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STAR DUST



MARCH 1, 1970 --- Vol. XXVII --- No. 7



THE GREAT NEBULA OF ANDROMEDA : M 31 : NGC 224

Andromeda Nebula Survey Will Be Described

Because of the large extent of the Andromeda Galaxy, it is possible to study individual regions in that galaxy in great detail. Spectra have been obtained of 70 emission regions in Andromeda, from which the velocity field in the galaxy is measured out to a distance of 80,000 light years from the nucleus. The resulting variation of circular velocity with distance from the nucleus is in agreement with that obtained from 21-cm radio observations, and is very close to that observed for our own galaxy. A mass model of Andromeda is derived. Close to the nucleus ($r < 3000$ l. y.) velocities are very asymmetric across the nucleus and not yet understood in terms of a simple velocity model.

The work has been done in collaboration with Dr. W. Kent Ford, Jr. using an image-tube spectrograph. Observing techniques (typical magnitude = 18, exposure time 1 hour) will be discussed.

CONTINUED ON Page 3

President Gould Appeals For Academy Fund

Our President, George Gould, says it is very important for those 100 or so members who have not done so to send in or bring to the next meeting at least 1 or 2 dollars to cover the cost of the special mailing of the ballots for the Washington Academy of Science.

"We have so far received approximately \$40.00," Mr. Gould says. "The academy polled its members and voted us into membership. What we will save is around \$15.00 a month in our present mailing costs and we will get our membership brought up to date free of charge. N.C.A. will furnish one member who will serve as a director on the Washington Academy of Science Board of Managers. In this way, N.C.A. will have a direct representation in the business of the academy."

So lets all get our dollars in and reimburse our president who furnished the money out of his own pocket. If you don't get to the March fourteenth meeting, send it to George Gould or Jerry Schnall,

5508 29th Place Hillcrest Hts., Md. and 2801 Quebec St. N.W. Washington, D.C.

Board of Directors Meeting, January 17, 1970, N.C.A.
Presiding, George Gould, President

~~CONFIDENTIAL~~

Proposed by George Gould, Chairman,

"It is hereby resolved that the Board of Directors of the National Capital Astronomers, Inc., shall conduct its meetings with the following order of procedure.

1. Call to order by the Chairman and in his absence by his designated acting chairman.
2. Reading of the minutes by the Secretary and in his absence by the acting secretary appointed by the Chair for that particular meeting.
3. Reports of Committees and other communications to the organization.
4. Old business.
5. New business.
6. Good and welfare from members of the National Capital Astronomers, Inc.; recognition of guests. All such communications and discussions taken place at this time shall be acknowledged by the chair and the Secretary will record the Chair's comments as to such action that the Board may consider at a later meeting of the Board of Directors.
7. All approved minutes of such Board meetings will be published in the next issue of the Star Dust.
8. Roberts Rules of Order as revised shall be deemed to be the guide for proper parliamentary procedure, providing that the Non-Profit Corporation Act of the District of Columbia legal requirements be met and all actions of the Board will be consistent with its powers authorized in the constitution and by-laws of the National Capital Astronomers, Incorporated."

FOR SALE

~~CONFIDENTIAL~~

DYNASCOPE RV-6, 6" reflecting telescope with clock drive, three lenses (6, 9 and 18 mm), setting circles, pier mount, fiberglass tube and finder scope. Also included is a camera mount, dynascope, with rack and pinion adjustment and swing-away action. Price \$175.00
Phone 356-3066 evenings or weekends

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Dr. Vera Rubín attended high school in Washington, D. C., and was then a member (1944) of the National Capital Astronomers. A. B. (Vassar 1948), M. A. (Cornell U. 1951), Ph. D. (Georgetown U. 1954); all degrees in Astronomy. 1954-65, Georgetown U.; 1965-present, Department of Terrestrial Magnetism, Carnegie Institution of Washington. She specializes in research and observation into motions of stars in our galaxy and motions of external galaxies.

