

THE STAR DIAGONAL

THE JOURNAL OF THE OGDEN ASTRONOMICAL SOCIETY

OAS Executive Committee

President- Lee Priest
Ph. (801) 479-5803
Vice Pres- Cliff Peterson
Ph. (801) 782-4378
Secretary- Jim Seargeant
Ph. (801) 479-4050
Treasurer- Doug Say
(801) 731-7324

Vol. 33

Number 11

August 2004

<http://physics.weber.edu/palen/oas/>

The President's Message

Hi All

Next week we have this year's final Monte Cristo star party and campout, August 12th through the 14th, although some are going up earlier. The Monte Cristo campground is a National Forest Service campground. It's 37 miles from Ogden, up highway 39. (That's 12th street going through Ogden Canyon past Huntsville and through South Fork Canyon.) As in the past, we will set up in the meadow East of camping loop E and try to get as many of the loop E camp sites as we can. They don't have a reservation system so the camp sites are first come, first serve and the camp host didn't like us saving sites - but we will keep trying. The campsites are \$12.00 per night but if you are staying in a tent you may be able to stay in a site with one of the motor homes or trailers and make a deal; the extra vehicle charge is \$5.00 per night. We will have the potluck dinners Friday and Saturday evenings at 6:00. Bring something to cook on the grill and a side dish to share. We will have a few grills there, but if you have a small portable gas grill please bring it.

We have our next public Star Party planned for Saturday August 21st at the Ogden Bay Bird Refuge.

On September 9th we will have our annual meeting to elect new Officers; the nominating committee is still looking for people to serve. If you are interested, call David Dunn, Dale Hooper or David Varney.

Thanks,
Lee Priest, President
Ogden Astronomical Society

OAS Minutes, July 04

During two (sometimes three) of the summer months, the OAS holds "private" star parties at the Monte Cristo campground - this year in July and August. During those months there is no OAS meeting. Instead the Monte Cristo potluck and tea party gatherings serve as the club meetings. So - see below

July Monte Cristo Star Party

Dave and Cliff

July's Monte Cristo star party was a lot of fun. We had the monsoon flowing up from Arizona, there were afternoon and evening thunder storms, though it didn't rain much. Those of us that were able to arrive early got some observing in on Thursday night after the clouds cleared away. I went to bed around 2am when some high thin clouds dimmed the stars. On Friday night, Dale Hooper, Bruce Fisher and I stayed out looking through sucker holes. The clouds eventually went away and we spent all night out observing. Bruce and I used my Sky Commander to view about 30 galaxies in Pisces and Pegasus. Most of the galaxies that we were able to see were just less than 12th mag. We also looked at Neptune, Uranus, Barnards Galaxy, the Helix and some of the other nebulae down in Capricornus. We used the clubs 15X 70mm binoculars to view both the Neat (C/2001 Q4) and Linear (C/2002 T7) comets. We could see a bit of the tail on Linear. The pot-luck dinners, tea parties, and watching the kids play Ghost in the Graveyard were also fun. (Fifteen kids running around in the dark and only half of them having flashlights - I think they should have worn helmets.) I am looking forward to this months event. I won't be able to be there on Friday and Saturday, but I plan to be there Tuesday and Wednesday nights. Hopefully the clouds will stay away this month.

Dave Dunn

I arrived on Monday at our location on Monty (a little bit early) and even though the daylight hours were cloudy, the first two evenings were fairly good viewing. On Wednesday, as some of the OAS members started to arrive, the weather turned windy and even more cloudy. Some good viewing was still to be had but you had to be more patient than I was to take advantage of it. Unlike years past, we were not allowed to put chairs in camping locations to save them for other members who would arrive later so we ended up spread over a bigger area. After the first two evenings I didn't even uncover my scope but that was more a function of the cable I had

forgotten at home than the weather. The visiting with OAS members and their families, especially around the campfires in the evenings, made it a very good activity that should not be missed.

The weather was cool in the evenings and warm during the daylight hours, but not hot like in town. The wild flowers were in full bloom and lead to a discussion as to whether they were blue or some shade of purple. There seemed to be something of a gender distinction as to whether they were blue or purple.

I believe that everyone in attendance had a good time, but more clear skies also would have been nice.

Cliff Peterson August

Ogden Dinosaur Park Star Party 10 July

The sky was beautifully clear most of the day - until it came time for the star party, of course. As Dr. Armstrong gave his talk in the park's auditorium, we all pondered the bottom of the clouds and wondered if

we'd ever see anything. Just as it got a bit dark, a few holes opened, Jupiter was sighted, and everyone pointed that way. Holes continued to open up as the night progressed and we were able to view several of the brighter objects that were overhead and to the north. The "crowd" was not too large, but many were absolutely delighted to be see Jupiter and some of the doubles.

Jim Sgt

Upcoming Events

No OAS meeting in July, see ya at Monte Cristo!

