PARTIAL ECLIPSE 25TH DECEMBER 2000

From: B Yen <byen00@earthlink.net> To: <SOLARECLIPSES@AULA.COM> Sent: Wednesday, December 27, 2000 4:37 AM Subject: [SE] **eclipse near Mt. Wilson**

I went to the local mountains (near Mt. Wilson, California) for the partial solar eclipse:

http://www.comet-track.com/eclipse/secl00/secl00.html

Believe me... I was NOT really motivated to "do" this eclipse. Hmmm...Partial eclipse???

"I wouldn't go across the street for an annular [eclipse]!! Seen one [total eclipse], seen them all!!" -- Don Trombino (noted eclipse chaser & eclipse expedition leader)

I made some quicky plans at the last minute. In S. California, the eclipse phase would be placed near the horizon. (7:37am - 9:13am) So..I realized a multiple exposure shot would probably be the "best" shot, so I planned on doing 2. The 50mm would have long-axis horizontal, the 70mm would have long-axis vertical (its short axis would BARELY fit the 15 deg azimuth span of the sun's partial phase).

You can see the "curved path" of the sun against the sky in the 50mm & 70mm multiple-exposure shots. I used the same 2 T90 cameras that were sitting around for 1.5 years, previously programmed for 10 min intervals from the '99 Turkey eclipse (see http://www.comet-track.com/eclipse/secl99/secl99.html). Both these shots give a good representation of my eclipse experience: (cold) sunrise from mountains & eclipse path across the sky. The 70mm shot picked up Antares near the horizon, during the sunrise "main frame". (the 50mm shot also picked it up, but not visible on the web-resolution image).

weather was clear, there was extremely light cirrus (barely detectable) during the partial phase. Seeing conditions were extremely bad ...narrow angle H-alpha photography was very questionable. The rippling on the sun's limb was unbelievable: it looked like "major pencil scribbling". Couldn't really focus with any certainty (film is still undeveloped. will remain so, until I get "motivated"). I was going to setup a 2nd mount, with a 4" f8 (800mm) to do eyepiece projection photography... forget it!!

Very windy at times. (35-40mph gusts). They would come roaring out of the NE periodically, I could actually see my parked van *move*. I would sit there, watch the 2 tripod-mounted multiple-exposure cameras..waiting for them to fall over. it finally got so bad, I stood in front of the 50mm camera to block the wind. Even so, it got lifted up by a couple inches & settled back. (look at the 50mm shot : put your eye near the screen & bottom of the picture, look towards the "path of the sun", which is curved. you can see where the curved-path is "broken"..that's the point where the camera+tripod got moved by the wind)

Quite cold on arrival at 6:30am (no gloves, my bare hands felt incapable of doing anything), it was pleasant (60 deg) when I left ~10am

strange coincidence: a white flower "obscured in shadow" near the eclipse site (a parody of the partial eclipsed sun) . it was reminiscent of the '99 solar eclipse in Turkey: a white flower near the eclipse site.(see http://www.comet-track.com/eclipse/secl99/trip.html)

During the observation period, 3 groups of people came by (drove into the pullout off Angeles Crest Hwy). I let 2 of the groups look through the H-alpha scope (AP 5" f8,2X barlow, extender, telecentric unit, Daystar .7A, Nikon F3, DW6 eyepiece viewfinder). What blew me away was that none of them came with solar filters!! (one couple brought their bird-watching binoculars). I think they were going to do (& probably DID) the eclipse "naked eye" & damage their vision. I guess the heard the local news reports & drove to the mountains.

