FROM

HALIFAX CENTRE R.A.S.C. 1747 SUMMER ST. HALIFAX, N.S.



NOVA

田公

HOYAL ASTRONOVICAL HOUTERY,

52 COLLEGE ST., TORONTO, ONTARIO.

4°38'N 63°35'W





NOTICE of MEETING



Halifax Centre

R.A.S.C.

Date: Jun

June 22nd, 1973

Place:

The Theatre

Nova Scotia Museum 1747 Summer St. Halifax, N.S.

Time:

8:00 PM Sharp!

Topic:

Tapes, Slides, and a Report;

The General Assembly in a Nut Shell.

Speaker: Peter Edwards

Halifax Centre's Delegate

- PLUS -

(time permitting)

Topic:

Arp's Theory on QSO

Speaker: Dr. David L. DuPuy

Department of Physics St. Mary's University

Halifax, N.S.

All members and guests are most welcome!

Nova Notes are printed, thanks to the

goodwill of the Nova Scotia Museum.

Editor's Page

Where was last month's Nova Notes? Why didn't I get mine? HOLD IT! Your Editor has looked into these and similar questions which were put to me, so here's the whole story...

It was decided that the second last Friday of the month previous to publication would be the deadline for accepting articles for N.N. For the last issue that was Good Friday. However, as I was in the grip of final exams, my complete attention was on the exams as I'm sure you can understand. I wrote my last exam on April 27 (Friday) AM. That afternoon I was busy at the typewriter preparing Nova Notes for the press. Monday morning (April 30) Nova Notes went to press, or so I thought! Normally this would have been plenty of time to have them printed. since it usually takes two weeks for printing they should have been delivered Monday AM May 14th. Such was not the case. On Thursday I went in search of our coveted bulletin only to find it was not even printed!! I was promised them for Thursday PM. The explanation given to me was that our kind of organization takes a low priority in the printing plant and as they have been so busy these last few weeks N.N. was put to the bottom of the pile not just once but several times. I returned to the Museum Friday AM. but no Nova Notes! Friday at 5:00PM, I went back again and found N.N. not correlated. By meeting time they were put together and addressed. At this point, I would like to draw your attention to the last sentence on the notice of meeting. This incident was unforseeable by all concerned and the only recourse we have is the prevention of a recurence.

Should the same or anything similar (ie. anything causing the delay of N.N. publication beyond the meeting date) happen in

the future, the meeting will be announced on CBH 860 Radio on the day of the meeting. Normally the meeting will be held on the 3rd (third) Friday of the month. But read the notice of meeting if it arrives, and it will, to be sure of the time and place.

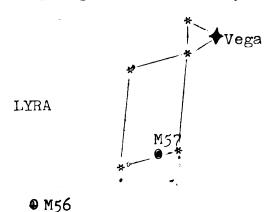
Also, we do have a back up system for just such an occasion, but it was not available to us at the time.

In last month's <u>Sky and Telescope</u> the American Museum-Hayden Planetarium, 81st St. and Central Park West, New York, N.Y. 10024, advertised a "Copernicus Medal" for \$1.75. I purchased one, and I certainly recomend it to you. For further details look it up in the May issue of S and T on page 278.

Peter Edwards The Editor

Featured Constellation for June

Around midmonth, Lyra crosses the meridian at 30 minutes UT. This striking "harp" is the home of +0.5 mag. Vega, a brilliant blue-white star. M57, the Ring Nebula, can be found half way between the bottom two stars, gamma and beta. Down to the SE, one can find the very tight globular cluster, M56.



Minutes of Meeting May 18, 1973

Dr. Cunningham opened the meeting with apologies to members for the lateness of Nova Notes, which the Museum had been able to print only that afternoon. There was a short discussion on the possibility of improving our contingency plans for such occasions, so that at least a notice of meeting would go out to members. Members should keep in mind that, unless told otherwise, the Centre meets on the third Friday of the month at 8 pm at the Museum. (Note, however: next meeting - June 22). If in doubt, members should feel free to phone a member on the Executive.

Dr. Cunningham next asked the ten members present for an indication of interest in the Summer Telescope Workshop (see May Nova Notes). Three responded positively, and it was hoped that there would be others interested from the members unable to attend the meeting.

