

Space Trip is Goal Of University Scientists

By ROG ALEXANDER

For the past eight years, scientists at the University have been working in a laboratory in Electrical Engineering on a project that will culminate with the launching of a space satellite next year, and in the future, possibly a trip to the moon.

These scientists are members of the Ionosphere Research Laboratory, concerned with geophysical research and observations into the ionosphere.

According to Sidney A. Bowhill, a member of the research team, the laboratory is part of the University's research program into the atmosphere. The team will assist in the research and groundwork for the basketball sized satellite which will circle the globe some-time during the international geophysical year which lasts from July 1, 1957, to Dec. 31, 1958.

The purpose of the satellite is to investigate the nature of the ionosphere, a vast, empty realm which extends from 50 to 150 miles above the earth, and in whose path, the satellite will travel in its globe circling flight, Bowhill explained.

For the past eight years, he continued, the laboratory has been investigating the ionosphere by radio waves. Situated on the site of the old iron mines, five miles west of State College, Bowhill said, is the transmitting station. Here, a 250 thousand watt transmitter, 1000 times stronger than that of the local radio station, sends out a continuous signal over an antenna system a mile long.

These signals bounce off the layers of the atmosphere and travel back towards the earth, Bowhill said.

The signals are picked up by the receiving towers on the University farms, and relayed to the laboratory where they are recorded on film strips in the form of graphs, he said.

The charts are then translated by the staff, and the findings sent to the Geophysical Research Directorate of the Air Force, the department sponsoring the satellite flight.

During the flight of the satellite, whose launching date is top secret, the research team will observe by radio signals, the region of the ionosphere which the satellite will pass through, Bowhill said.

The satellite itself will travel around the earth for several days, and as it looses speed, Bowhill said, it will gradually circle back into the upper atmosphere, and eventually disintegrate.

In the past, Bowhill stated, rocket flights to high altitudes have given some information about outer space, but the flights are too short to give sustained observations in both time and space. The information the satellite gathers on its flight, will give the scientist the opportunity of observing conditions to be met, and difficulties to be overcome, if the day comes when man actually makes that flight to the moon, he said.

Committee Plans Spring Week HEc Exhibits

Special exhibits for high school students attending the Home Economics Spring Weekend are being planned by the Spring Weekend student central committee.

The exhibits, a new feature of the annual weekend, are intended primarily to interest high school students in the University by showing them what courses are offered. They will also give a general picture of careers for students majoring in home economics.

Each of the 11 schools in the College of Home Economics will depict some phase of its curriculum. One school will be featured each hour, but students from all curriculums will be present at all times to answer questions. Live demonstrations and dramatizations are being planned.

More than 2000 high school students are expected to attend the weekend activities on April 21 and 22.

Committee co-chairmen are Susan Hill, junior in home economics from Old Greenwich, Conn., and Richard Walbridge, senior in hotel administration from Wellsboro.

Nominations Open For WRA Officers

Women interested in holding offices in the Women's Recreation Association next year may sign up on the self-nominating forms in 103 White Hall.

Offices open to freshmen are secretary-treasurer and assistant intramural chairman; sophomores, vice president and intramural chairman; juniors, president.

A 2.5 All-University average is required.

Elections will be held in the women's dormitories the second week in March along with the Women Student Government Association's elections.

Nikolaidi Will Sing In Concert Series

Elena Nikolaidi, leading contralto of the Metropolitan Opera Association, will present the third Community Concert at 8:30 tonight in Schwab Auditorium instead of Thursday night as was erroneously reported in yesterday's Collegian.

The Association of Independent Men is sponsoring the Community Concert ticket sale. Twenty \$2 tickets are on sale at the Hetzel Union desk.

Miss Nikolaidi has sung in recitals in nearly all the major cities of the United States and has appeared as soloist with many leading symphony orchestras.

3 Town Hall Recitals
In addition to her performances at the Metropolitan Opera, she has performed in three recitals in Town Hall and last summer sang with the American Chamber Society in Katonah, N.Y.

Miss Nikolaidi will open her program with three numbers, "Thanks Be to God" (Handel), "The Mermaid's Song" and "Pastoral Song" (Haydn).

