

Swan Misses Sack Time For Astronomy Studies

Missing sleep is a way of life for David Swan, a Texas A&M sophomore from Dallas.

The amateur astronomer has given up about 1,000 hours of sack time since he became interested in the celestial panorama four years ago.

The 19-year-old student wants to make the night-time hours his regular working schedule after he receives his physics degree at A&M. He then plans graduate study at a school specializing in astronomy.

"I've wanted to do serious astronomical work since I was in grade school," the slender, brown-haired student remarked.

About 350 hours of his sunless sessions have been devoted to scientific meteor observation. Since he started tracking the brilliant flashes in 1962, Swan has logged more than 1,600 meteors.

AMONG THE 700 charted this year was the recent brilliant Leonid display. Swan's decision to attend A&M assured him a chance to see the Leonids, since the 1966 shower was observed only in the Southwest.

He is a member of the Rhode Island Meteor Research Organization and was the only person in that group who viewed the phenomenon, because of overcast skies on the East Coast. The cadet joined the Rhode Island group while attending Keystone Oaks High in Pittsburgh. He also is a member of the American Meteor Society.

Swan, son of Mr. and Mrs. Herman L. Swan, 9305 Larchwood Drive, Dallas, has viewed the stars from High Point, N. C.; Norfolk, Va.; Annapolis, Md.; Washington, D. C.; Lewes, Del.; Pittsburgh and the Canal Zone.

HIS FATHER is with Continental Electronics of Dallas and was formerly a Navy technician. The elder Swan first interested David and his older brother, Herman, a veterinary medicine student at A&M, in star-gazing when the family resided in Pittsburgh. While there, he studied stellar classes at the Allegheny Observatory, which houses a 31-inch refractor, fifth largest in the world. The blue-eyed Army ROTC

cadet has his own three-inch refractor which he uses for nebular, planetary, stellar and lunar viewing.

The amateur astronomer lectured on meteors and stellar classes in a course he took as a freshman at A&M. The class, Physics 314, is normally a junior course, but Swan was allowed to take it as a "fish" because of his background.

"I THINK HIS educational plan is wise," noted Dr. Nelson M. Duller, A&M physics professor who taught Swan in 314. "By getting a physics degree at A&M, he will have excellent ground

work in physics and mathematics which will be required in his later astronomical studies."

"I haven't really decided what branch of astronomy I want to study," said the star-gazer who often recruits Company C-1 cadets for midnight vigils. He will probably do graduate work in one of his present areas of interest—meteors or star classification.

Swan's training is well under way, though. And his early evening alarm clock bell doesn't trouble his roommate, Mike Harvey of Fort Worth.

"Mike's a sound sleeper," Dave grinned.



SKY SNOOPING

Texas A&M sophomore Dave Swann of Dallas lines up his telescope for a sunless session. The amateur astronomer has reported 1,600 sightings to the American Meteor Society, of which he is a member.

Aerospace Engineering Gets \$21,000 Research Grant

A \$21,000 Sandia Corporation grant to Texas A&M has been announced by Harry E. Whitmore, Space Technology Division head.

The one-year Sandia grant funds research work in the Gas Dynamics Lab 12-inch arc-driven shock tube at the Research Annex. Dr. Richard E. Thomas, professor of aerospace engineering, heads the project. The research will employ graduate aerospace

engineering students Gary Hawkins of El Paso, James Reed of Festus, Mo., and Alton Stephens of Beaumont, Thomas said.

Under the grant, studies will be made to determine the effects of metal vapors on reaction characteristics of gases like nitrogen and oxygen.

"SPACECRAFT ENTERING planetary atmospheres cause a shock wave and high temperatures," Dr. Thomas explained. "Diatom molecules thus heated fly apart. It is important to know the rate at which this happens and how the rate is affected by metal elements present."

The scientist said molecular changes affect lift and drag forces and heat transfer rate on the vehicle.

Solid fuel rocket engine propellants utilize metal fragments to improve performance, Thomas added.

"Through study of relatively simple mixtures in the Sandia research, we will begin to learn how to describe the more complex processes occurring in the nozzle of a solid fuel rocket engine," he went on.

"WE WILL study principally the affect of aluminum vapors on nitrogen," the project director noted.

He said several basic chemical and physics problems must be solved in order to carry out experiments.

Other special equipment to be used includes a four-foot by 14-inch test chamber and spectrometer.



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TTI Official At Kansas Meeting

Prof. Charles J. Keese, executive officer of the Texas Transportation Institute at Texas A&M University, is participating in the 52nd annual meeting of the American Association of State Highway Officials being held this week in Wichita, Kans. During the sessions involving design, Keese will address the delegates on "The Break-Away Sign Support Project."

The project to provide safety in collisions with sign posts deals with break-away features and considers also windload effects for sign designs. It is being conducted in cooperation with 12 state highway departments and the U. S. Bureau of Public Roads.

M. D. Shelby, research coordinator at TTI, will attend a number of the AASHO sessions also.

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All freshmen in the College of Liberal Arts are to meet in Gail Hall, Thursday, December 1, at 4:00 p. m. 375fn

THE GRADUATE COLLEGE

Final Examination for the Doctoral Degree Name: Summers, Wesley Kenton Degree: Ph.D. in Education Dissertation: Differential Prediction of Academic Achievement with Implications for the Evaluation of the High School College-Preparatory Program Time: December 1, 1966 at 4:00 p. m. Place: Room 404 in Academic Building Wayne C. Hall Dean of Graduate Studies 37442

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Final Examination for the Doctoral Degree Name: Baur, Joseph Ralph Degree: Ph.D. in Plant Physiology Dissertation: Effect of Tobacco Mosaic Virus Infection on Glucose Metabolism in Nicotiana Tabacum L. var. Samsun Time: November 30, 1966 at 3:00 p. m. Wayne C. Hall Dean of Graduate Studies 37442

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H. L. Heaton, Director of Admissions and Registrar 365420

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