Notes: the same site was also used for Nov. 16-17-18 Leonids 1 month ago...(see

http://www.comet-track.com/meteor/leonids00/leonids00.html) In both cases (meteor shower & partial eclipse), I didn't feel

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motivated to go out, & just "bailed out" on a site close to home (30 min drive).
like the Leonids 1 month ago, tthe wind caused rock-debris in several places along Hwy 2 (mountainous, with sheer ledges & sheer dropoffs on either side). There were some pretty good size chunks, & I avoided most of them (last month I hit a 6" diameter..I could feel the rock compress the tire & contact the saddle of the rim. I was sure I blew a tire! 35" tire was fine (BFGoodrich tires are tough), only broke the 1/2" shock bolt for the left-front) went down the mountain, was hungry, & got 8 chicken drumsticks for $2.99 at the local Ralphs (grocery chain in S. Cal). Spent the next 5 hours driving around looking for colorful flowers: "burning" the remaining frames on the 2 rolls..(the mutliple-exposure shots were frame #1 on each roll...70 unexposed frames left). this will go down as one of the strangest "Christmas" for me.

From: Michael Simmons <msimm@ucla.edu>

Gee, I'm glad you had such a great time, Bob. :-) I was lazy and stayed home. We were having company that afternoon. The Sun didn't even clear my local horizon until after mid eclipse (we're on a hill and east is uphill). Saw it, went back in.

My Iran eclipse trip will finally get some exposure. It's a bit of the article I just submitted to S&T on astronomy in Iran. It's scheduled for the April issue. Mike

From: Phil Harrington <PHARRINGTON@compuserve.com> To: <eclipse@hydra.carleton.ca> Sent: Wednesday, December 27, 2000 9:57 AM Subject: [eclipse] **Success!**

Hi all, Yes, a nice eclipse indeed. We had clear, though very cold, conditions here on Long Island. I've been playing around a little with some photos I took with my wife Wendy's Olympus D360-L digital camera and have uploaded a few on my web site. Check http://ourworld.compuserve.com/homepages/pharrington/ec00.htm (yup, that's all one line!)

BTW, the three frames in the sequence shot were each taken afocally (and handheld, with an old, black turtleneck draped over my head) using the digital camera, a 22-mm Panoptic eyepiece, and C102 refractor. I also took some "conventional" shots through the C102 as well as my 400--mm telephoto, but haven't had them processed yet. For the first time, I used print film exclusively, figuring that I'll scan them in and play around some more. The Olympus was strictly an afterthought I had *during* the eclipse. :-) I'm actually pleasantly surprised that the shots came out as clearly as they did. No digital processing (sharpening, etc.). Those are just the raw images. Clear Skies, Phil Harrington

From: Ted Saker Jr. <ted@saker-law.com> To: solar eclipse mailing list <SOLARECLIPSES@AULA.COM> Sent: Wednesday, December 27, 2000 8:49 PM Subject: [SE] **Christmas Eclipse**

Well, I went and did it. Wasted a perfectly good Christmas Day outside,

in subfreezing temps, at an eyepiece. <G> Check out my solar eclipse animation at

http://www.saker.com/astropix/eclipses.htm#pse00

From: Bob Morris <morris@sce.carleton.ca> To: SE from LRM <solareclipses@Aula.com> Sent: Monday, December 25, 2000 12:50 PM Subject: [SE] **Weather report -- Ottawa**

After being overcast all day yesterday, and today until about 2 am, we now (8 am) have "coronal skies". With very low temps.
Eclipse starts at 11 am. Too bad there won't be any corona!

If any New Yorkers etc are headed north, email me directly for any weather changes. Merry Christmas to all.