On behalf of the Centre, Dr. Cunningham wished Bon Voyage to Mr. Peter Edwards, who will be representing the Centre at the RASC General Assembly (May 25-27) at Carleton University. Mr. Edwards will report on the General Assembly at the June meeting of the Centre.

Dr. Cunningham then called on Dr. Roy Bishop from the Physics Department of Acadia University, who spoke on his observation of the lift-off of Apollo 17.

Dr. Bishop began his talk, however, with a general consideration of the problem of getting a rocket to the moon, as economically as possible. A description of the required flight-plan was given, as well as explanations provided for the location of the Launch Centre at Cape Kennedy, and the reason for the launching of the Apollo 17 moonship at night.

Next, Dr. Bishop described, with the aid of a plastic model, the Apollo-Saturn 5 moon "rocket" - actually more than eighty individual rockets. The largest of these, the F-l engine, five of which go to make up the first stage, has a power output of 20 gigawatts; the total power output of the first stage is thus 100 giga-watts, twice that of all of Canada. Dr. Bishop reminded us that the inventor of kerosene, the fuel for the first stage of the Saturn 5, was a Nova Scotian: Abraham Gesner.

The site Dr. Bishop chose for his observation of the launch was situated on a two mile wide arm of water, across which there was ten more miles of land before the launch pad. Dr. Bishop showed some slides of the view from this position before the launch (as well as some other interesting slides), and the talk culminated with two showings of his ninety second film of the lift-off. It was decided to postpone the showing of the thirty minute official NASA film of Apollo 17, and the meeting adjourned for coffee at 9:45 pm.

Circular No. 2511

CENTRAL BUREAU FOR ASTRONOMICAL TELEGRAMS INTERNATIONAL ASTRONOMICAL UNION

POSTAL ADDRESS CENTRAL BUREAU FOR ASTRONOMICAL TELEGRAMS. SMITHSONIAN ASTROPHYSICAL OBSERVATORY, CAMBRIDGE, MASS 02138, USA CABLE ADDRESS SATELLITES, NEWYORK - WESTERN UNION RAPID SATELLITE CAMBMASS

COMET KOHOUTEK (1973f)

Dr. L. Kohoutek, Hamburg Observatory, Bergedorf, telexes that he has discovered another new comet, as follows:

1973 UT	a ₁₉₅₀	€1950	m_1
Mar. 7.86944	8 ^h 22 ^m 4	+ 4°31'	16
9.85972	8 21.0	+ 4 40	16

The comet is diffuse, with central condensation, no tail.

COMET KOHOUTEK (1973e)

The following precise positions have been reported:

1973	UT	α ₁₉₅₀	δ1950	$\mathbf{m_1}$	Observ er
Mar.	2.73681	10 ^h 58 ^m 00 ^{\$} 30 10 57 57.24	+25°05'32"5 +25 06 31.8	15	Kojima
	7.72014	10 32 29.05	+31 34 31.1	15	- и п
	7.73472 7.84688	10 32 24.48 10 31 47.78	+31 35 36.5 +31 44 08.4		 Kohoutek
	7.85590 9.87431	10 31 44.73 10 20 21.62	+31 44 48.3 +34 14 55.1		"
	9.88403	10 20 18.32	+34 15 37.2	1.5	
	10.63854 10.69966	10 15 54.27 10 15 32.48	+35 10 01.2 +35 14 23.2	15	Kojima "

- N. Kojima (Ishiki). Measurer: H. Kosai. Communicated by K. Osawa. The Mar. 2.7 position on IAUC 2506 is incorrect. L. Kohoutek (Hamburg Observatory). Nuclear magnitude estimates are: Feb. 28.0, 14.5; Mar. 7.8, 14.7; Mar. 9.9, 14.7.

