

"PRECISION OPTICS AND THE QUESTAR TELESCOPE"The December Meeting of National Capital Astronomers

The speaker for Nov. 30th meeting (in lieu of a December date) will be J. Roland Cumberland. He is the owner of Cumberland Precision Optics in Marlow Heights, Md. His talk will be illustrated with slides showing the various operations in the manufacture of the famous Questar telescope. He will answer questions on the extreme accuracy required for astronomical use.

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CALENDAR OF EVENTS

Saturday, November 30th, 1968

- 10 am to 11am A visit through the Cumberland Precision Optics plant in Marlow Heights, Md., and see how the fabulous Questars are made. (only the primary mirror and correcting lens, and Sun filter) NO CAMERAS ARE ALLOWED IN THE PLANT. So please do not embarrass anyone by trying to bring in a camera or try to take pictures.
- 6:15 Dinner with Speaker. ( We have just been notified that the speaker cannot make the dinner. Call Bill Winkler (H) 736 3553 or at office 440-7144 if you would like to have the usual dinner at Bassins.
- 8:15 Regular Meeting at Dept. of Commerce Auditorium, 14th & E.Sts.NW
- 7:00 Juniors Meeting at Dept of Commerce Auditorium
- Dec. 8th 2PM Prince Georges County Juniors. Materials Center, Bladensburg. For further information, call Ted Noble 721-2225 or Robert Pariseau 725-6774
- Dec. 3,10,17 Telescope Making Classes, Materials Center, Bladensburg, Md. Ted Noble, Instructor.
- Dec. 6,13,20,27 Telescope Making Classes, Palisades Community Center, Wash, DC Jerry Schnall, Instructor (h)EM 2 8872: (o) 557 3144
- Dec. 7th or 14th Discussion Group. Date to be decided at Nov.30th meeting. President George Gould has offered to present his theorems "Dealing with the errors of Einstein's Special Theory of Relativity." No math, a philosophical discussion based on Gould's discoveries that if accepted, will make profound changes in our physics books.

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An Invitation. . . . .

Following the November meeting, some NCA members expressed an interest in visiting near-by Planetariums. Perhaps these members would like to visit the Prince Georges' Planetarium for a Special Christmas Program !!!

The Planetarium Staff extends this special invitation to the NCA members and their families, for December 17th, 1968 at 7:30PM. Parking is ample on the grounds of the Materials Center. We request that you phone so proper accommodation can be made, since the planetarium only seats 60 persons.

Phone 779-7946 Planetarium- Miss Wendel or Mrs. Noble  
address 4600 Varum Street, Bladensburg, Md.

Directions: Turn at Upshur Street off Kenilworth Ave., Md.

(this is a commercial area with twisting streets. Thompson & Cook is a large Building at this turn off. You will see machine tools in their display window. the Center is then actually directly behind it but about two blocks away. You will see a number of school buses parked at the Center, and turn in right there. The Planetarium is hidden inside the long narrow building and cannot be seen from the outside of the materials building.

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#### Md - DC Junior Report

The Md-DC Juniors had their organizational meeting, Saturday Nov. 9th at 2pm in the meeting room of the Chevy Chase Library. Eight members were present. We worked out tentative plans for projects we would like to carry out during the 1970 eclipse.

In preparation for the eclipse, we are doing all types of astronomical observing, with and without telescopes; in groups and individually. By doing so, we hope to improve our observing techniques considerably by the time of the eclipse. Accordingly, we are having a 'Star Party and Picnic', Saturday Nov. 23rd, 4pm at Rock Creek Park. (too late, Editor)

Since some of our members have never been to a Planetarium, we are planning to visit one sometime in December. At our next meeting Dec. 14th, at the Chevy Chase (Md) Library, we are having a "Sun Party". Members are reminded to bring photos and sketches of recent observations along with anything else which might be of interest to the club. All juniors living in Montgomery County and the District of Columbia are welcome.

Astro reporter Sheila Duck.

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Just received notice from Margaret Noble that Amateurs from Chesapeake, Va. are planning to come to the tour and the lecture.

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#### SHORT NOTES -

MERRY CHRISTMAS & A Happy New Year -

We are most grateful that "Percy Wright" is home and feeling better. (That's Mrs Bot Wright and she is a past President of NCA) See you all Nov. 30TH

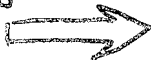
George E Jones

## CALENDAR OF EVENTS (CONTINUED FROM PAGE 1)

Dec. 17th 7:30PM "STAR OF BETHLEHEM" and a short Christmas story.  
Materials Center Planetarium, 4800 Varnum Street,  
Bladensburg, Md., promptly at 7:30PM  
Please phone for your reservation, phone 779-7946  
No charge, Special sky show for NCA members and family.

Dec. 3rd, Tuesday Evening In HARRISBURG, Pennsylvania We have been invited.  
The Astronomical Society of Harrisburg (old friends of ours) request member of NCA to join them in the dedication of their new observatory outside of Harrisburg, Pa. The principal speaker will be Dr. John Cavanaugh of Franklin & Marshal College. He is an excellent speaker and one of our finest Astronomers. Bob Wright is interested in getting up a few cars to drive up Tuesday evening. Its about a two hour drive each way. Bob will have maps available to the observatory. If you left a 5PM from Silver Spring, its a leisurely drive with a stop for dinner and be there by 8PM. You should be able to be back in town by 1PM We could share car expenses and it would be a delightful visit.