Bob Morris

2000 Christmas Eclipse - Report and Photos

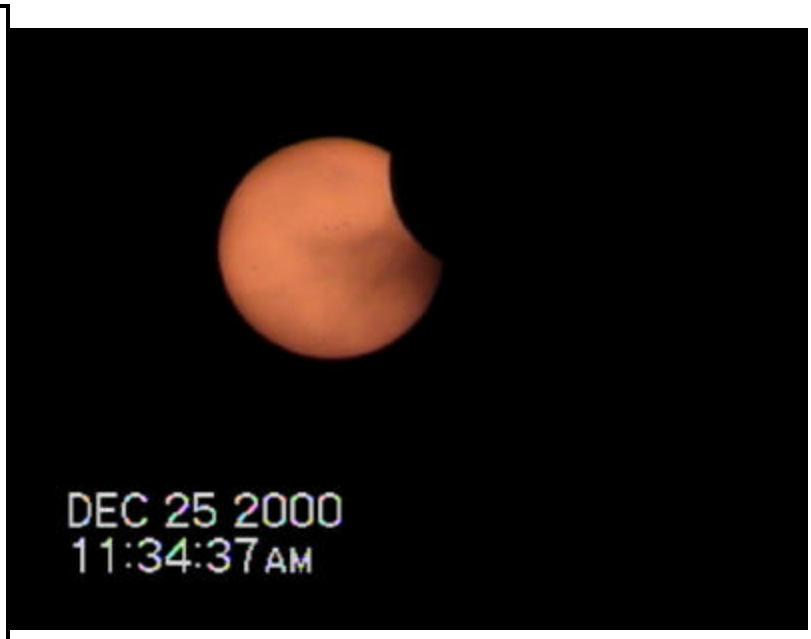
by Eric Pauer, from Brookline, New Hampshire, USA

Webcast/Eclipse Report

Overall this eclipse went very well for me. Interestingly, this was my first partial solar eclipse. Previously, I have experienced the annular eclipse in 1994 (Manchester, New Hampshire, USA) and total solar eclipses in 1998 (Aruba) and 1999 (Hungary) (follow links to for details on these). First of all, here in southern New Hampshire, we were fortunate to have mostly clear (95%+) clear skies, with just a couple very widely scattered clouds. That's not the typical December day for this area. I did, however, have to contend with a cold, windy day with a 11° F (-12° C) temperature, with wind chills around 0° F (-18° C). Believe it or not, I was so happy for the clear skies and eclipse that I did not notice the cold. But some of my equipment succumbed to the cold (see below). I would like to thank my neighbor and fellow amateur astronomer Mike Quinn for allowing me to use his yard, telephone, and electricity. The trees surrounding my yard are too tall to provide the unobstructed view of the sun during late December. Mike's front yard has a small hill with a nice view to the south above the trees where I could set up. We did run 100 feet (30 meters) of phone line and power cord from his house. Thanks Mike!

My equipment included my Celestron 5" Schmidt-Cassegrain Telescope (SCT) with Canon EOS Rebel G camera, loaded with Fuji Superia Reala color print film (ISO 100). The SCT was mounted on a clock-driven equatorial mount. I replaced the stock counterweight that came with the mount with my Sony Digital8 DCR-TRV720 camcorder. Using this setup, I was able to keep both the SCT and camcorder aimed at the eclipsed sun on a single mount. I also used a 35 mm automatic Pentax camera to take a wide (50 mm) angle multiexposure photo (results TBD) every 25 minutes during the eclipse.

For the webcast, I planned to upload new images via 56K modem every 3 minutes, which is what happened in the beginning. Folks may have noticed that I briefly (at times) showed a view of the equipment/Mike/myself instead of the eclipse closeups, which was intentional, for a chance of pace. As the laptop got colder, despite being on AC power, it appeared to slow down, and the interval between new images grew to over 5 minutes with no changes in the webcast settings. Late in the webcast, I did notice the count down (in seconds) decrease at a slower than expected rate. I also think that the load on my ISP's server (Bit-Net) slowed down my



The trees surrounding my yard are too tall to provide the unobstructed view of the sun during late December.

image ftp uploads as over 40,000 combined hits occurred during the webcast on my 2000 Christmas Eclipse pages. Thanks for your interest! The 9-volt battery in the Snappy video capture unit also failed due to the cold, which I quickly replaced with a fresh, warm one. The batteries in my Canon EOS camera also died shortly after maximum eclipse. The camera needed to warm up inside Mike's house, and then it worked.

