



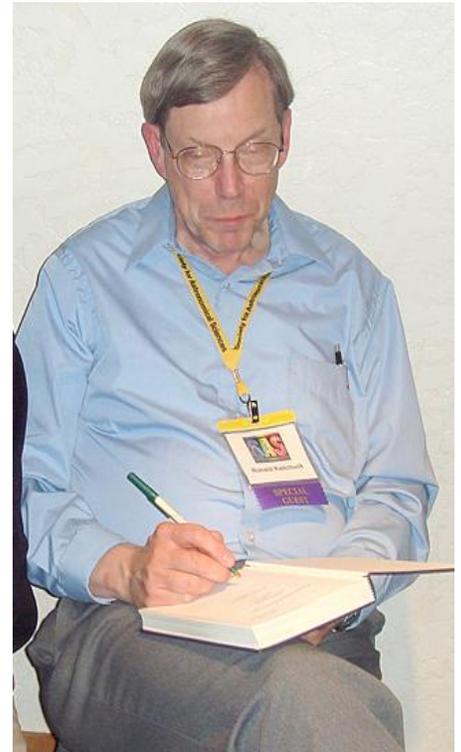
News from The Society- for Astronomical Sciences

Vol. 5, Number 2

SAS 2007 Symposium is in the books

This years SAS Symposium is completed and I think its safe to say we all had a wonderful time. As in the past, we continued the tradition of having a set of workshops on the Tuesday before the

Dr. Ron Kaitchuck of Ball State University in Indiana delivered the Keynote address at our 2007 Symposium. He gave an inspirational talk on Pro-Am relations. His "amateurs view of Pros" and Pros view of amateurs" slides had us all in an uproar. Many of us learned photometry through the book Arne and Ron published . He is seen here signing one of these books during the evening.



Symposium. This years topics were spectroscopy, conducted by Dale Mais, Gary Cole and Olivier Thizy who joined us from France. Olivier also brought their new Lhires III spectrometer to demonstrate and we all had fantastic views of the solar spectrum through this instrument. Richard Berry conducted the other workshop on the use of his software, AIP4WIN. Over fifty people attended each of the workshops.

This year featured Dr. Ron Kaitchuck as the featured speaker and he provided a wonderful over view of the way amateurs view pros and vise versa. We all came away inspired by his presentation and

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Committee:

- Lee Snyder – Co-Chairman
- Robert Stephens – Co-Chairman
- Robert Gill – Audio Visual Webmaster
- Dave Kenyon – Program Co-Chairman
- Dale Mais – Program Co-Chairman, Newsletter editor
- Brian Warner – Program Co-Chairman
- Jerry Foote – Program Co-Chairman

Advisors:

- Arne Henden
- Dirk Terrell
- Alan Harris



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Your Participation Wanted!

As I have mentioned in previous Newsletters, we need your participation in the Newsletter. We don't want this to become a one person or just a couple person show. If you have an article which can cover a variety of topics, please put it together for a future Newsletter. Work in progress is always welcome. In addition, we have started a "letters to the Editor" section where we would like to add 2-3 letters from the members/participants. We had no letters to incorporate into this Newsletter edition. Constructive comments are always welcome as we are always looking for ways to improve not only the quality of the Newsletter but also the quality of the Symposium. We want the SAS to become a year around organization not just a once a year group.

become a member, send \$25 to: Society for Astronomical Sciences, 8300 Utica Avenue, Suite 105, Rancho Cucamonga, CA 91730. You may also join online at the registration page of the web site. Membership dues are tax deductible.

learned that spectroscopy is the wave of the future and as a bonus he taught us the proper pronunciation of "spectroscopy".

Besides a full schedule of speakers we also held elections of new officers this year with Bob Bucheim presiding over the elections. There were no nominations for new Committee members and in a unanimous vote, the current Committee members were re-elected to further serve the SAS. I guess we are doing something correctly!

This year saw several talks on Exoplanets and search strategies highlighted by the serendipitous discovery of a microlens event by Bob Koff. We also saw presentations on spectroscopy, by Smith and Thizy. The usual type topics, the bread and butter, if you will, on minor planets by Benner, Chesley and Warner were heard and in addition we got to hear how Brian Warner saved the earth from an asteroid collision. General photometry talks rounded out the schedule this year.

Plans are already beginning for next years event. The committee will be meeting over a weekend toward the end of September to decide on a variety of topics/workshops etc for SAS 2008. If you have any thoughts or ideas on types of presentations or workshops you would like to have, now is the time to make suggestions to any or all of the committee members so they can be discussed this September.



Spectroscopy sessions using the Lhires III spectrometer continued into the evenings of RTMC

Membership Information

Membership in your new Society for Astronomical Sciences (SAS).

