eralogical chemistry at the Collège de France, distinguished for his work on the combustion of gaseous metal and chemical mixtures, died on September 18. He was eighty-six years old.

DR. JEAN CHARCOT; Professor de Vaux, French physicist; Dr. Larronde, secretary general of the French Geographical Society, and Professors Parat and Jacquir, of the Sorbonne, lost their lives when the French Polar exploration ship, the *Pourquoi Pas,* foundered in Faxa Fjord, Iceland, on September 16. The expedition, sponsored by the Paris Trocadero Museum of Ethnography, sailed from Copenhagen on April 25. There was only one survivor of the forty men comprising the expedition.

SCIENTIFIC NOTES AND NEWS

SIR FREDERICK GOWLAND HOPKINS, professor of biochemistry at the University of Cambridge, will deliver the Edward K. Dunham Lectures for the promotion of the medical sciences of the faculty of medicine at Harvard University. The general subject will be "The Significance of Catalysis in Biology." On October 6 he will speak on "The Catalytic Equipment of Micro-organisms" and on October 8 on "The Nature of Biocatalytic Systems in General." The lectures will be given at 5 o'clock at the Harvard Medical School.

SIR JOSEPH BARCROFT, professor of physiology at the University of Cambridge, will deliver the Terry Lectures at Yale University on October 5, 6 and 7. Sir Joseph will speak on "Three Aspects of the Relation of Environment to the Organism." The lectures will be given in Strathcona Hall at 4:30 P.M. The topics of the individual lectures are: "Mental Efficiency Considered in Relation to some Properties of the Blood"; "The Origins of Behavior in the Foetal Environment"; and "The Transition from Foetal to Neo-natal Conditions." Sir Joseph gave the opening lecture of the year on September 24 before the Cleveland Academy of Medicine, where he spoke on "The Genesis of Respiration."

AT the meeting of the American Astronomical Society held at Cambridge, Mass., from September 2 to 5, Hisashi Kimura, director of the International Latitude Observatory at Mizusawa, Japan, known especially for his studies of the variation of latitude, was elected to honorary membership. The following new members of the council were elected: R. S. Dugan, Princeton, *vice-president;* J. C. Duncan, Wellesley, *secretary;* F. C. Jordan, Allegheny, *treasurer;* D. B. McLaughlin, Michigan, S. L. Boothroyd, Cornell, and Keivin Burns, Allegheny, *councilors.* Otto Struve, Yerkes, was elected to membership on the U. S. National Committee of the International Astronomical Union for the term 1937–40.

N. S. OSBORNE, physicist of the National Bureau of Standards, received an honorary degree of doctor of engineering at the exercises on the occasion of the recent installation of Dr. Grover C. Dillman as president of the Michigan College of Mining and Technology.

THE gold medal of the Royal College of Surgeons has been awarded to Dr. James Alexander Murray, in appreciation of his services as director of the laboratories of the Imperial Cancer Research Fund.

IN the issue of SCIENCE for July 31 it was reported that one of the Field Medals at the International Congress of Mathematicians was awarded to Professor K. A. M. Ahlfors. A correspondent writes: "This medal was awarded not to Professor Ahlfors, but to his son (I believe), Lars V. Ahlfors, adjunct professor of mathematics in the University of Helsingfors. L. V. Ahlfors was lecturer in mathematics at Harvard University during 1935–36 and is now beginning a faculty appointment as assistant professor of mathematics at that institution."

DR. JOHN H. WOLFENDEN, lecturer in physical chemistry at Exeter College, University of Oxford, is Frank B. Weeks visiting professor of chemistry at Wesleyan University for the first half of the first semester of the present academic year.

LEE ROY SCHOENMANN has been appointed Charles Lathrop Pack professor of wild land utilization in the School of Forestry and Conservation of the University of Michigan.

DR. GLENN L. JENKINS, professor of pharmaceutical chemistry at the University of Maryland, has been appointed head of the department of pharmaceutical chemistry in the College of Pharmacy of the University of Minnesota.

HARRY T. POWER, for a number of years chief petroleum engineer for the Gulf Oil Corporation of Oklahoma, formerly a staff member of the U. S. Bureau of Mines, has been appointed professor of petroleum engineering and chairman of the department at the University of Texas.

DR. CARL P. RUSSELL, of California, formerly chief of the Museum Division of the National Park Service, has been appointed chief of the Wildlife Division to succeed the late George M. Wright, who was killed in an automobile accident last February.

