

Quarles Foresees Realization Of 'Space Travel Dreams'

The dreams of early pioneers of interplanetary travel are on the verge of realization, according to Dr. Gilford G. Quarles, director of the Ordnance Research Laboratory.

Quarles has been on leave from the University to serve as scientific and technical consultant to the Army Ballistic Missile Agency in Huntsville, Ala., where work is being done on developing the Jupiter Intermediate Range Missile.

Quarles recently told the Southwest Student Conference of the Institute of Aeronautical Sciences at Fort Worth, Tex., that even now rockets are being used for other than military purposes. He cited the Viking and other research rockets used to carry instrumentation into the upper atmosphere for scientific research.

"The demonstrated feasibility of stable flight of very large rockets," Quarles said, "definitely opened up the possibility of travel beyond the atmosphere of the earth."

"There is no question in the minds of the senior missile and aircraft experts that travel by

man beyond the confines of earth is now technologically possible. It is feasible on the basis of knowledge we have today."

Comparing the modern space traveler with Columbus, when he set out on his historic voyage to America, Quarles noted an important difference.

"Columbus had the ships, but did not know where he was going," he commented. "The prospective space traveler knows exactly where he wants to go, but presently lacks the transportation. However, construction of necessary space ships to reach Mars is well within current engineering capability."

The speaker cited studies made by Dr. Wernher von Braun, director of development in the Army Missile Agency, for a round trip to Mars requiring a little over two and one-half years.

Quarles said the United States' Vanguard satellite program will pave the way to larger, manned satellites.

He referred to the work of Dr. Ernst Stuhlinger, another Missile Agency scientist, and said this has proved an electrical propulsion system is feasible for a space

ship, traveling between satellite orbits. A nuclear reactor would make up the primary power source.

Computing the trajectory for the Stuhlinger model ship, Quarles said it would reach Mars on the 347th day after take-off from a satellite station.

He discussed some of the questions which must be answered prior to space ship operations, and said they may be partially answered by the Vanguard program. Quarles proposed a "meteor bumper" of a thin sheet of metal, to ward off the smaller objects which might be encountered as the ship hurtles through outer space.

Large meteors are rare, but if one struck the vehicle, Quarles suggested damage compartments like those of modern sailing vessels that would localize and minimize the impact.

Quarles listed some biophysical and physiological problems awaiting solution: for example, artificial atmosphere to support the crew, space suits, weightlessness and close confinement. The crew's chance of safe return will be greater than that of Columbus, he declared.

NSA Problem--

(Continued from page one) presented to Cabinet tonight for its approval.

The report recommends that the Cabinet committee on the AM station "make a detailed investigation of AM facilities for campus radio station WDFM," and if the committee arrives at a favorable conclusion, AM facilities for WDFM should be included in the gift suggestions from the class of 1958.

Elk County Ed Institute Directed by McGarey

Dr. Donald G. McGarey, professor of education, directed the Elk County Teachers Institute held last week.

Other faculty members who participated were Dr. Chester T. McNeerney, Dr. Nell Murphy, Hazel Daniels, Jeanette Molloy and Dr. Florence E. Taylor, all of the Department of Education.

Hutson Remains Critically Ill

Charles Hutson, sophomore who was stricken with pneumonia Tuesday remains in "critical condition" in Centre County Hospital, Bellefonte.

Hutson, geology and mineralogy major and a transfer student from Clarion State Teachers College, was admitted to the hospital Tuesday morning after he failed to show improvement in the University Hospital.

Hutson is the first student to be stricken with any complications from the respiratory illnesses which have hit the University. Dr. Herbert R. Glenn, head of the health service, said that he believes Hutson has "influenzal pneumonia."

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EXPERIENCED SECRETARY desires typing of term papers, reports and thesis. Fast, reasonable service. Phone AD 8-6943 after 8 p.m.

LOST

COROVAN WALLET, Monday 2:00 between McAllister and West Dorms. Call Ron Girty, AD 7-4326.

RIFLE IN front of 235 E. Foster while owner was helping distressed motorist. If returned no questions asked. Call Carter AD 7-2289.

WILL. PERSON who took tweed topcoat from Theta Chi Sat. night contact AD 8-9134. I have yours.

PAIR OF horned rimmed glasses between Osmond and Sackett. Call AD 7-4937 or leave at HUB desk as soon as you are able. Jack Hendricks.

CLARINET—fell out of car trunk Saturday night. Vicinity campus. Will finder please contact Mentzer AD 7-2337.

