

magnificent job of selling things like its new "universal" credit card—7 million accounts so far—that it soon won't have any interest in marketing the kinds of things it used to make.

The fact is that the company is still very much in the business of making chips, cable and gigantic switches, which in turn require hugely complex software systems. AT&T has retained a very respectable chunk of the US market for equipment and has built, starting from scratch, a \$1 billion annual business in the international equipment market. In its core business, the provision of long-distance service in the US, it has put its major competitors on the defensive.

Since the divestiture, which implicitly invited AT&T to go head to head with IBM in the computer business, the company admittedly has had a difficult time, as everybody knows. An alliance with Olivetti to produce things like personal computers was unsuccessful and finally was terminated. Yet the company also won a contract worth more than \$1 billion from the Department of Defense for workstations. Its Unix operating system looks to be gradually reducing all competition, and its strategic alliance with Sun Microsystems has yielded a close collaboration with one of the computer industry's fastest-moving and most successful companies.

While AT&T has not had very good luck with its PCs and mainframes, these have been unexpectedly troubled parts of the computer market in recent years, and IBM also has experienced grave difficulties. During the last economic quarter, a period in which AT&T was waging a determined battle to take over NCR, IBM's stock fell, while AT&T's climbed 25%, easily enabling the company's leadership to match NCR's demands for a more rewarding payout.

Whatever else one may say of the NCR merger—and a lot of industry analysts have been quick to point out

that there is no record in the computer industry of successful mergers—it certainly signals AT&T's determination to remain a player in the computer hardware business. The marriage surely looks complementary, as every business analysis also has pointed out: NCR has been specializing in things like grocery store cash registers and automated bank teller machines—things that need to be connected up—and AT&T has been specializing in connecting.

National mission

Speaking as an advocate for the changes that have been taking place at Bell Labs, Brinkman emphasizes that the US is in a highly competitive situation with respect to technology and that the total health of the country depends on the US performance in this competition. "So if you are in a leadership position at a high-tech company like AT&T, you would like to do what you can to help assure that the company is technically strong and competent and that it contributes to the national well-being."

PHYSICS TODAY reminded Brinkman that many experts on basic research in industry worry about a kind of downward ratchet effect such that basic research always tends to get trimmed when business is poor, and never gets restored. Brinkman said that one purpose of the reorganization was to secure the long-term future of basic research in Fleury's laboratory.

Perhaps the only way to absolutely guarantee the future of basic research at Bell Labs would be to reconsider the breakup of the national telephone system and to restore Bell Labs as an institution that draws on a guaranteed income and performs a well-recognized national mission. But as Brinkman says, "Nobody is talking about that now." As far as he and most of his colleagues at the lab can tell, the divestiture decision is for keeps.

—WILLIAM SWEET



Sidney Wolff

Washington.

Wolff earned her bachelor's degree in astronomy at Carleton College in 1962 and her PhD at the University of California, Berkeley, in 1966. She worked at Lick Observatory for one year and then joined the Institute for Astronomy at the University of Hawaii, where she remained for 17 years. She was named associate director of the institute in 1976 and acting director in 1983. In 1984 she became director of the Kitt Peak National Observatory, and in 1987 director of NOAO (an organization that embraces Kitt Peak, Cerro Tololo Inter-American Observatory in Chile and the National Solar Observatory).

Wolff's research interests have included stellar spectroscopy, photoelectric photometry and magnetic stars. Her recent work has concentrated on the study of the stellar analogy of solar activity and abundance determinations—specifically, the chemical composition of hot stars. Wolff is the first woman to head a major US observatory and the second woman (after Margaret Burbidge) to be elected president of AAS.

In other AAS election results, Mary K. Hemenway of the University of Texas, Austin, is the new education officer; Alexander Dalgarno of the Harvard-Smithsonian Center for Astrophysics was chosen to serve as one of three AAS members of the US National Committee for the International Astronomical Union; Helene R. Dickel of the University of Illinois, Urbana-Champaign, and Robert C. Bless of the University of Wisconsin's Washburn Observatory are newly elected to the nominating committee; and Suzan Edwards of Smith College, Richard G. Kron of the Yerkes Observatory and Mark M. Phillips of the Cerro Tololo Inter-American Observatory are newly elected councilors. ■

WOLFF IS ELECTED PRESIDENT OF AMERICAN ASTRONOMICAL SOCIETY

Sidney C. Wolff, director of the National Optical Astronomy Observatories, is the new president-elect of the American Astronomical Society. She will take office as president in June 1992, succeeding John N. Bahcall of the Institute for Advanced Study in Princeton.

James E. Hesser of the Dominion Astrophysics Observatory in Victoria,

British Columbia, is AAS's newly elected vice president. He will serve as one of three vice presidents, replacing Frank H. Shu of the University of California, Berkeley, who has completed his three-year term. The other two vice presidents are Harvey D. Tananbaum of the Harvard-Smithsonian Center for Astrophysics and Paul W. Hodge of the University of