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# Lick Transfers To UCSC; First Ph.D Offering

The first academic program leading to a Ph.D at the University of California, Santa Cruz, will be in astronomy, it was announced yesterday by Dr. Dean E. McHenry, chancellor.

Making this possible and practical is the proximity of Lick Observatory on top of Mount Hamilton, just an hour and 45 minutes by car.

The graduate courses will start next September. Mount Hamilton will serve as an observing station, while Lick Observatory's academic, administrative and major research facilities will be located on the campus.

Dr. A. E. Whitford, director of Lick Observatory, is heading a group of 11 academic and 19 non-academic staff members who are in the process of mov-

ing down from the mountain to take up residency in Santa Cruz.

**This move brings to an end the Lick tradition of astronomers and their families living beside the telescopes in an isolated community.**

The tradition began 78 years ago at the world's first mountain observatory and which contains the second largest telescope in the world, a 120-incher.

The event also marks the first substantial change since the observatory was conveyed to university Regents in 1888 by the founder, millionaire James Lick.

Dr. Francis H. Clauser, vice chancellor and dean of the graduate division at UCSC, said undergraduate degrees in astronomy are given at Berkeley and will not be given here.

Dr. Whitford said instruction

will range from lectures at the freshman level to the establishment of a graduate curriculum.

"Initially, the area of emphasis will be observational astrophysics, with frequent access to the Mount Hamilton telescopes, which include a 12-inch and 36-inch refractor, a 20-inch astrograph, a 36-inch reflector, and the 120-inch reflector."

A Ph.D is vital to anyone going into the field. In the medical field it would mark the difference between a doctor and a medical technician.

Dr. Whitford said there is no lack of employment for an astronomer.

He pointed out three main areas of positions: In the universities as an instructor or researcher, in government and

space work, and in the aerospace industry.

About 167 tons of equipment were transferred down the mountain to the UCSC campus.

**Included were instruments for the measurement and analysis of observations, electronic computer, machinery for technical shops and laboratories, and some 27,000 volumes from the Lick library.**

With the completion of the Natural Sciences II building, early in 1969, the observatory staff and equipment will be based in a single facility.

Members of the staff, beside Dr. Whitford are: Dr. George H. Herbig; Dr. Hamilton Moore Jeffers; Dr. Stanislav Vasilevskis, all astronomers; Dr. Thomas Kinman, Dr. George Preston, III, Dr. Merle F. Walker, all

associate astronomers; Dr. Peter Conti, and Dr. Joseph Wampler, assistant astronomers.

Present at the press conference yesterday was Charles Lick, a descendant of the family of James Lick, and Dr. C. Donald Shane, astronomer emeritus and former director of Lick Observatory.

There have been discoveries made at Mount Hamilton, but Dr. Whitford said that the progress of astronomy has in the main depended upon the synthesis of ideas stemming from a great variety of observations.

He said that now that the astronomers are in residence on a university campus, more attention can be given to underlying theory and analysis, aided by a computer.

Two research programs are

now in progress at the observatory.

For some years Dr. Herbig has been attempting to find clues to the processes that take place when new stars are formed out of gas and dust.

The T Tauri variables, which show instabilities and peculiarities not shared by sedate middle-aged stars like the sun, appear to be objects just completing the process of condensation.

Associate Astronomer Merle Walker was able to find numerous condensing stars in certain young clusters.

The many millions of years apparently necessary to complete such a process were difficult to reconcile with the known life of young clusters until the Japanese theorist Hayashi showed that physical laws predicted

a rapid collapse at a certain phase of the contraction.

Herbig suggests that here "we have actually witnessed the collapse process in the formation of a new star."

**A second research program has been the study of the quasi-stellar objects first found by radio telescopes and now under study by both radio and the 120-inch scopes.**

Attempts to understand these previously unknown components of the universe, very likely the most luminous objects known, is only a little over three years old.

The observatory will be open to visitors daily, except Mondays and university holidays, from 1 to 5 p.m., for guided tours.