COMET HECK-SAUSE (1973a)

Further precise positions have been reported as follows:

1973 UT	a ₁₉₅₀	81950	m ₁	Observer
Jan. 26.92152	12 ^h 07 ^m 32 ^{\$} 58	+21°54'58"2		Ferreri
26.92708	12 07 32.08	+21 55 11.7		11
30.01388	12 01 41.68	+23 51 13.9		
Feb. 5.95729	11 46 27.98	+28 17 16.6		
6.05016	11 46 14.84	+28 20 51.2		Vaghi
21.90583	11 01 25.32	+37 46 34.8	12.4	Waterfield

Circular No. 2522

CENTRAL BUREAU FOR ASTRONOMICAL TELEGRAMS INTERNATIONAL ASTRONOMICAL UNION

POSTAL ADDRESS CENTRAL BUREAU FOR ASTRONOMICAL TELEGRAMS SMITHSONIAN ASTROPHYSICAL OBSERVATORY, CAMBRIDGE, MASS 02138. USA CABLE ADDRESS SATELLITES NEWYORK - WESTERN UNION RAPID SATELLITE CAMBMASS

→ COMET KOHOUTEK (1973f)

Dr. L. Kohoutek, Hamburg Observatory, Bergedorf, communicates the following precise positions. The first refers to a prediscovery image, only a few nm from the edge of the plate, and it is probably less accurate than the other Bergedorf positions.

1973	UT	01950	δ1950	m_1
	28.94097	8 ^h 53 ^m 28 ^{\$} 35	+ 2°10'40"8	16
	26.84514	8 11 18.69	+ 5 52 25.9	15

The following elements, by the undersigned, are based on the 12 accurate positions, Jan. 28 to Apr. 2. The low-precision ephemeris is intended for those making advance plans for observations. Improved and more detailed ephemerides will be supplied later.

					73 Dec.		1 ET			Ω=	37° 257	.926	} 1	950.0
			q =	(14057	AU				i =	14	. 333	J	
,	1973	E!			δ1950	1973,	/74	α1	350	619	50	1974	ΕT	$\alpha_{1950}~\delta_{1950}$
	Oct.	30	11	^h 28 ^r	n_ 7°3	Dec.	24	17	h221	n-25	?3	Jan.	8	20 ^h 55 ^m -13°5
	Nov.	4			- 8.8		25			-24.			13	21 53 - 8.9
		9	11	56	-10.4		26	17	53	-24	. 2		18	22 49 - 4.0
		14	12	13	-12.2		27	18	09	-23	. 5		23	23 40 + 0.6
		19	12	33	-14.2		28	18	26	-22.	. 7		28	0.23 + 4.6
		24	12	55	-16.4		29	18	43	-21.	.7	Feb.	2	0.59 + 7.7
		29	13	22	-18.7		JO.	19	00	-20.	. 8		7	1 29 +10.1
	Dec.	4			-21.1		31	19	15	-19.	. 9		12	1 55 +12.0
		9			-23.4	Jan.	1	4.9	29	-19	. 1		17	2 16 +13.5
		14	15	20	-25.2		2	30	42	-18.	. 3		22	2 35 +14.7
		19	16	16	-26.1			; 9	57	-17.	. 5		27	2 51 +15.7
	The v	/alı	ies (of L	and r	and to	∉o e⁴	tin	nate	es of	fthe	e tota	al m	agnitude m
	are,	res	spect	tive	ely for	eschis	fat∈		٠.	4, 2	2.02	, 1.46	6, 6	.5, 6.2; Nov.
	24 1	F .	2 1	ΛE	27	· ~ /				7 (0.00	1 (١ ١	0 0 - D 10

24, 1.52, 1.05, 3.7 1.1. 7. 6.1 4. 17, 0.55, -1.0, +0.8; Dec. 19, 1.14, 0.40, -3.1, -0.7 6.1 7. 1.14, 0.24, -6.4, -2.8; Dec. 29, 1.11, 0.14, -10.0, -5.3, 0.7 3. 0.97, 0.27, -6.2, -2.8; Jan. 8, 0.86, 0.43, -3.4, -1.0; ... 6.81, 0.57, -1.6, +0.1; Feb. 2, 1.01, 1.06, 2.9, 3.7 2.2 1.01, 1.47, 5.9, 5.6.

1973 April 12

Brian G. Marsden

Contributed by Dr. Roy Bishop

Letters To The Editor

Beefs, bouquets and suggestions accepted here...

John Cunningham
381 Campbell Street
Summerside, P. E. I.

"KNOW ASTRONOMY"-- A PROJECT TO PROMOTE INTEREST IN ASTRONOMY

Interest here in S'side(abbreviation for Summerside) is fairly low when it comes to astronomy, though it can be expected of a small town.

However, interest here was demonstrated when Athena Regional High School offered a very basic course in the science of astronomy. Though small, the turnout was promising.