Other selections include "I Have Lost My Euridice" (Gluck), "The Nut Tree" and "Spring Night" (Schuman), "Layarni" (Spathy), and "Tsobanakos" (Kazassoglou).

Evans to Play
Robert K. Evans will assist Miss Nikolaidi at the piano and fol-

lowing intermission will play "Aubord d'une source" (Liszt), "Nocturne" (Poulenc), and "El Puerto" (Albeniz).

The program will include both



Elena Nikolaidi

Community Concert Singer secular and sacred music, closing with "My Heart at Thy Sweet Voice" (Saint Saens).

Doors will open for the concert at 8 p.m.

Student Employment

Representatives from the following companies will interview June and August graduates and undergraduates for summer work. Applicants for interviews may sign up in 112 Old Main within the next two weeks. This list will be carried only once by The Daily Collegian. Interviews will be held on dates mentioned.

Hercules Powder Co.—Mar. 14—CHEM, CHE, ME, MNG. Also M.S. candidates in CHEM, CHE.

S. Morgan Smith Co.—Mar. 14—M.E., American Tel. & Tel.—Mar. 14, 15, 16—EE, IE, ME, CE, CHE. Also M.S. candidates in EE, ME, PHYS, CHEM and Ph.D. candidates in Phys.

Debate

Team to Meet Vermont Squad In Tournament

The men's debate team will play host to the University of Vermont debate team at 4 p.m. today in 312 Sparks.

The topic for the debate is "Resolved: That the non-agricultural industries of the United States should guarantee their workers an annual wage."

Robert Neff, sophomore in agricultural education from Pottstown, and Thomas Hollander, sophomore in arts and letters from Monessen, will take the negative stand against the Vermont affirmative team.

Jonathan Plaut, junior in industrial engineering from Rockville Centre, N.Y., and Edward Klevans, junior in electrical engineering from Roaring Spring, will meet the Vermont negative team at 7:30 p.m. tonight in 316 Sparks.

Open forums will follow the debates. Students may attend.

This weekend the men's debate team will enter the West Virginia North-South tournament.

The affirmative team will be composed of George Haines, junior in education from Nottingham, and David Scott, junior in agricultural economics and rural society from Chatham, N.J.

Plaut and Klevans will take the negative stand in the tournament.

Study Includes Journ School

The School of Journalism at the University was included in a recently released study by James H. Herring, assistant professor of journalism at Marshall College.

The University was one of forty colleges and universities included in a study of instruction program development and related changes between 1940 and 1951. No specific ratings were released.

The purpose of the Herring study was to determine how the instruction programs of the forty schools developed over that time and to discover and measure other changes directly related to the instruction programs.

Philosophy Club to Hear Speech by Anderson

Professor John M. Anderson, professor of philosophy, will speak to the Philosophy Club tomorrow at 7:30 p.m., in 209 Hetzel Union. The topic will be "Why Matter Does Not Exist." An open discussion will follow the talk. The meeting is open to the public.

Players Advertising Crew

The advertising crew of the Penn State Players will meet at 7 tonight in the Schwab Auditorium loft.

Forster to Speak In Lecture Series

Dr. Kent Forster, professor of European history, will speak on "Has Penn State Been Worth Some of the Best Years of Our Lives?" at 7:30 p.m. tomorrow in the Hetzel Union auditorium.

It will be the second of three lectures in "The Last Lecture Series" sponsored by Mortar Board, senior women's hat society.

The lecturers may speak on any subject they choose and are to present the lecture as though it were their last.

Dr. Forster has been a University professor since 1941 and is one of three professors who wrote the text for international relations 300 and helped organize the course.

Organized Seminar
He was among the group to organize the Penn State Summer Seminar in Europe in 1949. He acted as a resident director in Great Britain in 1949 and 1950.

He received his B.A. degree at Washington and Lee University and his M.A. and Ph.D. degrees at The University of Pennsylvania. Sally McKnight, president of Mortar Board, will introduce Dr. Forster.

