leading articles in the *Glasgow Herald* which criticized the enrolment of foreign students in naval architecture and marine engineering. International co-operation, however, he considers, offers more of gain than of loss, in fact, "gain for all, with loss to none".

The Zeppelin Centenary

By the issue of commemorative stamps, the opening of a museum at Friedrichshafen, and in other ways, Germany has been paying homage to the memory of Count Ferdinand Zeppelin, of airship fame, the centenary of whose birth occurred on July 8. Born on the shores of Lake Constance, Count Zeppelin was educated at Stuttgart, and at twenty years of age became an infantry officer. His military studies led him to visit Italy, France and England, and in 1863 he served with the Union forces in the American Civil War, in the course of his service making a balloon ascent. Returning home, he took part in the war between Prussia and Austria and in the Franco-Prussian War and afterwards rose to high command. In 1891 he retired as a general. He had long conceived the idea of aerial navigation by airship, and free from official duties, and possessing considerable means, he devoted all his energies to the construction of a rigid airship. In 1900 he achieved his first success with *Z1*, a craft 420 ft. long and 38½ ft. in diameter, the envelope of which contained seventeen gasbags with a total capacity of about 400,000 cub. ft. of hydrogen. The two cars suspended beneath the ship had two 18 horse-power Daimler engines. On July 2, 1900, the airship was hauled out of its floating shed on Lake Constance and covered a distance of 3½ miles before being landed on the water and towed back to the shed. As a military officer, Zeppelin had visualized the use of airships for observations and for carrying dispatches, but their use as a means of transport was his chief aim, and one of his ambitions was to see Europe and America connected by an airship service. This, however, he did not live to see, for he died in Berlin on March 8, 1917, in the midst of the Great War.

Auguste Forel and Alcoholism

In a paper on Auguste Forel and his campaign against alcoholism, read before the Society for the Study of Inebriety and Drug Addiction on July 12, Dr. J. D. Rolleston, after a short sketch of Forel's life, stated that though an active campaign against alcoholism had previously been carried out for many years in Great Britain and the United States, Forel was a pioneer in the scientific anti-alcoholic movement not only in Switzerland, his fatherland, but also on the continent of Europe. The lack of recognition of his work in Great Britain was attributed by Dr. Rolleston to two reasons. In the first place, Forel was strongly opposed to making the campaign against alcoholism inseparable from religion and Christianity in particular, as it is in this country and the United States. The second reason was the severe blow to Anglo-Saxon prudery and obscurantism caused by his classical work on the sexual question. On the other hand, the high appreciation of his work in foreign countries was shown by quotation of the opinions of eminent neurologists, psychiatrists and others in Germany, Hungary, Switzerland and the United States. Forel's contributions to the study of the alcohol problem were then considered under the headings of blastophthoria, alcoholism and the sexual question, exposure of popular errors concerning alcohol, such as the view that beer and wine do not cause alcoholism and the value of alcohol as a food, drug, and indispensable agent in sociability, alcohol and sport, and the treatment of alcoholism.

Inland Water Survey

Definite quantitative results of the Inland Water Survey Committee's investigations are forthcoming in the Surface Water Year-Book of Great Britain 1935–36 (London: His Majesty's Stationery Office, 5*s*. net) which is a statistical report (issued by the Ministry of Health and the Scottish Office) relating to the inland water resources of Great Britain during the twelve months ended September 30, 1936. The publication provides detailed information about the surface water resources of a dozen drainage basins, together with their rainfall. Results for underground water are being published separately in a different form. Twenty-seven rivers, at twenty-eight gauging stations, have been the subject of continuous measurement and the results are tabulated in regard to daily maximum and minimum water levels and daily mean discharge in cusecs. The Year-Book furnishes, moreover, in each case a brief description of the station and the drainage area, together with monthly evaluations of rainfall. The issue of this publication, which is to be continued annually, marks a further stage in the development of the Survey and it will be welcomed by all the various bodies who are interested in the use and application of water whether for agricultural purposes, or for land drainage, fisheries, industries, navigation, sewage disposal or water supplies and the like. Some useful conversion tables are included.

The Norman Lockyer Observatory

The annual report of the Norman Lockyer Observatory, Sidmouth, shows that the activities of the Observatory are well maintained. The 12-in. McClean telescope has been used for taking spectra of ζ Aurigæ during its 1937 eclipse and also of Finsler's comet and of *A*-type stars. Its chief work has been in preparation for colour-temperature observations on early-type stars, and the preliminary experiments have shown that colour-temperature observations may be profitably taken up with this instrument. The 9-in. Kensington telescope has been used on a selected number of bright-line stars, with special attention to γ Cassiopeiæ. Some photographs of star fields have been taken with the Zeiss triplet camera attached to the instrument. Three meteor cameras fixed outside the dome have been used for the photography of meteors, but unfortunately without success up to the present. Prof. Blumbach has used the Mond equatorial for photographs of galactic clusters, Finsler's Comet, and some test plates of the

Andromeda nebula. Two photographs of the aurora of January 25, 1938, were taken by Mr. D. R. Barber, who also contributed notes on its appearance to the local Press. The director, Mr. D. L. Edwards, supplies many other interesting items in his report, dealing with publications, the laboratory, the library, buildings and grounds, etc.

