis goof. In the darkness, I started turning the main dial to test out various shutter speeds but no images appeared on the LCD monitor. With only two minutes to go with totality, I gave up and watched the totality visually and through my solar scope. As a result I did not get any photos of totality. It was after it was all over that I realized what the problem was. During all the excitement and in the darkness, I realized that pictures were not showing up on the LCD monitor because I was not pressing the shutter button, *i.e.*, I was not taking any pictures.

Well, in seven years when I go to the next total solar eclipse, I will know to take pictures during totality by pressing the shutter button. ☺

## Glen Kowick's Eclipse Experience

Monday morning before 8:00, I started from Savannah, Georgia. The forecast called for clouds and rain nearer the coast, lessening toward the NW and the Appalachians. The line of totality ran ~40 miles North along the Georgia-South Carolina line. I drove between the two, hoping to avoid Starmageddon traffic jams en route. There were gathering clouds behind and popcorn clouds above and ahead, maybe 30% cloudy.

Traffic was light, though the news predicted Starmageddon. Still under popcorn clouds, I drove NW a few miles past Greenville. I could see the sky wasn't getting much better ahead to the NW, but over me was a hole perhaps 10 miles across, completely clear inside. I couldn't tell how fast the wind was blowing or if it would hold together. But bird in hand, I pulled off on the side of the road to wait. Some people were standing on their front lawn with eclipse glasses. So I walked over and started up a conversation.

We hung out watching progress, discussing astronomy and current events. The hole seemed to hang together, so I elected to stay put. Besides, we were having fun talking astronomy.

Occlusion already began before I stopped. I had checked it out when it first started, maybe about 5% covered. Neat, but not much to it through my paper and plastic NASA glasses. The glasses were so opaque that the only thing one could see was the truncating orange disk of the sun. As the sun grew more and more occluded we observed.....almost nothing. At 50% occlusion, there was no clearly noticeable difference in

brightness of the sky and terrain. Even at 80%, no big deal. Then around 90% the ambient color seemed finally to change a bit, the sun was not as blazingly bright as usual. The overall light was mostly hazy bluish, not like an orange sunset. Of course, the shadow lines became sharper at 90%. A young lady came out of the house holding out a colander with 4mm holes, drawing dozens of narrowing crescents on the ground. Ditto the crescents of light under trees. Interesting how eclipses prove that light circles are really fuzzy images of the sun.

But at 95% it started getting interesting. Sort of dusky, hazy, getting somewhat dim. As the last few percent went off the light was still significant, as if the sun had only just dipped below the horizon. But then suddenly a huge switch was flipped, totality. Everything feels different. The sky is dark. There is this completely unexpected far brighter fuzzy ring of white in the sky where the orange crescent used to be. I expected the corona to be orange-ish, but it was completely blue-white, making for extreme contrast. And in the middle is a hole...in space. The black disk of the moon is the deepest black you ever saw. In the mind's eye, it was no longer something between us and the sun. It looked instead as a hole in space surrounded by that bright white circumference. Super-sharp on the inner circumference, but extending out fuzzily. Why doesn't the Universe go pouring out through the hole? Why don't we get sucked up into it?

Venus and Sirius were out and perhaps a few other very dim stars. The sky certainly was far too bright for the Milky Way. We weren't far enough in the country to get away from haze.

Like experiencing an earthquake, the first few moments are a bit confusing, trying to figure out how it is that things you didn't even realize were there are gone, where did they go, and what is going on with them? Then just wanting to squeeze out every iota of what's probably not going to last very long. Or will it. Will the sun come back?

And then it was over. The sky went from pretty dark to just-after-sunset light and within a few minutes back to normal brightness. The crescent shadows were back, and rounding out quickly.

The hole in the clouds had held. Nothing like lucky timing. I headed back to Savannah for dinner.

## Denise Sabatini's Eclipse Experience

My sister, niece, grandnephew, grandniece, and I went to Moss-Wright Park in Goodlettsville, TN. Although I was filled with trepidation, the clouds somehow moved out seconds before totality. This eclipse did not disappoint me. We saw everything. As I well know that every eclipse is different, I was shocked when I saw the second diamond ring. To date, it was the most impressive one I've seen. The real thrill was watching my family view totality for the first time.

## Bob Gurnitz's Eclipse Experience

Ellen, Grandson (Jakob), and I flew to the Nashville area. We were fortunate to be able to view from Gallatin, TN, 2 minutes and 37 seconds of totality. My grandson, Jakob, flew in

from Chile where he had been involved with the Atacama Large Millimeter Array for the summer. Much of the fun was in getting prepared. Our primary camera was secured to an iOptron telescope tracking mount and was controlled by eclipse specific software ( SET'n'C) from our PC. Most of the photos were taken with a filter with a transmissivity of about 1/1,000 of 1% (OD 5). During totality no filter was used. We employed an equivalent 600 mm lens on a Canon EOS 60D with a burst capacity of 5 frames a second. We were fortunate to capture every single event we planned for. The skies were just perfect. The 400 +/- photos will keep us busy for quite a while. Overall things worked out much better than for our first eclipse observation from Shanghai in July 2009. Experience and technology improvements helped.

## Henri Troch's Eclipse Experience

We were in Illinois in the middle of a preserved natural location, 150 people, including our son's family, 2 grandchildren, wonderful sky, 35 degrees Celsius. I was at the camera, and had a Celestron evolution 6" for visual that had a lot of success as many people never had seen the sun through a telescope. At the end of totality, my grandson Adam, who was looking at the scope, yelled at me, "The diamond ring, Papounet."

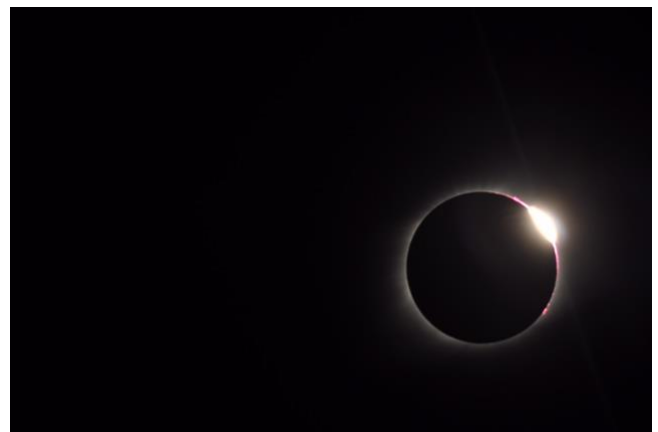


Photo of the diamond ring effect by Henri Troch.



Photo of totality by Henri Troch.



## More Pictures at the Eclipse



Jackie Richards, Rick Piper & Lori Piper in Greenville, SC.



Mike Usher at the eclipse in Greenville, SC.



Bart and Colleen Thomas at Isle of Palm, SC.



Chuck Pavlick at the eclipse in Greenville, SC.



Bob Francis showing kids the eclipse in Greenville, SC.