

\$300,000 NSF grant to Drs. Booker and Bowles

December 28, 1966

The dramatic growth of the Department of Applied Electrophysics at the University of California, San Diego is highlighted by the awarding of a one year \$300,000 National Science Foundation grant for radiowave diagnostic studies of the Earth's plasma environment.

The grant will allow the two recipients, Dr. Henry G. Booker and Dr. Kenneth L. Bowles, both professors of Applied Electrophysics at UCSD, to begin construction of an observatory for studying scintillations of radio stars caused by irregularities in the solar wind.

Since the founding of the Department of Applied Electrophysics less than two years ago, the department has received more than \$800,000 in extramural support from such agencies as NSF, the National Aeronautics and Space Administration, and the Advanced Research Projects Agency. Additional grants totaling more than \$120,000 are expected to be approved early in 1967.

Drs. Booker and Bowles, the original members of the departmental staff, are largely responsible for the growth of the department. In less than two years, the staff has grown from two to 12 members. In even less time, the department has attracted 23 graduate students to study in its developing laboratories. In addition, some 18 undergraduate students have indicated that they expect to major in Applied Electrophysics.

Booker, who is chairman of the department, was IBM professor of Engineering and Applied Mathematics at Cornell University before joining the staff at UCSD in July, 1965. He is known for his work in applied mathematics, electrophysics and research in associated fields and has written more than 50 scientific papers.

Bowles, a graduate of Cornell University, was physicist for the Central Radio Propagation Laboratory of the National Bureau of Standards at Boulder, Colorado, before joining Booker to form the department. He is known for his work in radio wave propagation and built the Jicamarca Radio Observatory, one of the largest radars in the world.

Working with Drs. Booker and Bowles on the staff are several scientists known throughout the scientific community for their work. Dr. Marshall H. Cohen, professor of Applied Electrophysics, is engaged in radio astronomical research. Formerly an associate professor at Cornell University, Dr. Cohen is co-teaching a course in galactic and extragalactic radio astronomy with Dr. Victor H. Rumsey, a visiting professor from Berkeley, and a course in radar and radio astronomy of the solar system with Dr. Bowles.

Jules Fejer, professor of Applied Electrophysics, received an electrical engineering degree from the Swiss Federal Institute of Technology and advanced degrees from the University of Witwaterstrand in Johannesburg, South Africa. He is studying phenomena in the space environment of the earth and sun and is teaching a course in physical optics and microwaves.

Dr. Carl Helstrom, professor of Applied Electrophysics, is a magna cum laude graduate from California Institute of Technology and a DuPont Fellow in Physics. He was advisory mathematician for Westinghouse Research Laboratories before coming to UCSD. Currently he is teaching courses in signal detection theory and signal processing.

Dr. Irwin M. Jacobs, associate professor of Applied Electrophysics, was at the Massachusetts Institute of Technology before joining the staff at UCSD. He is teaching courses in information and computer science. A member of several national electrical engineering societies, he also has been a General Electric Fellow, an Industrial Fellow in Electronics and a NASA Resident Research Fellow.

Dr. Henry D. Block, visiting professor of Applied Electrophysics from Cornell University is taking part in the planning of the educational program in information and computer science. Professor Block will initiate a special course on automata in the winter quarter. The NSF has made a grant of \$250,000 to design and build a special purpose computer for the Department of Applied Electrophysics.

Several of the faculty members are currently engaged in research in the UCSD Institute for Radiation Physics and Aerodynamics directed by Dr. Keith Brueckner, professor of Physics. Faculty members are also working in the Institute for Geophysics and Planetary Physics directed by Dr. Walter Munk, professor of Geophysics, and in the Space Sciences Laboratory under the direction of Dr. Carl E. McIlwain, professor of Physics.

The administrative department of Applied Electrophysics is to be located in John Muir College, the second of 12 planned colleges at UCSD.

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