AT the Massachusetts State College Arthur P. French has been promoted from assistant professor to professor of pomology and plant breeding and Rich-

ard C. Foley from instructor in animal husbandry to assistant professor. Alfred A. Brown has been appointed assistant research professor of agricultural economics.

A. GEORGE STERN, who was recently consulting chemist with the A. R. Maas Laboratories at Los Angeles, Calif., has joined the U. S. Bureau of Mines, Washington, D. C., as assistant to A. C. Fieldner, chief engineer of the Experiment Stations Division.

THE *Journal* of the American Medical Association reports that the Texas State Department of Health has financed through social security funds a division of industrial hygiene, with Dr. Carl A. Nau, formerly professor of physiology at the School of Medicine of the University of Oklahoma, as director. Preliminary surveys are now in progress of potential health hazards in industry, which will be studied in detail in the laboratory now being equipped.

PROMOTIONS of staff members of the Scripps Institution of Oceanography of the University of California at La Jolla, taking effect on July 1, include: Dr. Richard H. Fleming, from research associate to instructor in oceanography; Dr. Denis L. Fox, instructor to assistant professor of physiology of marine organisms; Dr. Claude E. ZoBell, from instructor to assistant professor of marine microbiology, in charge of the Biological Program; Dr. Roger Revelle from research associate to instructor in oceanography, on leave from September, 1936, to June, 1937.

DR. RICHARD H. MCCOY has joined the staff of the Wistar Institute and will devote his time to problems in biochemistry with special reference to nutrition. During the past year he has been a Rockefeller fellow working with Dr. McLean in the department of physiology of the University of Chicago, in a study of the relation of the parathyroid gland to the formation and destruction of bone.

DR. THOMAS C. POULTER, formerly head of the departments of chemistry and physics and the division of physical sciences, mathematics and astronomy at Iowa Wesleyan College, has been appointed director of the Research Foundation of the Armour Institute of Technology. Dr. Robert D. Snow, recently director of research for the Phillips Petroleum Company, will direct a project for a study of the coals of Indiana. The Research Foundation of the institute was founded in April for the purpose of promoting research in affiliation with Armour Institute of Technology.

DR. WILLIBALD SCHOLZ, professor of neurology and psychiatry at Munich, has become director of the department of cerebral pathology of the German Research Institute of Psychiatry, Kaiser Wilhelm Institute, Munich. He succeeds the late Professor Walther Spielmeyer.

THE Commonwealth Council of Scientific and Industrial Research of Australia, according to *The Christian Science Monitor,* has appointed F. N. Ratcliffe to study the problem of soil drift in southwest Queensland. The Commonwealth Council of Scientific and Industrial Research is subsidized by the government and the question of soil erosion has been considered to be sufficiently serious to warrant immediate attention.

PROFESSOR E. O. ESSIG, of the division of entomology of the University of California, will spend a year in Europe studying aphids, under a grant of the C. R. B. Educational Foundation of New York.

BORIS A. KRUKOFF, of the New York Botanical Garden, sailed recently for Brazil, where he will continue his work on the poisonous plants of the Amazon territory.

DR. BAILEY WILLIS, professor emeritus in geology at Stanford University, is *en route* from California to Java with a view to continuing his studies in comparative seismology as research associate of the Carnegie Institution of Washington. Studies of the dynamic, geologic conditions in the arcuate islands of the Orient were begun in 1927, but were put aside for the investigation of the rift valleys of East Africa in 1929. The results of that expedition having now been published by the Carnegie Institution in a monograph entitled "African Plateaus and Rift Valleys," Dr. Willis returns to the problem of the structural and dynamical conditions to which the island chains of the Philippines and Dutch East Indies owe their existence. He expects to be absent for six months or a year.

DR. E. M. K. GEILING, chairman of the department of pharmacology of the University of Chicago, has returned from his third trip to Rose Harbor, northwest of Vancouver, to secure pituitary glands of the whales. He was accompanied by Dr. Robert Walmsley, of the department of anatomy of the University of Edinburgh, fellow of the Rockefeller Foundation, who is studying the vascular system, and Lewis L. Robbins, research assistant. Dr. Geiling returned by way of the Atlantic, going to Tadoussac, 200 miles north of Quebec at the junction of the St. Lawrence and Saginaw Rivers, to investigate possibilities there.

