

ORLANDO SECTION NOTES



Volume V, No. 1

September, 1969



Mel Taylor Receives Chairman's Gavel

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INSTITUTE OF
ELECTRICAL AND ELECTRONIC ENGINEERS**

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INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS

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Inquiries concerning advertising and/or announcements should be forwarded to Mr. R. R. Rowell, 2131 Sycamore Drive, Orlando, Florida.

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Section Chairman:	Melvin J. Taylor R. 647-6045	Martin Marietta B. 855-6100 x 4245 4246
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Section Treasurer:	Gene Dashiell R. 644-1765	Hewlett-Packard R. 841-3970
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	H. Rosenblum R. 424-6882	NTDC B. 841-5611 x 2000
	B. L. Capehart R. 425-0473	U of F, Genesys B. 855-0881

FROM THE CHAIRMAN'S CORNER



I am fortunate to have such an outstanding slate of officers working in behalf of the Orlando Section of IEEE during the 1969-70 season. The names and telephone numbers for both those elected and appointed officers are on the preceding page. I would like to extend recognition to several new members of the executive committee: Mr. James M. Sessoms, Program Chairman; Mr. J. Douglas Wells, Group Chapter Representative; Mr. Harold Rosenblum and Dr. Barney

L. Capehart, members at large. Special recognition is in order for Mr. Robert R. Rowell who is again serving as the Publications Chairman, producing the Orlando Section Notes. This has been an exceptional publication for the past few years as I am sure it will continue to be through the 1969-70 season. Also, special recognition is in order for Mr. John E. Tracy, who is our current Senior Past Chairman. John has been very active in IEEE for many years and had progressed to Section Chairman for the 1967-68 season, however, he did not stop his participation after he had served in the highest local office. He has now accepted the appointment as Awards Committee Chairman and has agreed to present a five minute talk at Section and Group Chapter meetings outlining the advantages and responsibilities of membership in IEEE.

Several meetings have been held by the Executive Committee this summer to establish the section goals and program schedules for Group, Section, and Executive Committee meetings. The goals are:

1. Membership — now stands at 480 and Mr. Karl Lohman, Membership Chairman, feels that a 10% increase by 1 June 1970 can be achieved.
2. Publicity — Mr. Martin B. Goldman, Publicity Chairman, has promised that all meeting notices will be covered by local newspaper and that special events would also have local radio coverage.
3. Awards — Select and document the IEEE candidate for Florida Engineering Society's Engineer of the Year award by 1 January 1970. Select at least one nomination for IEEE Fellow by 1 January 1970.
4. Education and Careers — Mr. W. Henry Horne, Committee Chairman, assisted by Dr. Capehart of Genesys, will establish a Student Chapter by 1 June 1970.

Program schedules: Tentative schedule for activities planned for this season are shown on pages 10 and 11. This year we hope to concentrate on better topics and high quality speakers recognizing full well that the quantity of meetings will be reduced. The success of all these meetings depends upon your active participation and support. Please note poem on page 7 and Plan to Participate.

ORLANDO SECTION MEETING

Sponsored by

AES GROUP

Wednesday, September 24, 1969

Hilton Inn — House of Beef

Social Hour6:30 p.m.

Dinner7:15 p.m.
(Steak — \$4.50)

Program8:00 p.m.

— FLIGHT OF APOLLO 11 —

Presented by a representative of

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This should be a meeting of general interested - Guests are always welcome at IEEE meetings.

— x — x —

Reservation Deadline Noon 23 September

Make reservations and secure tickets from AES officers as listed on page 6 or from Miss Doris Brown — 855-6100 x 4245/6.

Aerospace & Electronic Systems—G-10

Chairman: Jack Krips R. 424-7458	Martin Marietta B. 855-6100 x 3314
Vice-Chrm: Norman E. Himelhoch R. 293-7993	Martin Marietta B. 855-6100 x 3275
Secretary: Robert Marshall R. 855-2543	Martin Marietta B. 855-6100 x 6328
Program Chrm. Gerald H. Weiss R. 241-1793	Martin Marietta B. 855-6100 x 2430

The AEROSPACE and ELECTRONIC SYSTEMS GROUP
is sponsoring the September Section Meeting
For details see page 5.

—x—x—

Parishioner to minister soliciting money: "But parson, I thought you said salvation was free as water."

Parson: "Salvation is free as water, Brother, but when we pipe it to you, you have to pay for the piping."

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PLAN TO PARTICIPATE

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Or are you just contented,
That your name is on the list?

Do you attend the meetings
And mingle with the flock?

Or do you stay at your office
And criticize and knock?

Do you take an active part
To help the work along?