As was pointed out with the last issue, it was felt that a modest membership fee would greatly help SAS to produce a better product for its members. This fee will be \$25.00 per year. What will this membership fee provide? Well for one thing it WILL NOT go to any committee members as part of their efforts within SAS. We volunteer our time for The Society.

Members will receive a discount for the registration fee each year for the Symposium at Big Bear. It will assure you that you will get a copy of the published proceedings each year, even if you do not attend the Symposium. It will help defray costs in bringing in outside speakers (professionals) to the symposium.

Membership is annual and runs from July to June of the following year. To





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There was a strong contingent of spectroscopists and presentations on spectroscopy at this years Symposium. Above, Olivier Thizy, Gary Cole and Dale Mais take time out from observing the spectrum of the sun through the Lhires III spectrometer. Right, some things never change, like Lee's jokes, but this year something new was added. Below, panoramic view of the conference in full swing.



As always this years Symposium was held at the lovely Northwoods resort in Big Bear, CA. We have already reserved our dates for next years symposium, so plan accordingly

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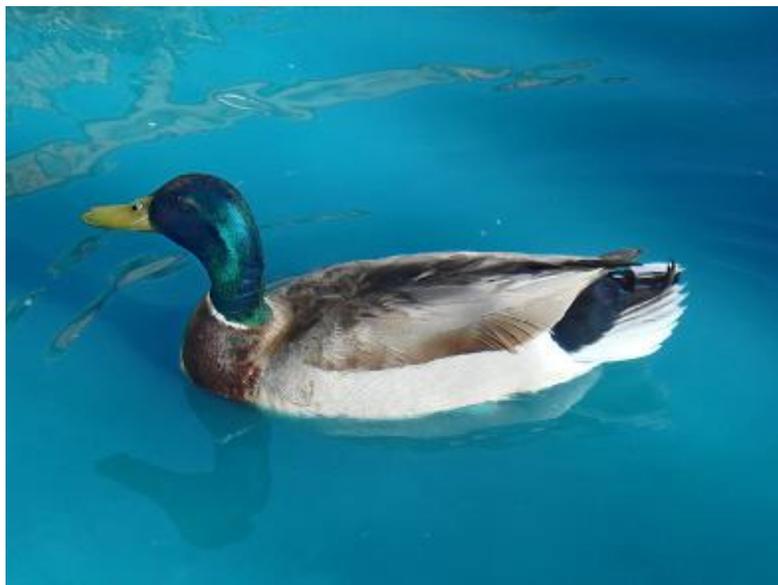
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Upper left: John Pye and Peter McCullough discuss telescopes in on Haleakala. Middle left: observing the high resolution spectrum of the sun through LhiresIII spectrometer. Top: Meade brought their 20 inch. Below right: in the middle of Richard Berry's workshop. Lower left: Even the ducks enjoyed the setting at Big Bear this year with perfect weather defining the SAS Symposium.



SAS 2007
Group Photo



THE BLUE HILLS OBSERVATORY

by Stan Gorodenski

I have been attracted to observatories since childhood which explains my motivation to build one. The one I built is two stories high and is 16'x16' square (see Image 1). The details of construction can be seen at my web site <http://users.commspeed.net/stanlep/homopagens.html>. The web site is outdated because I no longer plan on using the Starlight-1 photometer, and the 12.5" Dall-Kirkham has recently been replaced with a Meade 16" LX200R.

In 1981 I purchased 5 acres in a subdivision, Blue Hills, near Prescott, Arizona at close to 5200 ft. elevation. My primary reason for choosing this location was the close proximity to Dick and Helen Lines, photometrists who had an observatory about 15 miles south, but who have since passed away.

