

Sidereal Times

Amateur Astronomers Association of Princeton

Duncan Planetarium, Princeton Day School

The Great Road, P.O.Box 75

Princeton, New Jersey 08540



John Church
11 Princeton Pl.
Princeton Jct., NJ

Sept.
Aug. 1972

2 Oct	3:42:21 PM	2° 5'	85	130.1
2 Oct	11:13:21 PM	4° 0'	89	130.2
3 Oct	2:02:11 PM	9° 4'	30	130.3
3 Oct	1:30:21 PM	1° 2'	30	130.4
3 Oct	10:13:30 PM	2° 1'	88	130.4
3 Oct	1:21:30 PM	2° 6'	33	130.4

AMATEUR ASTRONOMERS ASSOCIATION OF PRINCETON

SIDEREAL TIMES

Director: Norman Sperling

Editor: Roxanne Tobin

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-----Meeting announcements and other news will be found inside this issue -----

Minutes of the September Business Meeting: The meeting opened at 9:40 PM, following the lecture by Paul Shenkle. This meeting was probably the longest in AAAP history, and much was discussed. First on the agenda was the idea of Norm Sperling that several telescope mounts be placed in strategic points in the AAAP area, so that members may have a professional mount to use with their scopes. A problem with this, however, is that each telescope would have to be individually balanced, something of a pain to most amateurs. After that was the discussion of what to do with out antique 6" refractor sitting in George Parker's back yard. A plan of rotating the telescope among members as soon as it is serviced was approved and John Church was placed in charge of repairing it. Another problem solved was the fate of our study group, which desperately needed a leader to succeed Cdr. Richey. Will Krasnansky, a new member, volunteered to do this. Members also approved a guarantee of up to \$10 per month to underwrite costs of producing Cluster, the new magazine we are participating in. The money would be used only if other sources of income prove insufficient.

The idea of a mirror-grinding class was brought up by Steve Shutt at the meeting before this, and was discussed at this meeting. At present only 4 members are grinding, and 2 of these are polishing while the other 2 are just beginning. For this reason nothing definite was planned. An idea by Roxanne Tobin is that the club should have observing groups. After considerable discussion, some of the members agreed to make plans for such groups. Henry Ziemba is in charge of deep-sky projects; members interested in such observing are invited to contact him. After checking on the path of a grazing occultation, the meeting adjourned at 10:59 PM.

--Roxanne Tobin, sec'y.

Notes on the August Star Party and Picnic: Between 50 and 55 people attended the Annual Club Picnic this year. The picnic was held by the lake on the Walker Gordon Farms, in weather slightly cool for August. Chicken and corn on the cob was prepared by George Parker, and macaroni salad was also served. There was plenty of brownies, cherry pie, and cake for dessert. Cluster, the new joint publication of AAAP, WAS, STAR and the State Museum Planetarium, assembled its first issue. The skies were fairly clear and the moon set early for a change this year. The Perseid meteor shower was at its maximum, so many people watched for them. There was a large selection of telescopes this year, including two 4" refractors, a Celestron 8, a Questar 3-1/2, a Celestron 5, a Jaegers 4" refractor, a 6" Newtonian, and several others.

--Roxanne Tobin, sec'y.

A special celebration of the AAAP's 10th anniversary is being planned for November. Announcement will be made at the October business meeting, and in the November Sidereal Times. Be sure to come to both meetings.

THE SIX-INCH REFRACTOR IS BACK ON ACTIVE DUTY -- by John A. Church

Our large refractor, which has been sitting unused for some time, has been recently restored to active service. At the September meeting of the AAAP, the writer was given the responsibility of moving the instrument from George Parker's farm and putting it in reasonable condition for use. George's station wagon and my car proved adequate for the task, and by 14 Sept. the basically fine but antique and neglected telescope was in my back yard.

The first order of business was to arrange, somehow, to have the instrument protected from the weather. It has been sitting exposed for a lengthy period, and although most of the mechanism is brass and painted iron (thus being relatively immune to moisture), a few vital parts, such as the steel worm for the right ascension drive, were showing serious signs of corrosion. The assembly weighs in the neighborhood of a quarter-ton -- about the same as an upright piano -- and is NOT your ordinary garden-variety portable telescope. It could not be stored in my garage and moved out for observation without some sort of moving equipment. However, a solution was soon found. A strong dolly was constructed, with 4 heavy-duty ball-bearing casters, and the base of the pier is now firmly bolted to the wooden platform. It is now possible for me to wheel the telescope in and out of my garage unassisted, although it is still considerable effort, inasmuch as there is a slight grade to my black-top driveway. When placed on a level spot on the driveway, however, the telescope is quite stable, even on wheels, due to its great mass. Problem satisfactorily solved.

The objective of this telescope has a clear aperture of 6.19". It was filthy. Although the exterior surface was protected by a heavy brass cap, some corrosion had taken place inside the cell, and flakes of corroded brass had gotten between the crown and flint elements. There was also a fair amount of gummy brown residue on the interior surfaces. The objective was therefore carefully disassembled, with due regard to the orientation of the elements relative to each other, and given a thorough but gentle cleaning. There remain some scratches, however, as would be expected from the estimated 100-plus years of age. The scratches are not too serious and do not appreciably degrade the contrast and resolution of the image. More on this below.

The brasswork has been cleaned as far as possible, and the pier and tube have been repainted. The tube has 2 coats of white enamel, and the pier has been repainted black. The equatorial head is difficult to paint, due to its intricate construction, and this has been left with its original battleship-gray paint for the time being.

Mechanically, the mount is in good condition. All bearings work smoothly, and even the declination slow-motion is OK. Corrosion of the steel worm will not be a problem, provided no further corrosion occurs.

