

THE

BUFFALO ASTRONOMICAL ASSOCIATION INC.  
BUFFALO MUSEUM OF SCIENCE  
HUMBOLDT PARKWAY  
BUFFALO NEW YORK 14211

# SPECTRUM

A P R I L 1 9 6 8

**APRIL MEETING:** For our meeting of April 12, 1968 (8:00 PM, EST, at the Museum) we are fortunate to have as guest speaker our own Walter Whyman whose topic will be "Comet Ikeya-Seki and other Comets." Walt certainly needs no introduction - for many years he has been one of our most faithful members. Residing in Batavia, he divides his astronomical time between the BAA and our Rochester counterpart. It is our pleasure to welcome WALTER WHYMAN!

The April Meeting coincides with the TOTAL ECLIPSE OF THE MOON. The Museum's Kellogg Observatory will be open to the general public from 10:00 PM, EST (April 12) until 1:30 AM, EST (April 13). All BAA members and friends are, of course, welcome to stay on after the meeting and view the eclipse (the law of averages, as far as the weather is concerned, ought to be with us this time. But don't count on it!). The Moon will enter the umbra at 10:10, with totality beginning at 11:22. Mid-eclipse occurs at 11:47 and totality ends 12 minutes after midnight. The Moon leaves the umbra at 1:25 am, Saturday morning. The penumbral phase is usually not observable without photometric instruments. The Moon will be near the meridian around midnight, with an altitude of about  $41^{\circ}$ , so that it will be fairly well placed for viewing. Judging from the last eclipse (rained-out in Buffalo, of course) and since the Moon passes through the umbra near its southern edge, this should be a "bright" eclipse without the dark reddish tones observed 3-4 years ago. The Museum expects large crowds, since for once the eclipse occurs at just about the right time for everyone. The following BAA members have indicated their desire to help: Ron Clippinger, Edith Geiger, Ed Lindberg, Paul Redding, and Dick Zygmunt. SEE YOU AT THE ECLIPSE.

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\* NIAGARA FRONTIER COUNCIL OF AMATEUR ASTRONOMICAL ASSOCIATIONS \* NOTICE.

Under the above title the Buffalo Astronomical Association is convening a meeting of representatives of amateur astronomical societies within a radius of about 200 miles from Buffalo. This meeting will take place Friday evening, April 26, 1968, at 8:30 PM, EST, at the Buffalo Museum of Science. The purpose of the meeting is to attempt the formation of an alliance of amateur astronomer societies to achieve greater coordination of activities, specifically in these areas:

1. The formation of a speakers exchange pool and a program planning pool.
2. Joint meetings or joint summer star nights or both.
3. Coordinated observing projects extending over large and remote areas.

The following is a very tentative agenda of the meeting: Roll call of associations present; Appointment of representatives from the various associations; Appointment of permanent officers; Scheduling of future meetings (probably on a bi-annual basis); Establishment of a speaker exchange pool; Planning of joint observations; Planning of joint star nights; Establishment of a mailing list; Discussion of a possible joint newsletter. Our secretary mailed out notices to 25 amateur societies, of which 12 have responded favorably so far. Since the BAA is hosting this important meeting we will need some volunteers to help with refreshments, etc. If you want to help, please contact Ron Clippinger at the April Meeting. Our president is acting as general chairman of this first meeting.

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IMPORTANT NOTICE! - - - This June we are electing new officers (President, Vice-president, Treasurer, and Secretary). According to our constitution, the nominating committee consists of those board members who are not holding elective office. These include: Ernst Both, Ed Lindberg (Chairman), Darwin Christy, Fred Price and Walter Whyman. It is requested that: 1. members who are interested in serving as officers submit their names to this committee; 2. members who wish to nominate fellow members for office likewise submit their intentions to the committee. This is a crucial year since most current officers have indicated that they do not wish to run for re-election. THE COOPERATION OF ALL MEMBERS IS URGENTLY NEEDED.

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\* A TALE OF A TAIL.\* By Edith Geiger.

There is an air of excitement and foreboding when a celestial body from the far reaches of space and time streams its light into the darkness of the night as it passes by, on its restless journey through the heavens.

The conduct of earthlings of the species Homo sapiens, when confronted with such an event, is oft times ridiculous, humorous, and even tragic. When Halley's comet last gave us a passing glance in 1910, a Cleveland paper of May 19th recounted the goings on of the night before. As one might expect, there were the usual fears and frenzies that the public worked itself into, worrying over the effect on the Earth when it would pass through the comet's tail that night, and the possibility that our quivering little planet might even be struck by this awesome visitor.

The evening of May 18th found the people of Cleveland gathering early in the downtown streets, hurrying about nervously in a vague unrest, waiting (or hoping?) for a catastrophe to strike. Police reserves were called in from outlying districts to help keep law and order as Cleveland waited for whatever the night had in store. Large audiences attended four or five street meetings in the public square to hear the preachings concerning the implications of the expected terrifying event.

Grillroom row on East Fourth Street did a staggering business fortifying people's spirits with stiff drinks to help them face the oncoming disaster. Those who decided that the comet wasn't going to harm them after all, celebrated their rationalized relief in the same manner. Grillrooms were filled to overflowing from early evening until around three in the morning, when the happy little groups began to wander out into the night air filled with comet gas and pink elephants. Not only were the grills filled, but hotels too bulged with parties as the predicted doom brought a general togetherness everywhere.

