observations confirm their 1965 result. The expected limb brightening is definitely absent. It is difficult to escape the conclusion that the temperature minimum in the solar atmosphere is much higher than had been supposed.

After his 1965 observation of strong polarization in the coronal Fe XIV 5303 line, Hyder measured that of the Fe X 6374 line in Bolivia. He found the polarization to be $0 \pm 3\%$, confirming his calculation that this line is not subject to resonance polarization.

In the field of instruments at the observatory, progress on the evacuated tower telescope is about on schedule. The 220-ft vertical well was finished in November 1966. At the time of writing, the concrete tower had reached a height of 50 ft, and the walls of the associated laboratory building were up. The construction of optical and instrument parts proceeds according to schedule for installation in late 1968. No serious unexpected problems that might delay completion have appeared as yet, but are confidently awaited when pieces now being made are fitted together.

The most significant instrumental development completed during the past year was the installation of Slo Syn drives on the two coordinates of plate motion in the microdensitometer. A programming system permits the specification of any desired scan path in steps of 5μ , with speeds up to 1 mm/sec. The digital output is recorded on incremental magnetic tape or on the magnetic disk in the electronic computer. This system has worked well and facilitates the management of quantities of data previously quite impossible.

JOHN W. EVANS, *Director*

Sproul Observatory, Swarthmore, Pennsylvania

The year course in descriptive astronomy was given by Peter van de Kamp, who also gave a seminar on astrometry and double stars during the second semester. Martin Pomerantz, director of the Bartol Research Foundation, gave a seminar on Cosmic Matter, Radiation, and Fields during the second semester. Peter van de Kamp and Sarah Lee Lippincott continued to participate in the NSF-AAS Visiting Professors Program. Visiting lecturers included L. Binnendijk, V. Blanco, A. Blaauw, H. Shapley, and D. Polozhentsev. Mr. van de Kamp and Miss Lippincott participated in the IAU colloquium on the Evolution of Double Stars, held 29 August–2 September 1966 in Uccle.

Mrs. Mary Jackson, Mrs. Elizabeth H. Kuhlman, and Mrs. Louise Mitchell assisted with the measuring and reduction of photographic plates. Michael D. Worth continued as principal night observer and assisted with measuring and miscellaneous activities. Graduate students Nahide Gün Gökaya from

the University of Ankara, and beginning February 1967, Jesus Francisco Villamediana from Zulia University, Venezuela, were research assistants. Undergraduate students Jean Warren, Timothy Barker, and Susan Andersen assisted with the night work.

The telescope and mounting were overhauled, improved mechanically and modernized at the plant of the Wilmot Fleming Company in Philadelphia; the telescope was out of operation from 9 May 1966 to 20 January 1967. The lens in its cell remained in the Sproul Observatory.

The lens components were cleaned and remounted by Kurt W. Opperman of the Perkin-Elmer Corporation on 8–9 November 1966. A new double slide plateholder and a new set of rotating sectors are under construction at the Latady Development Company in Philadelphia and will be installed in the near future.

The copper dome was painted during the summer of 1966, the outside being painted a weathered copper green color, to match the earlier color and the surrounding buildings and landscape. A new insulated hardwood floor was installed in the dome in October; three exhaust fans were installed in the wall of the dome.

Photographic observations with the 24-in. refractor were made on 57 nights, a total of 759 plates were taken. Evening observations were made on 43 nights, morning observations on 38 nights; 25 nights included both evening and morning observations. This low yield is explained by the telescope not being fully in operation again till the end of June 1967.

The continued support of the National Science Foundation for our research is gratefully acknowledged.

No open nights were held.

PETER VAN DE KAMP, *Director*

Steward Observatory, the University of Arizona, Tucson, Arizona

Academic Staff. Bart J. Bok, Director of Steward Observatory and Head of Department of Astronomy; Walter S. Fitch, Aden B. Meinel, Bengt E. Westerlund, Ray J. Weymann, Professors of Astronomy; Beverly T. Lynds, Elizabeth Roemer, Thomas L. Swihart, William G. Tift, Associate Professors of Astronomy; Ronnie L. Hilliard, Andrzej G. Pacholczyk, Donald J. Taylor, Raymond E. White, Robert E. Williams, Assistant Professors of Astronomy.

The year 1966–67 has been a memorable one for Steward Observatory and the Department of Astronomy. We have hit our full stride in the development under the National Science Foundation's Science Development Program. Our staff situation is a healthy one and increasing numbers of high-