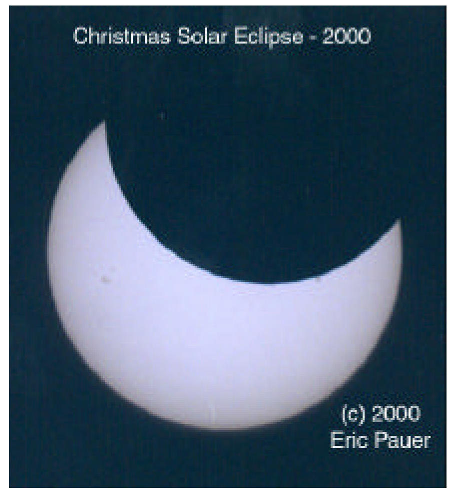
Clearly, the cold was a factor to contend with. I have already received over a hundred emails of appreciation from folks who "tuned" in, from all over the United States and the world. It is nice to get that kind of feedback. My goal was to share the eclipse experience who could not otherwise "see" it, because of the weather, their geographical location, or their personal plans. After all, the eclipse was on Christmas Day!

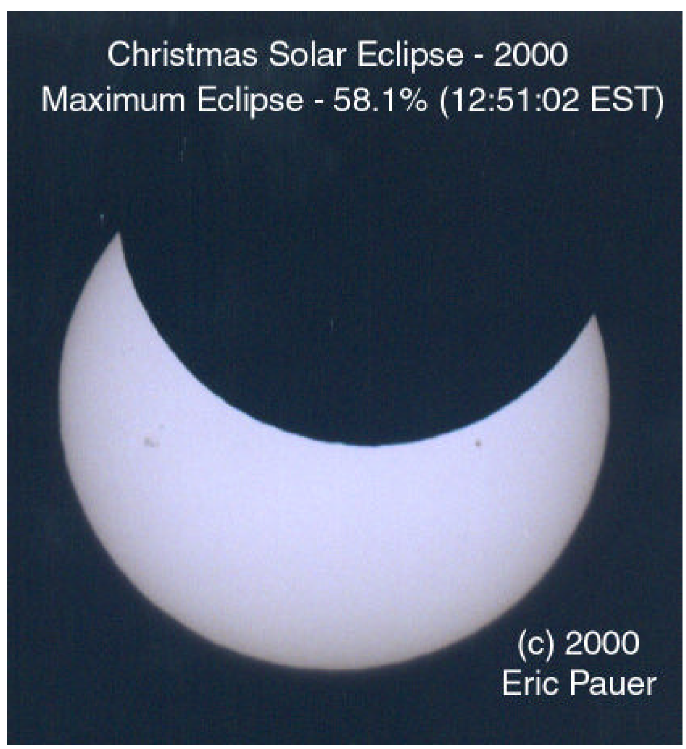
Eclipse Photographs

During the eclipse, in addition to the live webcast, I took photographs using my SCT in prime focus (1250 mm focal length (f/10)), equipped with a Roger Tuthill Solar Skreen® Filter. All exposures were 1/125 second with the equatorial clock drive running. Note the numerous sunspots, including a nice grouping near the center of the sun's disk. Also, I managed to capture the eclipsed sun with some thin clouds, for a nice effect in the second photo below.

Video

I've included a video still of the maximum eclipse and a view with a bit of cloud in front. I also did an animation of the eclipse by stringing together 40 video stills (animated GIF) over the duration of the eclipse.
Eric





Partial Xmas Eclipse from Long Beach Island, New Jersey—By: Patrick Poitevin

Short of holidays and of course money, mainly due to the move from Belgium to England, prevented us from travelling to the Antarctic eclipse of February, Patagonia and Alaska in July. But nothing could hold us from the Xmas eclipse of last 25 December 2000.

Fred Espenak and Pat Totten invited Joanne, the kids Michael and Laura, and I to their beach house on Long Beach Island in New Jersey. A nice combination for our vacation which started in Miami. After a few days Miami beach we stayed and entertained ourselves a week in Orlando, flew to Philadelphia and drove to New Jersey for the eclipse. A drop of temperature of course. Snow and ice which was never seen on the east coast. And as Fred mentioned earlier in this SENL, temperatures under zero. Something of which we were not foreseen in regard of cloths.