People of Cleveland were told that they wouldn't be able to see the comet,

not even its 10,000,000 mile tail on this night of nights, so there was great excitement around midnight at Euclid and East Fourth when a wobbly astronomer with his yard-long telescope trained on a grillroom sign, shouting out that he had sighted the comet.

This hilarious evening produced instant song-writers, one of whom jumped upon a table and got as far as: "If the comet comes I'll calm it," when his unappreciated efforts were doused in a stream of seltzer. Flat roof-tops were crowded with spooning couples, with popular spots being the darkened chimney corners. What a night for romance!

An account from Paris speaks of the disappointment of French astronomers who spent the night at their giant telescopes and didn't witness any startling phenomena as the Earth sped through the comet's tail. Tragedy struck in that city, "owing to overindulgence in strong drink and underindulgence in comet study." Two roof-top sky-watchers, in different parts of the city, lost their balance and took a fatal plunge to the ground. A number of people seemed to have lost their equilibrium on this night, as many injuries were reported from folks who had fallen off low roofs also. It must have been a gay night all around the world.

In Roseville, New Jersey, it seems that a practical joker terrorized some comet watchers with his little prank. Herman C. Boehm, a chemist, took a small balloon and a considerable amount of sodium, a time fuse and a stick of dynamite, and made a contraption which rose to about a thousand feet, exploded with a gigantic roar, and ignited the sodium which fell to earth in a showery flame. The hour-long pandemonium Boehm created was finally quelled as the people were assured that the comet hadn't struck.

Well, folks, that comet is due back somewhere around 1986. Are you prepared or are you, too, going to spend a hilarious evening when we dash through the tail of Halley's comet? \*

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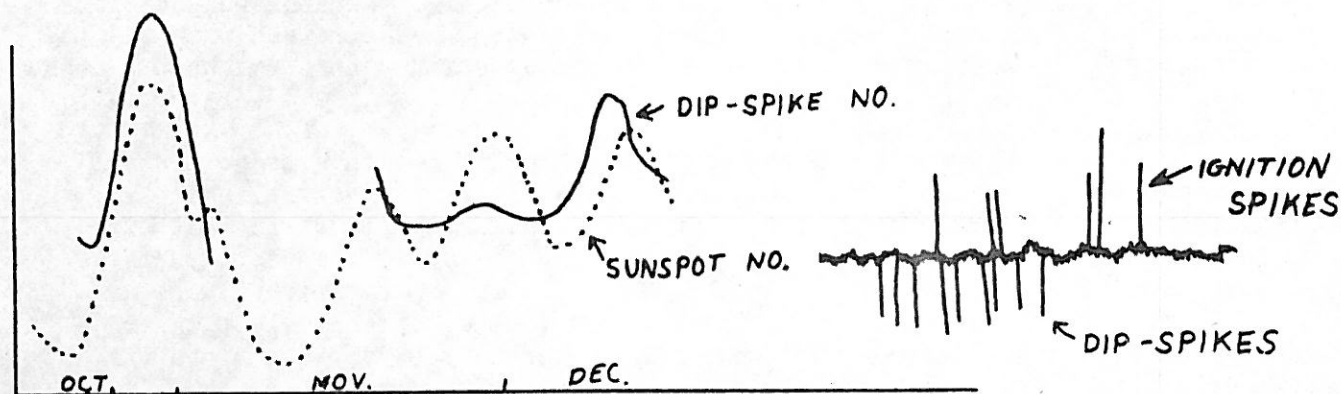
\* SOLAR INFLUENCE ON THE LOWER IONOSPHERIC TRANSMISSION OF HIGH FREQUENCY RADIO WAVES\* A Summary, by Orrin D. Christy

There is a particular type of short-lived ionization in a layer of the ionosphere 45 miles above the Earth, which affects the transmission of high frequency radio waves through it and which is directly dependent on the relative sunspot number.

While investigating the radio structure of the galactic nucleus with a 16 ft. parabolic dish, a strange type of interference was found which, when compared with the AAVSO (= American Association of Variable Star Observers) relative sunspot number corresponded directly. It manifested itself as a loss of signal strength particularly only that component of the signal originating in extraterrestrial sources. This was not just a scintillation effect, but a significant cancelling of the extraterrestrial component.

On the chart these looked like little spikes and were a reduction in signal strength, so the phrase "dip-spike" was coined. "Ignition spikes" rose from the graph, being essentially a short-lived increase due to automobile ignition noise.

Most studies of the ionosphere are done by using earth-bound transmitters, but in this study the low power levels of extraterrestrial radio noise were utilized as the transmitter outside of the ionosphere. The short life of this ionization (about 10 seconds) makes it fairly unique, and no account of this was found in contemporary journals. The observations were carried out over a period of 62 days with a 16 ft. parabolic dish, BC1161A radar receiver at 162 Mc, and a 0 to 50 volt chart recorder.



An approximate graph of the observations of the daily dip-spike number and the relative sunspot number. The gap in the dip spike number was when equipment was out for testing.

NOTE: We invite the comments of our readers on Orrin's work. We might state here that noise from the galactic nucleus is used routinely in ionospheric studies (for example at the McMath-Hulbert Observatory) and shall comment at greater length in the next issue. Orrin is presenting details of his work (already given to our members at the March meeting) at the Eastern Colleges of Science Conference at Yale University, April 18-20, 1968. eeb.

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