of astronomy at Wesleyan University, Middletown, Conn., and will assume his new duties in the autumn. A new observatory will be erected immediately as a memorial to the late Professor Van Vleck, for many years in charge of that department at Wesleyan.

DR. WILLIAM C. ALPERS, formerly a trustee of the College of Pharmacy of Columbia University, has been appointed dean and professor of pharmacy of the pharmaceutical department of Western Reserve University.

MR. ROBERT N. HOYT, '09, has been appointed by the corporation of the Massachusetts Institute of Technology special lecturer on public health administration.

MR. SEARCY B. SLACK, B.S., Georgia, '11; A.M., Harvard, '12, has been appointed adjunct professor of civil engineering and road expert at the University of Georgia.

PROFESSOR BURTON H. CAMP, who has been associate professor of mathematics at Wesleyan University, has been advanced to a full professorship.

DR. ELLIS M. FROST, instructor in clinical medicine and microscopic anatomy in the School of Medicine, University of Pittsburgh, has been appointed to the position of director of the department of health of the university.

DISCUSSION AND CORRESPONDENCE

SMALL AERIALS AND THE STRENGTH OF WIRELESS SIGNALS

FEW persons realize the ease with which wireless signals, such as are sent from the Navy station at Arlington, Va., and Sayville, Long Island, may be intercepted and read, even when one is some distance from the sending station.

In connection with some experiments on the effect of foliage, humidity, etc., on the strength of the wireless signals sent from the government station at Arlington, the writer was impressed by the large amount of power intercepted by an aerial erected on the university campus and an attempt was made to see if these signals could be read with a much less pretentious aerial. During the writer's summer vacation spent near Morgantown, W. Va., on the banks of the Monongahela River, a T aerial consisting of two No. 18 wires, 100 feet long, was stretched up between two trees on the side of a hill at the back of the camp. This aerial was approximately 30 feet high and 50 feet from the top of the hill. There were quite a few trees in the neighborhood of the aerial and in most cases they extended well above the highest point of the aerial. Some difficulty was met with in trying to find a satisfactory ground connection, but as soon as that was secured the "time signals" could be heard very clearly even in the brightest sunshine and on the warmest days of last August.

Upon the writer's return to Morgantown he found that not only the "time signals" from Arlington but the Sayville Long Island press dispatches could be heard with a T aerial consisting of three No. 18 wires, 30 feet long, fastened to the rafters in the attic of his residence. Later experiments showed that both these signals could not only be heard, but were loud enough to be read by using an ordinary iron bed with a wire soldered to the middle of one side for the aerial. The bed was located on the second floor of the house and was about 12 feet above the level of the street.

The receiving apparatus consisted of a Navy type of loose-coupled receiving transformer, a variable condenser, a silicon detector used without batteries and 1,000-ohm telephone receivers. A gas pipe leading to a gas stove in the room served as the ground line.

Morgantown is 162.3 miles from Arlington, Va., and 374.6 miles from Sayville, Long Island, with both the Blue Ridge and the Allegheny Mountains between. The peaks of some of these mountains rise as high as 2,200 feet above the top of the writer's residence and for the most part are covered with forests. In view of the distance from the sending stations and the mountainous character of the country over which these signals are transmitted the results obtained with these low and small aerials seem to warrant this brief description.

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