12-14 Aug
21 Aug

Monte Cristo
Public star party, Ogden Bay Bird Refuge

9 Sep

OAS meeting, Ott Planetarium, WSU. Officer election night

Star Party Scenes



Dinosaur Park



Monty



WebCam Imaging

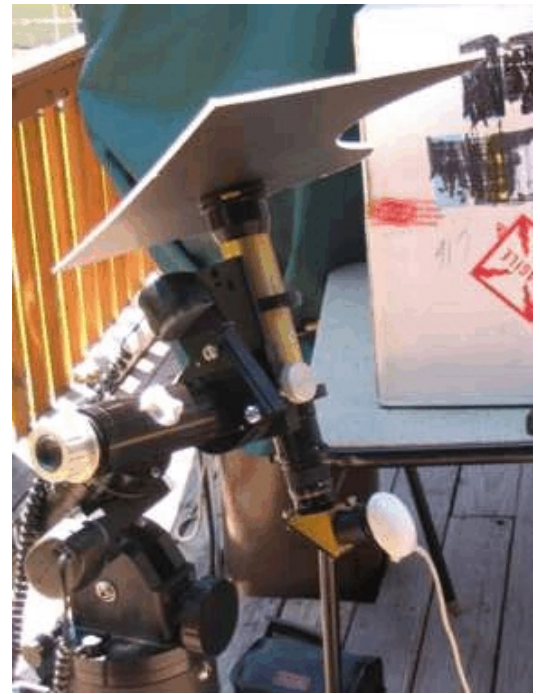
I've had a webcam camera - a ToUcam Pro - for some time now but haven't done much with it. I've had custody of the OAS's lovely little Coronado MaxScope for several weeks and had adapted it to my Losmandy GM8 mount to provide a little better tracking. The UtahAstronomy mailing list had notified me of some large sunspots. Why not give it a try? First I set up the GM-8/MaxScope combo on my back deck. I knew which of my roof vents to use as an aim point to achieve rough polar alignment. I'd already hung a bit of scrap foamcore on the MaxScope's muzzle to shade the eyepiece. The next step was to find the sunspot visually through the MaxScope; they were clearly visible through the 25mm Cemax eyepiece. After watching for several minutes, tracking appeared to be fairly good, considering the hasty alignment.



Now to set up the notebook computer and camera. I used a 1 1/2" webcam adapter (Steve Mogg, <http://webcaddy.com.au/astro/adapter.htm>) to attach the camera into the Maxscope and then plugged the camera's USB cable into the laptop. Start up the laptop and the software that came with the camera. Dang! Even under the shade of an umbrella, there's too much light to see the laptop's screen no matter how I position the screen. Search the basement. Ah, a big cardboard box! Set it up on the card table with the computer tucked inside. Perfect!

Good! The sun is still in the image fed from the ToUcam. Focus is not too far off. Tweak the MaxScope's's focus; there are the sunspots, sharpening up. And there is a small prominence on the sun's rim just to the lower right of the sunspots. Start a capture sequence of 30 seconds. Another. Touch up the focus and re-frame the sun in the image using the GM-8's motion controls. Take another couple of 30 second sequences. Done - total imaging time after the glare on the computer screen was solved - about 15 minutes. Quite a change from my usual imaging runs of several hours on deep sky objects. The ToUcam takes color images, so there is no luminance, red, green, blue filter sequences to take. The sun, even through the MaxScope, is bright enough to allow many frames per second.

Next is processing the image. I should have both dark frames and flat fields, but with the bright sun, darks don't seem necessary and I can't imagine how to take flats using the MaxScope. Load the .avi file into the software and let it run. The software separate the .avi file into



individual frames, registers each frame to common point that I designate, and weeds out the images that are not too sharp. It then combines the images, does some processing to sharpen the result, and saves the result as a single image file. This file can be opened by one of the image editors and touched up. Here is the result of a brief effort at processing.

Now, this is the result of a hasty first attempt. I feel that much better results can be obtained from the MaxScope and the ToUcam, but it will take a bit of practice.

One of the really attractive things about webcam imaging is the relatively low cost. The camera itself is available from many vendors at prices ranging from \$61 for the old model that I have to \$160 for the newer model with adapter. See, for instance, <http://www.scopetronix.com/>. Several other sources are available through a web search for "ToUcam". The software range from \$35 - \$50 for image capture programs to the more expensive image editors such as Photoshop Elements (which is available bundled with some scanners) and Photoshop; and Corel PhotoPaint.

Specific recommendation on software - I tried several programs, including the following:

K3CCDTools <http://www.pk3.org/Astro/> \$35 registration fee
Capture and process. Excellent for image capture, but I couldn't get the filtering/stacking functions to work. It may be the trial version I downloaded has some of those save functions disabled. Seems to be well worth the registration fee.

AstroVideo <http://www.coaa.co.uk/astrovideo.htm> \$29 registration fee
Capture and process. Seems to have many features, but I couldn't get it to work for me - probably too impatient to learn it after I got K3CCDTools and Registax going.

Registax <http://aberrator.astronomy.net/registax/index.html> Freeware!
Registering and stacking. Excellent package, works like magic! Whatta deal!

AVIedit <http://www.am-soft.ru/aviedit.html> \$25 registration fee
Capture and process. Many functions, but I have not yet tried it much. Well regarded, though.

I used K3CCDTools and Registax for the image of the sun. All of these programs allow a free trial period to get to know the software before registration.

Much more information is available in the June 2003 issue of Sky & Telescope and on the QuickCam and Unconventional Imaging Astronomy Group's (QUIAG) site at <http://www.qcuiag.co.uk/>.

The advantages to this approach to astro imaging are considerable - low cost, relatively low learning curve, and much fewer demands on the telescope OTA and mount. This last advantage really opens imaging up to many of amateur astronomers - the process of stacking many images, each of which has a short exposure time, can cure many tracking errors. The principal disadvantage is the fact that the imaging chips are uncooled and therefore rapidly accumulate thermal noise as exposures lengthen. This limits webcams to the bright solar system objects. To be sure, they can be used to image the dim fuzzies, but the long exposure they require gives a big advantage to the expensive cooled cameras.

I hope to try webcam imaging of some of the other solar system objects such as the Moon and Jupiter and I've seen a beautiful webcam shot of Uranus. If anyone wishes to drop by and see a demonstration of webcam imaging, let me know and we can set something up.

Jim Seargeant