A beautiful sunset the night before was an indication of a clear sky. We never expected such a wonderful perfect sky. Preparations for the partial eclipse began early in the morning. We brought one of our Celestron C90, a binocular each for Michael and Laura and Jo tested her brand new Camcorder 25X Sony. Of course all foreseen with sunfilters. The Xmas eclipseshades of Rainbow Symphony brought each of us the necessary Xmas atmosphere.

From Learning Technology we just purchased the Sunspotter. A wonderful instrument. See as well the test report in the SENL. Any one, including a visiting policeman, could follow and monitor the eclipsed sun on the Sunspotter. A must for every eclipse chasers.

As mentioned above, the sky was perfect blue, but cold, oh, so cold. Hands were frozen, nose was fragile and seemed to break, but the partial eclipse was perfect. The atmosphere was wonderful and Fred and Pat, together with son Russell spoiled us all with warm drinks and lots of jokes. Fred entertaining with his photographic skills. I am looking forward seeing them on his WebPages. I can not wait.

The sunspot presence on the sun was wonderful. We could easily observe them disappearing and of course after maximum reappearing. Due to the cold we did not make any attempt of timing, measuring and calculating the size of the sunspots. Something what would be more interesting with a nicer temperature?

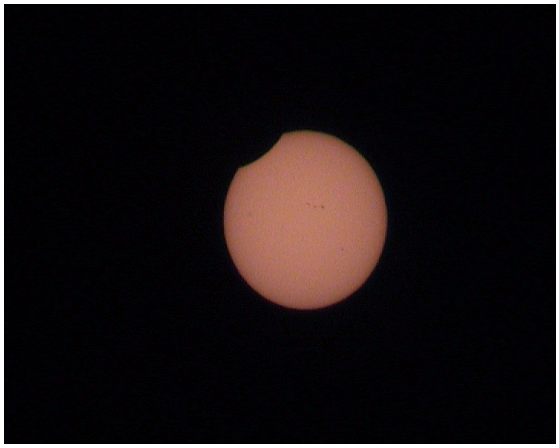
Despite the temperature, the missing totality, this partial eclipse was one of the most fascinating we ever had. The kids enjoyed it very much, we had a wonderful atmosphere, the pictures were great, and ... we had the best company we could have ever dreamt of to observe a partial eclipse. After the eclipse, Pat and Fred surprised us all with a wonderful Christmas dinner.

The eclipse was a nice preparation for the Africa total eclipse in June. Joanne, Michael, Laura and I are ready for this one. The first total for both Michael and Laura, but we are sure it will not their last.

After the eclipse, we drove back to Pennsylvania, stayed and travelled through Amish Country and our vacation ended in New York after New Years Eve on Time Square.

Thank you Pat and Fred, we had a great time and a wonderful eclipse. Lets do this over one day, one time, ..., wherever!!!

PP

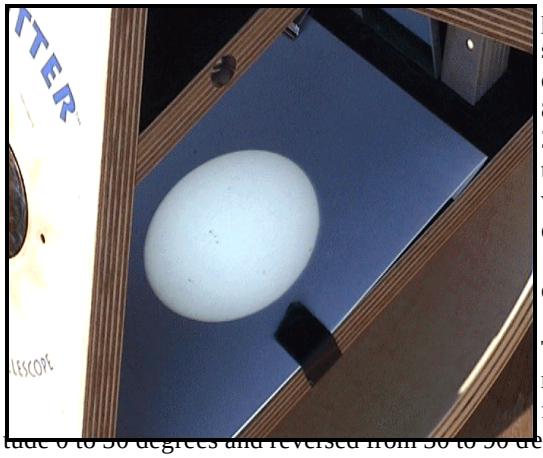


Test Report: Sunspotter

Learning Technologies, Inc. has the Sunspotter (The Safer Solar Telescope) available. This Sunspotter has been advertised in most of the Astronomical magazines. As a dedicated solar eclipse observer, I had the aim of having such an instrument. I dreamt of a heliostat since I was a boy. Making one myself was an option, but it never came to it. The Sunspotter was the ideal instrument for me. A sun projecting system, portable, educational and the size of the sun large enough to measure, time and calculate the size of the sunspots. Of course, it did not take too long before I bought the instrument.