MISCELLANEOUS

HAPPY BIRTHDAY, Dick Drayne. May your remaining illegal year be a good one. Belated best wishes, Pat.

TURKEY SHOOT—turkeys or cash prizes every Friday nite 8:00 p.m. Ferguson Lions Club, Lions Park, Pine Grove Mills, Pa.

LOCAL REPAIR Service on all makes of typewriters. We will call for and deliver your typewriter. Nittany Office Equipment, AD 8-6125.

FRESH PRESSED CIDER. Truck will be at Werner's Freezer Fresh Saturday evenings, Sunday afternoons and evenings. Please bring iugs.

California Scientist Nomination End Visits University Set for Ed Frosh

Dr. George Tunnell, professor of geology at the University of California in Los Angeles, is a visiting scientist for the month of October.

Tunnell's field is mineralogy, crystallography, and economic geology. While on campus he has discussed problems of the mode of formation of mineral deposits with professors in the College of Mineral Industries.

Ag Econ Club to Meet

The Agricultural Economics club will meet at 7 tonight in 217 Hetzel Union to discuss "Culture and Agriculture in the Philippines."

Tomorrow is the deadline for freshmen to submit self nominations for the Education Student Council.

Nomination blanks are available in 110 Burrowes and at the Hetzel Union desk. Two wallet-size photographs must be submitted with the nomination for use at the polls.

Second-semester freshmen must have a minimum 2.4 All-University average. Elections will be held Oct. 30 and 31.

Science Fiction Elections

The Science Fiction Society will elect officers at 7 tonight in 214 Hetzel Union.

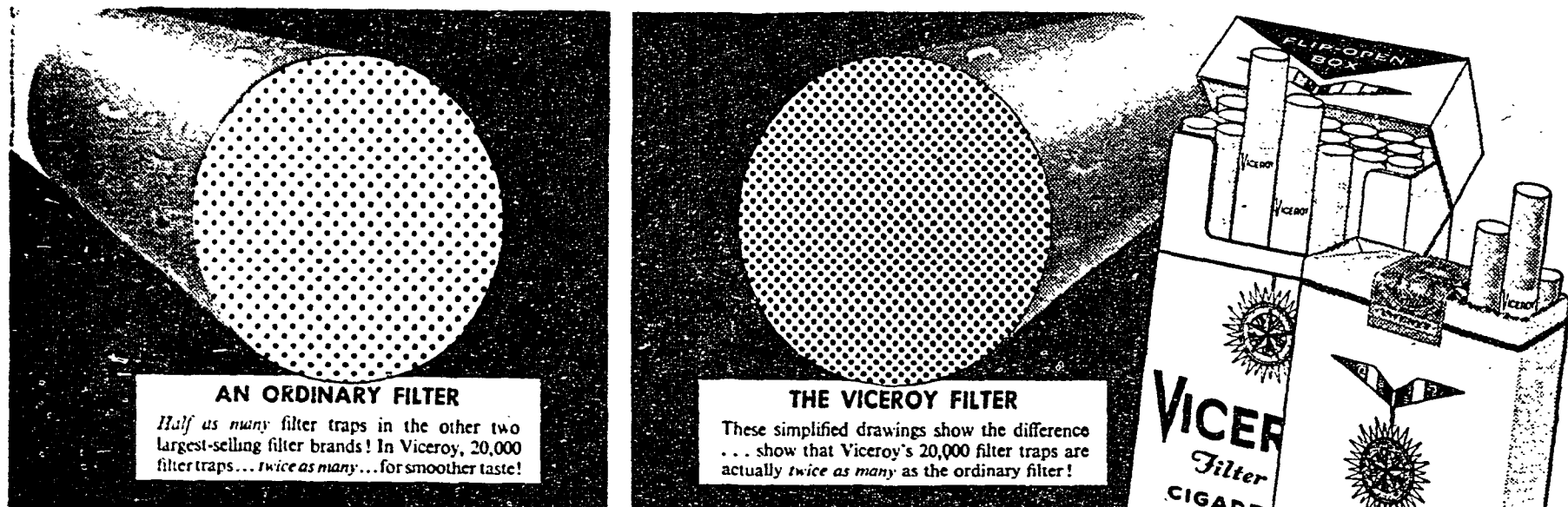
\$9300 Study Grant Awarded to Corso

Dr. John F. Corso, professor of psychology has been awarded a research grant of \$9300 by the National Science Research Foundation to conduct a one-year study on the neural quantum theory of hearing.

The basic aim of this study is to determine whether the threshold of hearing for tones of low frequency shows stop-line discontinuities from which it can be inferred that auditory processes are quantal in character.

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