Other Series Successful
This type of series has been successfully presented by Mortar Board of the University of Colorado, the University of California, and Ohio Wesleyan.

Dr. Henry A. Finch, associate professor of philosophy, will give the final lecture in the series at 7:30 p.m. March 14 in 112 Buckhout laboratory.

Players to Present Children's Matinee Of Thurber Show

For the first time in 10 years the Penn State Players will give a Saturday matinee for children.

"The Thirteen Clocks," a musical dramatization of the famous James Thurber story, will open March 8 at Schwab Auditorium.

It will be presented at 8 p.m. March 8, 9, and 10. The children's matinee will be presented at 12:15 p.m., March 10. Children under six must be accompanied by adults.

Members of the cast include: Robert Kokat, Golux; Batya Pais, Saralinda; Derek Swire, Prince Zorn.

Joseph Conaway, Duke; Donald Barton, Hark; Ernest Swiggert, Dancer-singer; Kathryn Kelleher, Hagga; Walter Vail, Innkeeper; David Faust, Captain.

Thomas Buckley, Jackadandy; William Warthling, Tale Teller; Gary Zinman, Jackolent; Mark Wallace, Traveler; Sandra Grosky, Woman; Robert Nocera, Dancer; Janet Bean and Elizabeth Harned, Dancer.

Leonides Applications Available

Application blanks are now available at the Hetzel Union desk and the dean of women's office for self-nominations for Leonides officers.

The deadline for these applications is March 5. Leonides has set March 13 as the day for the election of its officers, in conjunction with the primary elections of the Women Student Government Association members.

Any independent woman may nominate herself or other independent if they feel are qualified for office.

Candidates for Leonides president must have a minimum All-University average of 2.5, and must be juniors. They must also have served one semester as a member of the Leonides council. The runner-up for Leonides president will become the treasurer.

Women applying for vice president must be freshmen or sophomores with a minimum All-University average of 2.5, and also must have been a member of council for one semester.

Candidates for recording or corresponding secretaries may be freshmen, sophomores, or juniors and must have an All-University average equal to the minimum average required by the school in which they are enrolled.

All applicants are asked to submit a picture. Applications will be screened by the Leonides executive council.

Tickets Now Available For Alchemist Production

Tickets for "The Alchemist" will be on sale from 8 a.m. to 5 p.m. this week at the Hetzel Union desk. Remaining tickets will be on sale at the door.

"The Alchemist," a Players' production, opened Friday at Center Stage and will run four more weeks.

Farm Reports Birth Of Lambs Hits 200

Lambing season is at its peak in the University sheep flock, as evidenced by the birth of approximately 200 lambs up to now, with almost 100 more on the way.

The barns which house the new arrivals are located on Shortlidge road opposite the Agricultural Engineering building. They are open to the public, and during lambing season numerous visitors are expected, according to Carrol Shaffner, University shepherd.

This year's crop is somewhat larger than anticipated because of the high percentage of twins. Twinning is an inherited characteristic, and by careful breeding the number of twins born increases every year.

Championship Offspring
Many of the new arrivals are offspring of championship blood lines, since several of the various breeds were winners of top awards at the International Livestock Exposition in recent years.

Approximately 400 sheep are kept in the barns so that that number in the flock may be maintained. More than half of the lambs will be sold. The remainder will be used for class demonstrations.

Accurate records are kept of the lambs. In order to facilitate the recording, the lambs are numbered within 24 hours after

birth. These numbers are stamped on their backs.

Students Live At Barns
Assisting with the work at the sheep barns are three animal husbandry students who live at the barns. They are William Watkins, junior from Bellefontaine, Ohio; Donald McCreight, junior from West Lebanon; and Thomas McIlwain, junior from Spring Church.

During the summer the sheep graze at the eastern end of the University farm land. They will be sent out to graze sometime during May, depending on the weather.

Dairy Club to Discuss Livestock Show Plans

Plans for the Little International Livestock Exposition will be discussed at a meeting of the Dairy Science Club at 7 p.m. tomorrow in 117 Dairy.

P. Thomas Zeigler, professor of animal husbandry, will speak at the meeting. It will be open to the public.