

## NOTES.

IN connection with the celebration of the decennial anniversary of the founding of Clark University, to be held July 5-8, several courses of lectures have been arranged to be delivered by distinguished foreign scientists. Among others a course of three lectures on a subject to be announced will be given, July 5-7, by Professor É. PICARD, of the University of Paris, and a course of four lectures on the principles and fundamental equations of mechanics, July 5-8, by Professor L. BOLTZMANN, of the University of Vienna. The hours of the various courses will be so arranged as not to conflict. Tickets for admission may be obtained, without charge, on application to Mr. L. N. Wilson, Clark University.

THE sixty-ninth annual meeting of the British association for the advancement of science will be held at Dover beginning on Wednesday, September 13th. Professors MICHAEL FOSTER and J. H. POYNTING are the respective presidents of the association and of the section devoted to mathematical and physical science.

The French association will hold its annual meeting at Boulogne at the same time. Members of the French association will visit Dover on Saturday, September 16th, and members of the British association will visit Boulogne on Thursday, September 21st.

THE Jubilee of Sir GEORGE GABRIEL STOKES, Lucasian professor of mathematics at the University of Cambridge since 1849, was celebrated at Cambridge June 1st and 2d. The University of Cambridge presented an address and a commemorative gold medal to Professor STOKES, and the Academy of Sciences of Paris conferred the Arago medal upon him; and the Berlin Academy of Sciences transferred his name from the roll of correspondents to that of foreign members. Delegates presenting addresses were present from seventy-five universities and scientific societies. The honorary degree of doctor in science was conferred upon Professors M. A. CORNU, of Paris, J. G. DARBOUX, of Paris; A. A. MICHELSON, of Chicago; M. G. MITTAG-LEFFLER, of Stockholm; G. H. QUINCKE, of Heidelberg and W. VOIGT, of Göttingen.

The Redo lecture was delivered June 1st by Professor M. A. CORNU, on "The theory of luminous waves; its influence on modern physics."

AMONG those proposed for election as fellows of the London Royal Society is H. W. LLOYD TANNER, professor of mathematics at Cardiff College, South Wales.

PROFESSOR GIBSON, in a review of the third volume of M. Cantor's *Vorlesungen über Geschichte der Mathematik*, which appears in the Proceedings of the Edinburgh Mathematical Society, vol. 17, gives some very interesting details of the controversy which was caused by Bishop Berkeley's criticism of the doctrine of fluxions. The part played in this controversy by Benjamin Robins (1707-1751) appears to have been overlooked. One has associated Robins only with the Ballistic Pendulum and with a work on Gunnery which Euler translated into German (Routh, *Rigid Dynamics*, ch. iii.). But, to quote Professor Gibson, "to Robins, more than to Maclaurin, I think is due the credit of expounding in systematic and consistent form the fundamental conception of a limit, and of freeing Newton's statement from the ambiguities which gave plausibility to Berkeley's attack."

THE number of *Nature* for May 4, 1899, contains a sketch of the scientific work of Professor SIMON NEWCOMB by Professor M. LOEWY, director of the Paris Observatory. The sketch is also reprinted in the Johns Hopkins University Circular for June, 1899.

THE library of the late Dr. HERMANN SCHAPIRA is offered for sale by Gustav Fock of Leipzig.

CORNELL UNIVERSITY. During the academic year 1899-1900, the following advanced courses will be offered by the Department of Mathematics, each course occupying either two or three hours a week as indicated, and continuing through the year :—By Professor WAIT : Advanced analytic geometry, (a) plane, three hours, (b) solid, two hours ; Advanced differential calculus, three hours.—By Professor JONES : Higher algebra and trigonometry, three hours ; Probabilities, etc., two hours.—By Professor MCMAHON : Theoretical mechanics, two hours ; Quaternions, two hours ; Potential and spherical harmonics, two hours ; Mathematical theory of sound, two hours.—by Professor TANNER : Algebraic invariants, two hours ; German readings, two hours.—By Dr. MURRAY : Differential equations, three hours ; Finite differences, etc., two hours.—By Dr. HUTCHINSON : Advanced integral calculus, two hours ; Theta and abelian functions ; three hours.—By Dr. SNYDER : Projec-

tive geometry, three hours ; Algebraic curves, two hours ; General function theory, three hours ; Line geometry, two hours.—By Dr. MILLER : Theory of groups of an infinite order, three hours ; Theory of numbers, two hours.

The Oliver mathematical club will hold fortnightly conferences.

Dr. EDWIN S. CRAWLEY, assistant professor of mathematics at the University of Pennsylvania has been promoted to a full professorship, succeeding to the chair held for many years by the late E. Otis Kendall.

Dr. J. V. WESTFALL, honorary fellow in Cornell University, has been appointed instructor in mathematics in the Iowa State University.

H. M. MACDONALD, M.A., of Clare College, has been appointed a University lecturer in mathematics in Cambridge University.

IN Cambridge University the Adams prize for 1899 is awarded to Dr. J. LARMOR and Mr. G. T. WALKER. The Smith's prizes are adjudged to W. H. AUSTIN for an essay on "The motion of a symmetrical top on a smooth horizontal plane," and to G. W. WALKER for an essay "On the scattering of light by small slightly conducting particles."