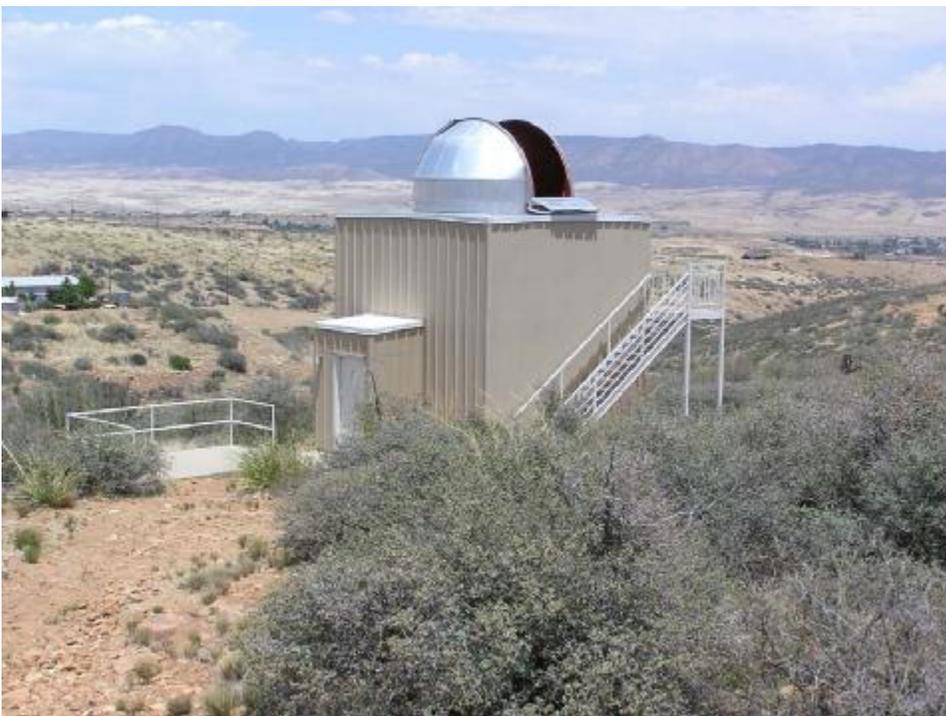
I started construction in 1983 and was determined to do everything myself (except for the concrete work). I put up the building, learned how to gas weld, designed and built the dome, and put up the outside stairs. A lot of time was spent painting the inside, laying a tile floor, and other cosmetic things. These

are not necessary for a functional observatory, but I was fulfilling a dream and wanted to do a nice job.

When I first started construction I thought it would be done in time for Halley's comet in 1985. What a gross underestimation of time that was. It took me two years working on weekends, vacation time, and personal time off work just to build the dome. After the observatory was completed, for years I used my 12.5" Dall-Kirkham. However, the RA and DEC drives, and software control (none), was completely inadequate to do serious astronomy. I attempted to resolve this with a Paramount, but the observatory, namely the positioning of the block pier, was not designed to accommodate a German-Equatorial mount. A fork mount works best and so in August last year I took possession of a 16" Meade LX200R. I saw first light on February 17th. It took this long to get it up and running because at the same time I took possession of the telescope I went back to work full time for six months 90 miles from

my observatory.

I am very happy with the Meade 16". The optics are very good, and, to date, the TCS appears like it will do everything I want it to. The permanent equatorial pier Meade provides is very well built. The tube wall is made of ¼" steel, and the top plate and bottom base are of ½" thick steel. The top plate is custom fabricated to plus or minus ½ degree of the latitude of an observatory site. Because my observatory already had a 32" square block pier I could not mount the Meade steel pier in the usual manner, the usual manner being bolting it to a concrete floor. Consequently, I had to come up with a different mounting method, which resulted in a much superior method for polar aligning the telescope. The standard procedure for polar alignment is applying brute force to move the pier azimuthally and using shims where it bolts to a concrete floor to get the altitude adjustment. As you can see in my web site, the block pier has a hollow central square hole, and all block holes were grouted with #3 rebar, each terminating with a ¾" J-bolt: there are twelve block holes and so there are twelve J-bolts. To be able to fit the Meade turn down the diameter of the bottom base from 24" to 22.5". I obtained a 1" thick steel plate and had 1" diameter holes drilled through it that correspond to the location of the twelve J-Bolts. In Image 2 you can see the Meade metal pier bolted to the 1" thick steel plate. Although not seen in the image, the steel plate does not rest directly on the block pier, but instead on ¾" J-bolt nuts. This gives me my altitude adjustment for polar alignment. In the Image you can see the brackets I made (out of a ½" thick flat iron that I had to heat with a



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multi flame heating nozzle to be able to bend it 90 degrees) and the 3/8" set screws to adjust the telescope azimuthally. However, to get a clean azimuth adjustment I had to make a modification to the Meade steel pier. As mentioned, the usual way to make this adjustment is to use brute force to rotate it. This means the pier would sloppily rotate within the confines of the three two degree slots of the base. I did not like this and so I drilled a 1/2" hole in the center of the base, and then put in a 1/2" diameter stud in the (near) center of the 1" thick steel plate. Thus, the pier pivots on this for the azimuth adjustment. Polar aligning the telescope went extremely smooth, probably in part because I brushed on anti-seize compound over the J-bolt threads underneath the 1" thick steel plate. I was very happy over how well the polar alignment went.

