## NOTES.

At the meeting of the National Academy of Sciences held in Washington, April 16-19, the following papers of a mathematical character were read: "Mechanical interpretation of the variations of latitude," by R. S. Woodward; "On a new determination of the nutation-constant, and some allied topics," by S. C. Chandler; "On the secular motion of a free magnetic needle," by L. A. Bauer; "Relation of Jupiter's orbit to the mean plane of 401 minor planet orbits," by H. A. Newton; Orbit of Miss Mitchell's comet, 1847, VI., by H. A. Newton. Among the new members elected was Professor W. L. Elkin, director of the Yale College observatory; and among the foreign associates elected was Professor Sophus Lie, of Leipsic. The autumn meeting will be held at Philadelphia, beginning October 29.

PROFESSOR SIMON NEWCOMB has been elected a foreign associate of the French Academy of Sciences to fill the vacancy caused by the death of von Helmholtz.

Among recent appointments and promotions at Johns Hopkins University are: Dr. Charles Lane Poor to an associate professorship of astronomy, Dr. Alexander S. Chessin to an associate professorship of mathematics and mechanics, and Dr. Abraham Cohen to an instructorship in mathematics.

At the Massachusetts Institute of Technology Dr. Frederick S. Woods has been appointed an assistant professor of mathematics.

At Yale University Dr. Percy F. Smith has been promoted to an assistant professorship of mathematics in the Sheffield Scientific School.

At the University of Chicago among recent promotions and appointments are: Dr. T. J. J. See to an instructorship in astronomy, Dr. James Harrington Boyd to an instructorship in mathematics, Mr. Herbert Ellsworth Slaught to an assistantship in mathematics, and Dr. Louis A. Bauer to a docent-ship in mathematical physics.

AT Syracuse University Dr. William H. Metzler has been appointed an associate professor of mathematics.

This year the meeting of the British Association for the Advancement of Science will be held at Ipswich, September 11-18. Sir Douglas Galton will preside.

THE UNIVERSITY OF CHICAGO.—During the summer quarter of 1895 the following courses (four hours weekly) in advanced mathematics will be given: by Professor Moore, Linear differential equations, Theory of functions of a complex variable; by Assistant Professor Maschke, Higher plane curves, Differential geometry of curves and surfaces; by Dr. Young (for first term), Mathematical pedagogy, Determinants; by Mr. Slaught, Differential equations; by Professor Smith of

Shurtleff College, Advanced analytic geometry.

During the three quarters (a, w, s) of the academic year 1895-96 the following courses will be given: by Professor Moore, Groups seminar (a, s), Elliptic functions (a, s), Theory of functions of a complex variable (a); by Professor Bolza, Algebraic functions and their integrals (a), Linear differential equations (w), Advanced integral calculus (a-w); by Assistant Professor Maschke, Invariants (w), Theory of the icosahedron (s), Differential geometry (w), Analytic mechanics (s); by Dr. Young, Theory of equations (a, w); by Dr. Boyd, Partial differential equations (a); by Dr. Hancock, Minimal surfaces (w), Solid analytics (s); by Mr. Slaught, Differential equations (s).

THE JOHNS HOPKINS UNIVERSITY.—During the next academic year the following advanced courses in mathematics will be offered to graduate students, each course extending throughout the year:—Professor Craig: Algebraic integrals, three times a week; Theory of surfaces, three times a week; Seminary, weekly;—Associate Professor Chessin: Elementary theory of functions, twice a week; Lie's theory of transformation groups, twice a week;—Dr. Hulburt: Projective theory of curves and surfaces, three times a week.

The following courses in astronomy will be given next year:—Associate Professor Chessin: Celestial mechanics, three times a week;—Associate Professor Poor: The theory and use of astronomical instruments, three times a week, first half-year; Advanced theoretical astronomy, three times a week, second half-year; General course in theoretical and practical astronomy, twice a week; Astronomical computations, weekly; Seminary, weekly, Practical work, daily.