LET'S TRY FOR  
A good representation  
by NCA -



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## NOV. 30<sup>TH</sup> SPEAKER (CONTINUED FROM PAGE 1)

This telescope can resolve finer detail than most other optical systems twice its size. The speaker will have both the 3 1/2 inch and the new 7 inch Questar on hand for our inspection. If weather permits we will set up the telescopes on the monument grounds and do a little observing. Otherwise Mr. Cumberland will set up various targets in the Auditorium which he will use as examples of the resolution that can be gotten when these telescopes are used as long distance microscopes.

Mr. Cumberland's talk is based on the operations carried out in his plant. In addition to the Questar which is his principal product, he designs and manufactures special optics for the US Government and leading R & D corporations in the country.

J. Roland Cumberland is a native of Washington, DC., and founded his company in 1949 after gaining his experience in the optical shop of the U.S. Naval Gun Factory. He operates his business with his two sons, and eight other employees. In the 1950's, Cumberland's precision work led to the techniques required in the development of the revolutionary Questar Optics. This telescope is now used world wide. In addition Mr. Cumberland is equally well known as a musician and choir leader. His devotion to Masonic good will through music keeps his very busy.

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## PRINCE GEORGES COUNTY JUNIORS

On Sunday, November 10, the Prince Georges County Juniors held a meeting at the Materials Center in Bladensburg. Much of the meeting was taken up in a discussion of elementary astrophotography. The PGC Juniors' 4", F 3.5 astro-camera was displayed, and all became familiar with its use. Examples of lunar photography, star trails, and time exposure star photography were also displayed. This led to a very general discussion of developing and printing techniques. The meeting ended with a discussion of the merits of equipment available from various companies for fitting out a telescope for astrophotography. The next meeting is on Dec. 8th. Submitted by Astro reporter Robert Pariseau.

New Members

Joan B. Barrows \_\_\_\_\_ 4904 Tarheel Way Annandale, Va. 22003 - 461/7286  
 Ken Dymond \_\_\_\_\_ 409 Constitutional Ave. N.E. Wash, DC 20002 \_\_\_\_\_ 543-8046  
 Haruo Kato \_\_\_\_\_ 700 South Court House Rd. Arlington, Va 22204 \_\_\_\_\_ 522/2781  
 John & Bonnie Legowik \_\_\_\_\_ 3513 Randolph Rd. Wheaton, Md. 20902 \_\_\_\_\_ 946-8996

Junior Members

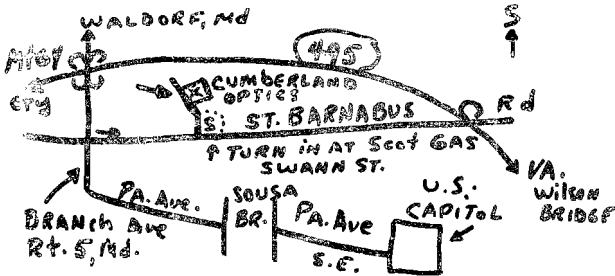
Paul E. Gilliam, Jr \_\_\_\_\_ 13103 Imperial Ct., Laurel, Md. 20810 \_\_\_\_\_ 725/2729  
 Daniel Hepworth \_\_\_\_\_ 1903 N. Quintana St., Arlington, Va. 22205 \_\_\_\_\_ 532-8939  
 Jonathan Liebenau \_\_\_\_\_ 6200 North 22nd Rd., Arlington, Va. 22205 \_\_\_\_\_ 534/7315  
 David Rubenstein \_\_\_\_\_ 359 Scott Drive, Silver Spring, Md. 20904 \_\_\_\_\_ 384-6795

The November Meeting of NCA

The November meeting featured an illustrated, modified panel discussion of astronomical education in the Washington, D.C. area. Margaret Noble, William Fagin, and Alan Breitler, area Planetarium Directors, were the speakers. Among the points brought out was the difficulty of teaching the idea of apparent planetary retrograde motion and the fact that a gap in astronomical education develops in high school as a result of crowded schedules. This novel meeting format was highly successful, as indicated by audience interest generated.

Astro reporter "Bob" Wright

Leith Holloway sends his address: Northgate Apts 135B, Cranbury, N.J. 08512. We wish him good observing and hope that his many friends in NCA will write to him.

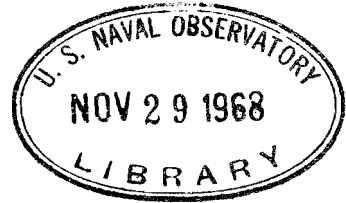


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(NOT TO SCALE) G.E.G.

MAP to CUMBERLAND OPTICS ↑

MAP to PRINCE GEORGES PLANETARIUM ↓



Library,  
 Naval Observatory  
 Washington 25, D.C.

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 Astronomical League of Wash, DC.  
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