I could use the Sunspotter immediately with the Xmas eclipse. See the account of the Xmas eclipse in this SENL as well. It is my aim sharing our experiences with the Sunspotter.

Some technical data: The Sunspotter is a folded refractor type telescope. F 11 and altazimuth designed. The Objective lens is a 2 element achromat, 700 mm FL and fully coated. The objective aperture is 61.7 mm diameter, stopped down to 57.0 mm. The mirrors are 50 mm x 50 mm x 10 mm, two at 25 mm x 25 mm x 5 mm, <1/4 wave. The field lens is a 4 element, 12.5 mm FL Plossl, fully coated, 10 mm aperture. Total path length is 875 mm, fixed focus. Equivalent magnification is 56x. Approximate solar image diameter is 85 mm or 3.25" and the field of view 0.75 degrees or 1.5 solar diameters.

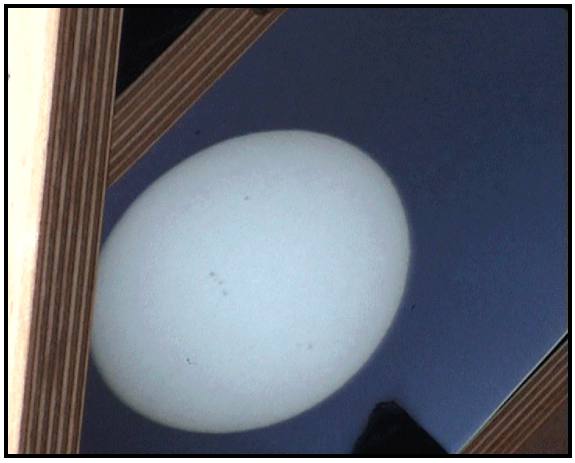


The pointing range is from altitude 0 to 90 degrees and reversed from 90 to 90 degrees. Azimuth from 0 to 360 degrees. The pointing aids are a 2.2 cm gnomon (+/- 30 degrees) and 22 cm pinhole projections (+/- 3 degrees).

The frame material is 15 mm 9-ply (cradle), 20 mm 13-ply (telescope), Baltic plywood. Overall dimensions H x L x W, 40 cm x 37 cm x 15 cm or 16" x 15" x 6" and a total weight of 3 kg or 6.6 lbs.

The Sunspotter, with reference #LT-70 Sunspotter, costs 300 USD plus 30 USD shipping and handling within U.S. at Learning Technologies, Inc. 40 Cameron Avenue, Somerville, Massachusetts 02144, USA. Phone 800 537 8703 (US only) or 617 628 1459, fax 617 628 8606. E-mail starlab@starlab.com and internet http//www.starlab.com

Experience: If you want to observe the sun, partial eclipsed or not, safely and projected the Sunspotter is your ideal companion. You can make drawings of the sun with the sunspots.



Make drawings of the eclipsed sun and measure and calculate the size of the sunspots. The bright 85 mm image of the sun is wonderful and clear. Many enthusiasts can stand around and observe at the same time. You can observe the sun time by time, every hour, every day and see the rotation. Or you can observe the progressing partial eclipse minute after minute.

The aligning is quite easy with the projection facility. The switch from 0 to 30 degrees altitude to 30 to 90 degrees, does not it make too easy, but once used to it, it is peanuts to observe the sun with the Sunspotter. This unique wooden, folded Keplerian telescope provides a very safe and social observation of the sun or partial solar eclipse. The Sunspotter can be carried as hand luggage and should be taken to every solar eclipse. Something we will do for sure. It is every dollar worth.

Any queries or questions, please let me know. PP