Mr. Harvey Smith is also trying hard to promote interest, he and I are trying to obtain access to the little used ten inch on top of Athena(if we get in, it will be do to his efforts). Though it was origanly planned out for his church group, it may later be possible to invite the public to an "open house", which would also gather together amatuer astronomers through out Prince Edward Island to see and meet each other.

Mr. Smith majored in physics at University of Victoria in Toronto and took courses in astronomy at that same university.

I myself have wrote to Mr. James MacNeill of Athena in hopes of interesting students to take Lyrid meteor counts per hour and if the results are promising later I will do the same with the Eta Aquarids.

My friend David Randall shows an interest which is more than just passing, indeed, he has purchased just April the 11th a Tasco telescope, similar to mine.

I myself recieve monthly the <u>Sky and Telescope</u> magazine and pictured below **is** my two inch Tasco alt-azimuth. The tripod, telescope and eyepieces, sell at Tasco for a total of about \$70, a complete unit named the <u>Cosmic 6T</u>, but I bought it from a store for \$43, plus the expence of \$12 to replace my table-top tripod for a large, over 5 foot, tripod.

It is hoped in the near future a small astronomy club can be formed here, as well as a high-school level course(at Athena) in astronomy, as well as the formation of a monthly circular, for distribution to my and other school libraries, as well as the public library.

John Cunningham 381 **Campbell** St. Summerside, P.E.I.

SKY-LAB

MANNED ORBITAL WORKSHOP AND LABRATORY

Leaving Launch Complex 39, three astronauts will be launched to dock with a prevolusly orbited "Skylab", an S-IVB Apollo third stage, and various other componants, forming the "Sky-lab Cluster".

The Orbital Workshop, or OWS, is the main componant of the Skylab spacestation. It houses the crew and is an experimental area and labratory. Half of Skylab's power comes from the solar wings attached to the forty-eight foot long twenty-two foot wide canister. For Skylab One 1500 pounds of feed will be carried and 6000 pounds of waterwill be used. It contains a shower(to allow the astronauts one shower a week), and the first extra-terrestial toilet.

The Airlock Module and Multiple Docking Adapter (AM and MDA, respectivally). The command ship, a modified Apollo Command Module, will dock with the forward of two ports attached to the MDA, the other being reserved for, if needed emergency purposes. To enter Skylab they pass through the 17 foot long and 10 foot wide airlock module, large enough to hold two astronauts, carring portable life support systems, in pressure suits, compfortable moving space.

Of interest is the ATM, the Apollo Telescope Mount, 11.3 feet wide and almost 7 long, which contains the majority of the Skylab telescopes.

Sky-lab will be launched ummanned, the ATM horizontal with the OWS, and by a Saturn 5.It will stand at over 330 feet(one book:334 feet, another 357 feet)tall on the pad. Total wieght is 3110 pounds. The crews will be launched by a Saturn I-B, an early Saturn test modle abondoned for the S5 in the Apollo moon flights.

Varoius experiments will touch into the fields of technology, science, ecology, and industry. Perhaps it can be used as a rest station and base when the first major station is built--or when the first Mars ship is built.

REFERENCES

Sky and TElescope, January 1973 issue, page 24

Nasa Facts "Skylab" (write to NASA)

Time Magazine, April 23 issue(73), page 64

HAVE YOU READ ??

This is a journal published by The New York Academy of Science and is aimed at high school students and other queer people like me. It should be in all high school libraries. In the May 1973 issue there is a fascinating article on comets. Of the long period comets, about half rotate in opposition to the rest of the planets.. Some of these come to within a hairbreadths of the sun's surface only to recede way out beyond the solar system half way to our nearest star! The short period comets all rotate in the same direction as the planets. They seem in many cases to be in captive resonance with the sun and Jupiter. There is a new theory (to me) that many comets are formed from massive ejections from volcanoes. Remember Nix Olympica? With the bright comet expected next December, Lets set up a Comet Committee to observe this and perhaps make some usefulobservations. ?structure of head ?spectra of tail and ?time related variations.

NATURE April 27 1973

On page 557 is a short note on the relation of QSO's and galaxies. The object known as Ton 256 seems to be an intermediate between a quasar and a galaxie !!!!!!

Murray Cunningham