Or are you just satisfied to be
The kind who just belongs?

Do you ever work on a committee
To see there is no trick

Or leave the work to just a few
And talk about some clique?

So come to the meetings often
And help with hand and heart;

Don't be just a member
But take an active part.

Think this over, brother,
You know right from wrong,

Are you an active member,
Or do you just belong?

Electronic Computer—G-16

Chairman:	John R. Walker R. 647-6224	Dynatronics B. 838-6161 x 398
V-Chairman:	Lawrence G. Smith R. 293-7741	Computer Systems & Software B. 841-6790
Secretary:	Richard S. Van de Houten R. 838-0571	Dynatronics B. 838-6161 x 423

The Electronic Computer Group has scheduled its first meeting to be held on 7 October. Detailed announcement of this meeting will be in the October Issue.

The Electronic Computer Group embraces theory design and practices relating to digital and analog computation and information processing.

The functions of the local Electronic Computer Group are to promote close cooperation and exchange of technical information among its members and those of other groups both in and outside of the IEEE organization. Our local chapter engages in a broad range of activities, such as general meetings, panel or roundtable discussions, inspection and field trips, study groups and seminars.

Membership is open to all IEEE members of every grade. Why not become active with this Group — NOW?

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ALGONQUIN ANTENNA PICKS UP NEW RADIO SOURCE

Scientists from one Canadian and three U. S. universities have used the 150-foot (45.7-meter) dish antenna of the Algonquin Radio Observatory to detect in space OH molecules of a hitherto unobserved level of excitation. The antenna is operated by the National Research Council of Canada.

The OH molecules are short-lived couplets composed of one hydrogen and one oxygen atom. Like other molecules and atoms. OH groups can exist at various energy levels and each is characterized by emission of energy at an appropriate wavelength. In space, OH can be detected as emitted radiation by radio telescopes, or its presence may be deduced by inference, as is the case when light or radio energy, deficient in only a few component wavelengths, reaches earth from a faraway source.

The observations that are the subject of the present report, published in the current volume of the Astrophysical Journal of Chicago (by J. L. Yen, University of Toronto; B. Zuckerman, University of Maryland; P. Palmer, University of Chicago; and H. Penfield, Harvard College Observatory), were of radiation stemming from a source in our own galaxy, the "Milky Way." It is known as W 3 and is on the edge of the visible nebula I.C. 1795. The belief is that the radiation is produced by a gigantic natural maser. It is thought to be energized by infrared or ultraviolet energy in nearby gas that is becoming hotter and hotter as it condenses under the influence of local gravity, as part of the process of creating a new star.

This study of molecules in interstellar space is of special importance because some of these molecules, only a little more complex than those recently observed, come very close to the simplest of the amino acids — the first steps toward life.

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- 1969-1970 ACTIVITY

MONTH ACTIVITY	Sept.	Oct.	Nov.	Dec.
Section Mtgs.	24th G-AES	—	—	2nd G-EC
Exec. Brd. Mtgs	3rd	1st	5th	3rd
Aerospace & Electronic Systems Group	Sponsor Section 24th	—	19th	—
Electronic Computer Group	—	7th	—	Sponso Section 2nd
Microwave Theory and Techniques Group	—	16th	11th	11th
Communication Technology Group	—	—	13th	—
Power and Industry and General Applications Group	22nd	27th	24th	22nd

CITY CALENDAR -

Jan.	Feb.	Mar.	April	May	June
BBQ 23rd 7th	Engineers Week 4th	25th G-P&IGA 4th	15th G-CT 1st	13th G-MTT 6th	Annual Meeting 19th 3rd
14th	—	11th	—	20th	—
—	3rd	—	7th	—	2nd
—	18th	18th	—	Sponsor Section 13th	—
8th	—	12th	Sponsor Section 15th	14th	—
—	23rd	Sponsor Section 25th	27th	25th	22nd



Dr. Pierson, recipient of
Engineer of the Year Award



Annual Meeting Speaker
Dr. Paul H. Sherman

Fellows Table



Our Membership Chairman reports an Orlando Section Membership of 480 of these 480 members there are the number shown below affiliated with each the Groups.