The telescope was minus its finder. A 7x30 model has been ordered from Jaegers, and should arrive soon.

The original eyepiece holder is 2" ID. An ancient Ramsden eyepiece was fitted to this. This eyepiece has a focal length of about 1", and consequently gives about 90x with the 90 or 91" focal length of the objective. However, it has very short eye relief and is uncomfortable to use, especially with objects high in the sky. I have adapted the eyepiece holder of my own 4" refractor to the eyepiece holder of the large scope, and it is now usable with a diagonal and any standard 1-1/4" eyepiece.

Optically the scope is performing excellently. Due to poor seeing, I have not yet attempted very difficult objects, but even with relatively poor seeing, the close pair of ϵ Lyræ is very cleanly split, with the smallest diffraction discs I have yet seen on this pair. M13 is bright and beautifully resolved. The Perseus double clusters are magnificent. Jupiter shows great detail, even with bad seeing (at moments), and a shadow transit was spectacular. The big aperture and long focal length makes for much better contrast in image than usually seen with smaller apertures. At 300x, I could practically count individual boulders in Copernicus, or so it seemed.

Most good nights will find me out with this telescope. Club members are invited to use it whenever the spirit moves. Call me early any good evening at 799-0723; with few exceptions, I will be home and the instrument available. Use it: it's your telescope.

TELESCOPES FOR SALE

(8)

6" f/10 homemade newtonian reflector, good optics, plate glass mirror. German equatorial mount, brass setting circles, one eyepiece, one barlow. Good condition.

Sears 60mm f/15 refractor. 4mm, 9mm, 27mm eyepieces, barlow, diagonal, sunscreen, image erector, finder. Mount convertible equatorial or altazimuth. Case and padding. Good condition.

The best offer will take either of these scopes from long-time member Kurt Rahlfs, who will be attending Villanova University this year. Since many members have viewed with pleasure through Kurt's instruments, several should want to bid on them. Contact Rahlfs at 609-737-1409.

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Cluster, introduced to AAAP members with the August Sidereal Times, has received quite a bit of favorable comment from readers. A schedule adjustment has been necessitated by the different publication dates of the contributing organizations, however. The September Cluster appeared with the August Sidereal Times, so none appears with this issue. A very thick October issue of both publications will appear next month. Cluster is free to AAAP members, received in exchange for contributing pages to the other participants. Non-members may purchase the magazine at the sales counter of the State Museum in Trenton, near the Planetarium. It might be a good idea to pick one up on your way out of one of their outstanding planetarium shows. Price at the counter is 25¢; for mail rates and non-member subscriptions, contact the State Museum Planetarium.

Cluster is growing and promises to be a very well-read state-wide astronomy monthly. The magazine will prosper with articles contributed by the members of the AAAP and the other groups. The many AAAP members who have things to say might consider writing them down for all to enjoy. Contact Roxanne Tobin or Norm Sperling about how to contribute.

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EASILY-OBSERVED LUNAR OCCULTATIONS FOR SEPTEMBER AND OCTOBER
(see the May Sidereal Times for further comments on occultation observing.)

date	EDT	mag.	%sunlit	cuspal angle	comments
13 Sept	7:37:32PM	5.9	33	69°N	twilight, but easy
25 Sept	10:36:29PM	5.7	88	75°N	a reappearance on the bright limb slightly S of Mare Crisium. Star is Mu Arietis.
12 Oct	7:35:51PM	7.5	26	12°N	
13 Oct	9:03:37PM	6.4	36	83°S	moon altitude only 10°.
16 Oct	11:13:57PM	6.0	66	58°S	
25 Oct	9:45:51PM	5.9	82	45°N	bright-limb reappearance of 118 Tauri near Mare Struve. Moon altitude only 12°.

--John Church.

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Grazing occultations, among the most exciting of astronomical phenomena, will be visible along lines not too far from Princeton on the evenings of 18 September and 17 October 1972. Detailed plots of the paths, and a brief description of observing techniques, will be available at the September and October AAAP meetings.

STAR PARTY COMING SOON!

On the first clear evening of the sequence 29, 30 Sept - 1 Oct (fri, Sat, Sun) there will be a star party at Princeton Day School, on the soccer field behind the main building. This is an excellent time for AAAP members to bring their telescopes, show them to other members, view various objects through the scopes there, and show the heavenly bodies to a bunch of astronomy students. Most AAAP members have telescopes that many of us haven't seen outside for some time. This is a very good opportunity for you and your friends in the club to have a lot of fun under the stars. If Friday, the observing will start about 9:30; if Saturday or Sunday, about 8:30 PM. You can reach the soccer field most simply by the "Back Road" to the school: Pretty Brook Road, turn north onto the service road toward the school garages. We'll be in the field on the left at the top of the hill. Please use only parking lights when approaching the observers. More star parties will be held later in the year.

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Other coming events of interest:

13 Sept: NASA will launch the eighth Interplanetary Monitoring Platform (IMP-H) from Cape Kennedy.

18 Sept: Public Broadcasting Service will repeat The Restless Earth, an outstanding 2-hour feature on the doings of this planet's interior as observed from the surface. First shown 28 February 72, it gives the best demonstration of the structure of our planet available.

6-7-8 Oct: the Mid-Atlantic Planetarium Society convention will be hosted by the Spitz Laboratories, Inc., at their factory in Chadds Ford, Pa, and at West Chester State College. For registration and attendance information see Norm Sperling or Richard Peery.

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The location, time and topic of the next Study Group meeting will be announced at the September meeting. If you cannot attend, please contact someone who does go.



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