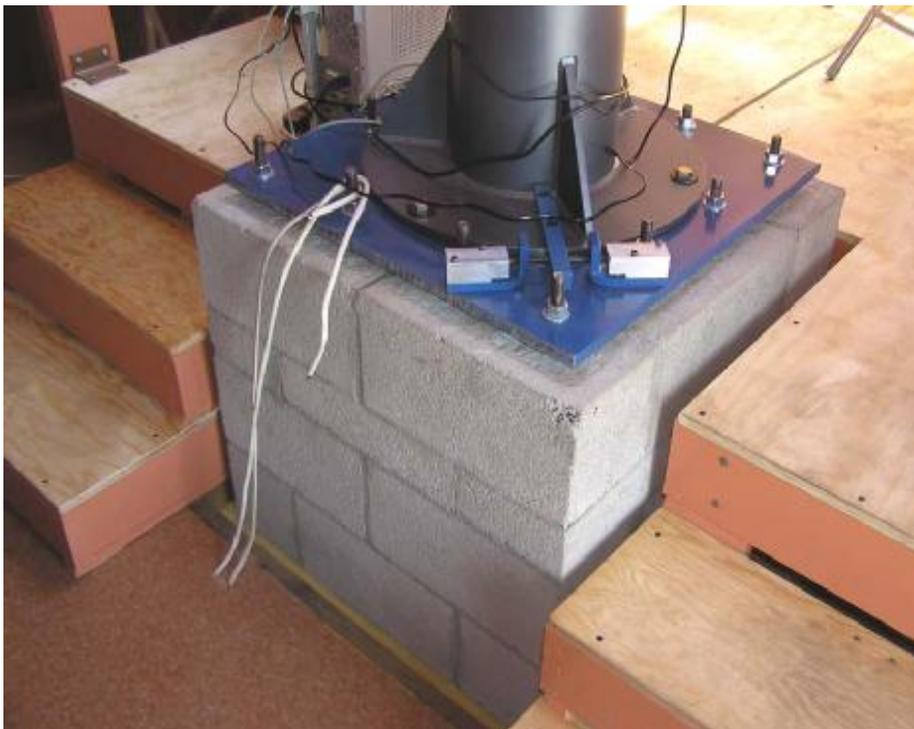
How did I get the Meade Steel pier, which weighs about 225 lbs, and the rest of the telescope inside the obser-

vatory and on the block pier? In Image 3 you can see a frame I welded together out of 1/16" thick 2" square steel tubing. It consists of two sections that bolt together. In this image it was erected on the outside decking to hoist the steel pier through an opening by removing wood deck planks (I am turning the crank on the hoist. Jeff Hopkins, not shown in the image, came up that day to help me). After the pier was hoisted up I then disassembled the frame and reassembled it inside the observatory to lift and put the steel pier and OTA on the block pier (the RA drive is light enough to lift by hand). 6" diameter wheels were bolted to the frame to enable me to move it as needed.

Image 4 is my most impressive shot of the completed 16". In it you can see the rail for the 8'x8' raised floor, 21" above the second story floor, I had to construct for easy access. In image 2 you can see the steps to the raised floor.

I am interested in the photometry of binary stars, but I have always thought spectroscopy would be interesting and plan on pursuing this also. I do not yet know what I would like to do in spectroscopy, except, for now, binary stars, but whatever I do I will view my activities as more oriented toward learning physical chemistry at the atomic and subatomic level, rather being just a data collector. To fulfill these interests I purchased the LHIRES III over a year ago, and I recently purchased an ST-8XME, primarily to have a wide image field for photometry. The LHIRES III uses a webcam for centering and tracking a star, and so the Meade LPI that I already have should work well, but I still need to test this out. I also want to mount a refractor on the 16" for guiding, and the Meade DSI Pro I purchased a couple years ago, along with the Autostar Suite, should work well for this. To make everything operable I need to redo the current telescope balance system. I also will explore the possibility of using a flip mirror system to easily go between spectroscopy and photometry. Finally, the dome still has to be motorized, although it moves easily by hand.

Now that I have an observatory my dream, my purpose in life, going back to my childhood has been fulfilled. I thought there was a danger of dying (since my purpose in life was completed), but, alas, light pollution has rescued me. When I purchased the property in 1981 the night skies were excellent. I never thought I would have a problem with light pollution. However, there has been tremendous growth in the Prescott area and the future outlook is grim. The night sky is still okay, but it will get worse. Consequently, when I took early retirement 4.5 years I started looking for another observatory site. In the late 1950's we lived in Roswell for a few years and I have always liked New Mexico. I found a 10.4 acre site in New Mexico that borders BLM land at 8,000 feet in very



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dark skies. It is essentially in the middle of nowhere so that the prospects of light pollution ever being a concern in my lifetime is practically nil, and the seeing has been very steady the few times I have been there. The site is in a subdivision called The Last Frontier about 22 miles SW of Datil on Horse Mountain. I purchased the property in December, 2005 and plan to put an observatory on it. This time, because of my age, I will have someone else do most of the construction work. Since I anticipate it going up a lot quicker than my current observatory did, I will then be faced, again, with the dire consequence of my purpose in life being fulfilled, but, alas, I still haven't collected that Luna Moth or netted that Zebra Swallowtail which should keep me going for quite a long time (I am also interested in Lepidoptera)!

