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know of only one notable exception. This will be disappointing to many of us in view of the violent anti-intellectual stand the Nazi party had taken up to about 1941; when, *e.g.*, theoretical physicists were often classed with "Jews and Marxists."

Many of the younger astronomers participated actively in one of the German services, but in 1943 most of them were released as part of the general program to bolster science. This step was taken, as a result of the initiative of Esau and particularly Osenberg, after the comparative weakness of Germany's scientific preparation had been demonstrated. The surprising thing is that the recalled astronomers, as their older colleagues, and their colleagues in some other fields, did mostly work of their own choosing, often with government support.

2. The attitude of some astronomers is demonstrated by their own publications. *E.g.*, the German director of the Graz Observatory, K. Stumpff (formerly of Breslau) writes in his report for 1942:¹⁰

"The nucleus of the new observatory at Graz will be made up out of several fairly large instruments of the Belgrade Observatory which, according to the Dictate of Versailles, the Reich had to deliver to the former Yugoslav State, and which now had to be returned." He continues in his next year report:¹¹ "The Belgrade instruments assigned to the Graz Observatory could not yet be moved in 1943. As a result of two trips I made to Belgrade I got assurances that they will be shipped by the summer of 1944." (See, however, footnote 8.)

Other removals of astronomical equipment from Allied territory are the two important telescopes from Uccle, Belgium (see p. 267) and the dismantling of the Simeis Observatory (see p. 266). Uccle and Belgrade have one point in common: both had obtained reparation equipment after the first world war.

3. One of the symptoms of intellectual deterioration in Nazi Germany was the wide-spread use of pseudo-scientific theories. Not only was astrology widely practiced, even in Hitler's headquarters, but the theory of the world ice was popular, as well as the theory that the world was a hollow shell, with the human race living on the inside (Hohlwelttheorie). The following illustrations may suffice:

a. Dr. W. Führer, a graduate of Kiel (Rosenberg, Unsöld) and later an associate of the physicist Lenard at Munich, was "Referent für Mathematik, Astronomie und Physik" under Ministerialdirektor Mentzel, 1940-1943. In this important capacity he had a large share in making Nazi appointments to German universities. (*e.g.*, the successor to Sommerfeld!). In 1943 he reportedly became official astrologer for Himmler and Hitler, at the Führer's headquarters.

b. Certain German naval circles believed in the Hohlwelttheorie. They considered it helpful to locate the British fleet, because the curvature of the Earth would not obstruct observation.

Visual rays were not suitable because of refraction; but infrared rays had less refraction. Accordingly a party of about ten men under the scientific leadership of Dr. Heinz Fischer, an infrared expert, was sent out from Berlin to the isle of Rügen to photograph the British fleet with infrared equipment at an upward angle of some 45° .

c. Other groups, including officers of flag rank, practiced or supported "Pendelforschung": a large map of the Atlantic was spread out horizontally, with a 1-inch toy battleship as test object. A pendulum, consisting of a cube of metal (about 1 cm^3) and a short string, was swung above the battleship. If the pendulum reacted it proved the presence of a true battleship at that location.

d. This intellectual regression is only part of the general anti-cultural movement that supported Nazism. Other symptoms are (a) the racial theories, (b) the sacrifice of conscience to the will of the race (as personified in the Führer), which often resulted in extreme cruelty.

e. Most scientists did not actively support the anti-intellectualism of the Nazis, and combatted the pseudo-scientific theories (though not always the racial theory). In this connection a book by R. Henseling, "Umstrittenes Weltbild," Leipzig, 1939, may be quoted. In fairness it should be stated that the milder forms of pseudo-science are not confined to Germany.

VI GERMAN ASTRONOMICAL PUBLICATIONS DURING THE WAR

The lists of publications given below should be essentially complete for the following observatories: Heidelberg, Göttingen, Munich, Hamburg-Bergedorf, the Rechen-Institut, and the Fraunhofer Institute. Information received on publications by other observatories was less direct, and only the principal issues have been listed. Complete information up to the end of 1943 may be obtained from the year reports of observatories, listed below.

Articles in common periodicals, as *Zs. f. Ap.*, *A. N.*, *B. Z.*, are usually not listed separately since these periodicals are listed themselves. Only for observatories where a complete list was at hand have all titles been retained.

A copy was secured of all publications issued by observatories visited; they are on file at the Yerkes Observatory and are available for reference and reproduction to interested astronomers. Publications for which no copy is at hand are listed with an asterisk.

Many of the publications have already been circulated in the U. S. thanks to the Committee for the Distribution of Astronomical Literature (Chairman, Dr. B. J. Bok). The Bulletins issued by C. D. A. L. further contain useful abstracts. Titles given below for which such