IEEE MEMBERSHIP GROUP COUNT, AUGUST 1968

Group	Field	No. of Members
G-1	Audio	9
G-2	Broadcasting	4
G-3	Antennas and Propagation	10
G-4	Circuit Theory	20
G-5	Nuclear Science	9
G-6	Vehicular Communications	7
G-7	Reliability	6
G-8	Broadcast and Television Receivers	8
G-9	Instrumentation and Measurement	11
G-10	Aerospace and Electronic Systems	57
G-12	Information Theory	12
G-13	Industrial Electronics and Control Instrumentation	10
G-14	Engineering Management	20
G-15	Electron Devices	8
G-16	Computer	38
G-17	Microwave Theory and Techniques	23
G-18	Engineering in Medicine and Biology	4
G-19	Communication Technology	39
G-20	Sonics and Ultrasonics	4
G-21	Parts, Materials and Packaging	5
G-23	Automatic Control	22
G-25	Education	3
G-26	Engineering Writing and Speech	7
G-27	Electromagnetic Compatibility	10
G-28	Human Factors in Electronics	1
G-29	Geoscience Electronics	4
G-31	Power	18
G-33	Magnetics	1
G-34	Industry and General Applications	2
G-35	Systems Science and Cybernetics	6

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Microwave Theory & Techniques—G-17

Chairman	W. O. Copeland R. 855-9559	Martin Marietta B. 855-6100 x 4106
Vice-Chairman	T. R. Page R. 647-2598	Martin Marietta B. 855-6100 x 4560
Secretary	James M. Schuchardt R. 671-4877	Martin Marietta B. 855-6100 x 4514

The MTT Group plans to hold 6 meetings during the 1969-70 year. The first will be on 16 October, details in the Orlando Notes.



LOCAL GROUP CHAPTERS

The G-MTT promotes the formation of active local Group Chapters which are located from coast to coast and continue to increase in number. They have considerable vitality, meeting frequently and engaging in active discussions on current scientific topics related to the field of interest. Much of the strength of the national G-MTT stems from these local Group Chapters.

Why not participate in the meeting of this Group Chapter?

New facility opened for UHV-cable testing

An advanced facility for testing extrahigh- and ultrahigh-voltage cable designs has been operated by the Phelps Dodge Cable and Wire Company in Yonkers, N.Y., overlooking the Hudson River.

Equipment in the new EHV Test Center will enable the testing of insulated transmission cables with ratings of up to 1200 kV dc and up to 1000 kV ac. The highest underground present-day ac power transmission system in the U.S. operates at 345 kV. Special major equipment presently installed in the Center consists of a 2000-kV dc testing set, a 1500-kV ac series resonant test set, and a 46-kV impulse and switching surge generator.

The laboratory structure—the first major building to feature a new Phelps Dodge aluminum wall system—is built over the river on steel pilings driven into the river bed. The interior hall is completely environmentally controlled. It houses giant electric testing devices and auxiliary equipment for monitoring the performance of experimental electric power transmission cables.

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Communication Technology - G-19

Chairman:	J. D. Wells R. 855-1524	S. B. T. & Tel. Co. B. 241-9031
V.-Chairman:	Martin-Marietta B. 855-6100 x 2952	H. E. Lindsey R. 293-5665
Secretary:	Tom Wallace R. 422-2524	S. B. T. & Tel. Co. B. 423-7071

The scope of the Communications Technology Group embraces planning, research, development, design, application construction, installation and operation of all telecommunications including telephone, telegraphy, data facsimile and point-to-point television, by electromagnetic propagation including radio, wire, aerial, underground, coaxial and submarine cables, wave guides, communication satellites and lasers; in marine aeronautical, space and fixed station services, repeaters, radio relaying, signal storage and regeneration, telecommunication error detection and correction, multiplexing, carrier techniques, communications switching systems, data communication and communication theory.

The function of a communications Technology Group is to promote close cooperation and exchange of technical information among its members and other related groups both in and outside of the IEEE organization. The local Group Chapter engages in a broad range of activities, such as general meetings, panel or roundtable discussions, inspection trips, study groups, and seminars.

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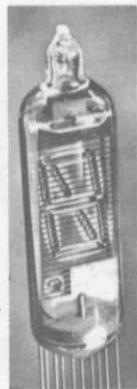
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Program Chrm:	Fred Finney R. 671-8426	Fla. Power Corp. B. 644-6142 x 224
Secretary:	Dean Hall R. Leesburg	Minute Maid B. 841-2100

GROUP MEETING

Monday, 22 September 1969

8:00 p.m. — Florida Power Corp., Conference Room, Pinecastle,
5563 So. Orange Avenue

Speaker — Mr. Clifford B. Benhan, Transmission Consultant, FPC

Topic — Florida Power Corp. 500 KV Design Problems

A discussion of the unique problems encountered along coastal sections of the FPC Service area.

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SEPTEMBER ACTIVITIES CALENDAR

Monday, September 22 — 8:00 p.m.

Power-Industry and General Application Group Meeting

FPC Conference Room, Pinecastle

Wednesday, September 24 — 6:30 p.m.

Section Meeting, Sponsored by AES Group

Flight of Apollo 11 — Hilton Inn



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