Bill Winkler

NOTE: Because of the March 7 eclipse, Dr. Rubín's talk on the Andromeda survey will be held on the second Saturday this month - (see below)

CALENDAR



- March 14, Md. -D.C. Juniors meeting. 2:00 p.m. Chevy Chase Public Library, 8004 Connecticut Ave., Chevy Chase, Md. For further information contact Ray Finkleman, 933-0945.
- March 14, 6:15 P.M. Dinner with the speaker at Bassins, 14th and Penna. Ave. N.W. Dr. Vera Rubín, a former NCA junior, will be our guest. Call J. Legowik, 946-8996 or B. Winkler, 762-5135 for reservations.
- March 14, 8:15 P.M. NCA monthly meeting. Dr. Vera Rubín of the Carnegie Institution of Washington will speak on "A Spectroscopic Survey of the Andromeda Galaxy". Our eclipse results will also be discussed.
- March 13, observing at Trivilah Elementary School. Junior and Senior members. Contact Raymond Finkleman: 933-0945.
- Observing at the 5-inch at Naval Observatory. Friday, March 27th. 8-10 p.m. with John Alexio.
- Telescope-Making Classes at Palisades Recreation Center will meet Friday nights, March 6, 13, 20 and 27 at 7:30-10.
- No discussion group in March.

New Members:

Mr. & Mrs. Edward C. Laughery
7332 Lee Highway Apt. 104
Falls Church, Va. 22046
573-2170

TREASURER'S REPORT

<u>Income</u>		<u>Outgo</u>	
Dues	17.25	Sky and Telescope	8.01
Handbooks (9)	13.50	Star Dust	6.53
Timetables (2)	.90	Speaker Dinner	3.93
		Md. Acad. Sci.	46.87
Total Income-Jan.	31.65	(Timetables)	
Balance Jan. 1	<u>652.93</u>	Amer. Ephemeris	<u>4.50</u>
Total	684.58	Total Outgo-Jan.	69.84
Less Outgo-Jan.	<u>69.84</u>		
Balance Jan. 31	614.74		



J. Schnall 2/8/70

NATIONAL CAPITAL ASTRONOMERS, Inc. of
WASHINGTON, D. C. *ASTRONOMICAL LEAGUE
of WASHINGTON, D. C. * President,
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dolph Road, Wheaton, Md. 20902, Assoc. Editor,
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Lunar Material Featured in February Program

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Dr. Edward Chao of the U. S. Geological Survey gave an unusual talk on his preliminary analysis of Apollo 11 and 12 Lunar samples. Illustrated by 40 beautiful slides, Chao's talk indicated that while the samples from the two lunar locations, more than 1000 miles apart, were qualitatively similar, the percentage composition of their constituent elements differed markedly, especially for titanium oxides. No sign of present or former life was found, nor were important quantities of precious metals detected.

JUNIORS' REPORT

On January 30 and 31, a group of Md. -D.C. members and their guests held an observing session at Travilah Elementary School near Gaithersburg. We saw the recently-discovered comet, Tago-Sato-Kosaka, and I noticed a change in position over the 24 hours. I can now understand how Charles Messier could have gotten comets confused with galaxies, nebulae and clusters.

The next meeting will be on March 14th at the Chevy Chase Public Library, 8004 Connecticut Avenue, Chevy Chase, Md. Meeting time is 2:00 p. m. Topic of discussion will be the solar eclipse. For further information, contact Raymond Finkleman at 933-0745.

We will be holding an observing session on Friday, March 13th. We will meet at the Chevy Chase Public Library at 7:30 p. m. The observing site, Travilah Elementary School, is a 1/2-hour drive from the library. Call Raymond Finkleman to check the weather situation. I wish to invite all members to join us. Although this event is sponsored by the Juniors, Senior members and their guests are also welcome.

Raymond Finkleman