THE Observatory has recently issued the first of a series of bulletins, which will be published from time to time, probably averaging about one a year. These will include articles less technical in character than the usual papers which appear in the *Monthly Notices of the Royal Astronomical Society*, and will describe special lines of research undertaken at the Observatory. In the present number, the first paper, by Mr. D. L. Edwards, deals with the spectra of γ Cassiopeiæ, of which the late Dr. W. J. S. Lockyer gave an account a few years ago. Considerable changes have taken place since, strong absorption lines replacing the early hazy ones, these absorption lines fading out again and new emission lines appearing. The most striking stage was when the absorption lines had completely disappeared and there remained only the spectrum composed entirely of emission lines, the Balmer series of hydrogen being the most prominent feature. Prof. F. I. Blumbach contributes a paper which contains six photographs of Comet Finsler (1937 *f*), taken in August, and this is followed by Mr. D. R. Barber's paper, "Note on the Spectrum of Comet Finsler (1937 *f*)", which describes the objective prism spectrograms of this comet, secured on five favourable occasions in July and August. A useful table is given which supplies a list of the identified emission features of the cometary spectrum, together with their probable origin, wave-length and observed band limits. In the next paper, by Mr. Edwards, there is a description of a tube sensitometer made to a given specification by Messrs. Casella and Co., Ltd., who are also constructing a microphotometer for the Observatory.

Popular Astronomy at Mount Wilson Observatory

RECENTLY, the Carnegie Institution of Washington has catered in a practical way for the immense growth of public interest in astronomical research by opening a special building on Mt. Wilson to be devoted entirely to satisfying the layman's thirst for first-hand information on the many researches undertaken by the staff at Mt. Wilson and other astronomers. For many years, visitors have been privileged on one night per week to use the 60-in. telescope for visual observations of the heavenly bodies, but since the completion of the Angeles Crest highway about two years ago, the number of visitors has become a difficult problem. During 1936, it was estimated that 50,000 persons inspected the 100-in. telescope when it was open to the public, and the total number who visited the Observatory on all occasions during that year reached the large figure of 100,000. The main features of the building are, first, a room for the display of models and photographic transparencies and, second, a lecture-hall, capable of accommodating 270 persons, in which the general public are brought into direct and personal touch with the scientific staff of the Observatory. The Carnegie Institution and the Mt. Wilson astronomers are to be congratulated on their enlightened policy of giving to the public such unique facilities for the practical understanding of what scientific research is accomplishing in the realm of astronomy.

Petrology of Igneous Rocks

WRITING with reference to the review of Hatch and Wells' "Petrology of Igneous Rocks", which appeared in NATURE of May 28, p. 952, Dr. A. K. Wells has directed attention to the second paragraph, which he believes suggests that he has been guilty of plagiarizing the scheme of classification of rocks put forward in the report of a research committee of the British Association. This was not the intention of the reviewer, who states that at no time has he entertained such an idea. He adds that considerations of space precluded mention of the fact, well known to him and to others interested, that Dr. Wells was the moving spirit of the committee in question. The main object of the review was to indicate the radical changes made in the new edition of Hatch and Wells' well-known text-book.

White Fish Commission

THE Minister of Agriculture and Fisheries and the Secretary of State for Scotland have appointed the following to be members of the White Fish Commission constituted under Part I of the Sea Fish Industry Act, 1938: Sir William Palin Elderton (chairman), Mr. H. G. Maurice (vice-chairman), Prof. Alexander Gray, Mr. G. Dallas, Mr. T. Darling. The Commission is charged under the Act with the functions of keeping generally under review matters relating to the white fish industry, and of advising and assisting the Ministers in regard thereto. The Secretary of the Commission is Mr. R. G. R. Wall, to whom all communications should be addressed at the Offices of the Commission, Nos. 6 and 7 Old Palace Yard, Westminster, S.W.1.

Weather Forecasts by Telephone

IN *The Times* of July 11, there is an account of a new enterprise on the part of the Dutch meteorological service and Dutch General Post Office. In Great Britain, anyone can get the latest official weather report over the telephone by asking for it at the Meteorological Office, but on the Hague telephone system the subscriber need only call the number 393131 and he will hear automatically the latest forecast, not only for Holland, but also for Great Britain, Belgium and North and West Germany. To this is added a statement of the distribution of high and low barometric pressure over Western Europe, and doubtless also an indication of the way in which the distribution is changing.

British Empire Cancer Campaign

ON the recommendations of its various committees, the Grand Council of the British Empire Cancer Campaign has made the following grants, totalling