ARRANGEMENTS for further archeological investigations at Tepe Gawra, in northern Mesopotamia, where the world's oldest town was uncovered last year, have been completed by the American School of Oriental Research in Baghdad and the University Museum of the University of Pennsylvania. The expedition,

sponsored jointly by the two institutions, will be directed by Dr. Ephraim A. Speiser, director of the American School of Oriental Research in Baghdad and professor of Semitics at the University of Pennsylvania, who will carry on field work. This is his third season in Mesopotamia. Dr. Speiser sailed for the Near East on September 15, and expects to begin work at Tepe Gawra early in October. Assisting him on the scientific staff will be E. Bartow Muller, architect; Arthur J. Tobler, recorder, and Alfred Bendiner, artist, all of the University of Pennsylvania.

THE London *Times* states that at the general meeting of the British Association for the Advancement of Science the British Science Guild was incorporated with the association. The formation of the guild in 1905, with Lord Haldane as first president, was primarily due to Sir Norman Lockyer. Its aim, which coincides with the policy of the association to lay emphasis on the social implications of science, was to influence public opinion, and to promote closer contact between science on the one hand and social problems and public affairs on the other. The annual lectures associated with the name of Norman Lockyer will be continued by the association. The past work of the guild has been varied, comprising reports on agricultural research, patent law, river pollution, the conservation of national energy resources, etc.

THE residuary estate of the late Mary Gardiner Thompson, who died last April, is left to Columbia University, the Presbyterian and New York Hospitals, the New York Historical Society, the Children's Aid Society and the New York Association for Improving the Condition of the Poor. Each of these institutions receives the sum of $2,201,491.

IN giving his report on the three hundredth anniversary fund of Harvard University, President Conant said that the friends and alumni who have contributed to the fund number 8,881; that they had subscribed $760,954 without restriction, $523,696 specifically for the support of university professorships, $997,685 specifically for the endowment of Harvard national scholarships and $492,636 specifically for the encouragement of work in the physical sciences, a grand total of $2,774,972. He recorded three other gifts. First was that of Lucius N. Littauer, already announced but not yet formally reported, of $2,000,000 for the support of instruction and research in public administration. The second came from the Carnegie Corporation in recognition of the tercentenary and in the interest of dental research and dental education. This was $350,000. Third was a gift of $250,000 received from Mrs. Frances Glessner Lee to establish "The George Burgess Magrath Endowment for Legal Medicine." These and a few minor benefactions made a total of $5,448,192.

PUBLIC institutions will ultimately receive most of the estate of George Blagden, formerly a broker and vice-president of St. Luke's Hospital, New York City, who died in 1934. The estate was valued at $2,510,729 gross and $2,337,118 net, consisting principally of securities. Five institutions will receive cash bequests amounting to $87,500. Upon the death of named beneficiaries, the residuary estate will go to Harvard University and to St. Luke's Hospital, New York City, in equal shares. Bequests made in addition to the residuary estate were: The New York Association for Improving the Condition of the Poor, of which Mr. Blagden was treasurer, $25,000; St. Luke's Hospital, $42,500; Grace Church, $10,000; The National Society for the Prevention of Blindness and the Board of Visitors of the New York State Orthopedic Hospital for Children, $5,000 each.

DISCUSSION

SIGNIFICANT FIGURES IN STATISTICAL CONSTANTS

STATISTICIANS might well follow the lead of the physicists and engineers who, in general, have consistent rules for the retention of significant figures. Statisticians have devised formulae for estimating the standard error and probable error of statistical constants, but no uniformity of practice exists in the retention of significant figures. Not only is much time wasted on computations, due to the retention of more figures than the precision of the data warrants, but results expressed to many decimal places without regard to their precision give a very misleading impression of the accuracy of the results.

The analysis of a large sample in "Statistical Methods for Research Workers" (Fourth Edition, pp. 47–49) by R. A. Fisher is an example. The data, the heights of men, are given to the nearest inch, and the mean of the sample is found to be 68.6435 inches. The standard error is 0.0797 inch. Fisher concludes "from this value it is seen that our sample shows significant aberration from any population whose mean lay outside the limits 68.48 inches to 68.80 inches. It is therefore likely that the mean of the population from which our sample was drawn lay between these limits." Then why not simply find the mean of the sample to be 68.64 inches and the standard error 0.08 inch?