

and $+40^\circ$ and the mean cloudiness varies from 2 in summer to 5 in winter. The annual rainfall amounts to 870 mm. Dr. Curt Hessen will be in charge of the observatory.

Both these stations are in latitude $-31^\circ 55'$.

At the Observatory of Pulkowa, in latitude $+59^\circ 46'$, a series of observations is in progress to supplement the observations at the stations of the International Geodetic Association and it is expected that the observatories at Leyden (latitude $+52^\circ 09'$) and at Tokyo (latitude $+35^\circ 39'$) will cooperate in this work.

PROFESSOR BJERKNES'S LECTURES.

THE lectures which Professor V. F. K. Bjerknes, of the University of Stockholm, will give at Columbia University during December are as follows:

FIELDS OF FORCE.

Friday, December 1, 1905, 4 to 6 P.M.: 'Elementary Investigation of the Geometric Properties of Hydrodynamic Fields' (with experiments).

Saturday, December 2, 1905, 10 to 12 A.M.: 'Elementary Investigation of the Geometric Properties of Hydrodynamic Fields' (with experiments).

Friday, December 8, 1905, 4 to 6 P.M.: 'Geometric Properties of Electromagnetic Fields According to Maxwell's Theory.'

Saturday, December 9, 1905, 10 to 12 A.M.: 'The Dynamic Properties of Electromagnetic Fields according to Maxwell's Theory.'

Friday, December 15, 1905, 4 to 6 P.M.: 'Transformation of the Hydrodynamic Equations to Forms which prove the Analogy of Hydrodynamic and Stationary Electromagnetic Fields.'

Saturday, December 16, 1905, 10 to 12 A.M.: 'Further Development and Discussion of the above Analogy.'

Friday, December 22, 1905, 4 to 6 P.M.: 'General Conclusions: Remarks on Methods of Research and of Instruction in Theoretical Physics.'

Saturday, December 23, 1905, 10 to 12 A.M.: 'Supplementary Lecture: The Hydrodynamic Fields of Force in the Atmosphere and the Sea; Discussion of the Fundamental Problem of Meteorology and Hydrography.'

The lectures will be open without charge to teachers and advanced students of physics.

PERMIAN GLACIATION IN SOUTH AFRICA.

THE following note of greeting has been addressed to Professor T. C. Chamberlin, of the University of Chicago:

Members and guests of the British Association in South Africa, returning from a geological excursion, provided by the hospitality of the Natal government, send you greetings and wish you might have been with us to-day to see the Dwyka glacial formation (Permian) lying on a glaciated surface of Barberton (Archæan?) beds. The evidence of extensive glaciation, with *southward* movement of the vast ice sheet, is not to be doubted.

J. LOMAS, Liverpool.

G. N. MOLENGRAAFF, Johannesburg.

A. PENCK, Vienna.

B. HOBSON, Manchester.

DR. PR. BECK, Freiberg.

WILLIAM ANDERSON, Natal.

A. P. COLEMAN, Toronto.

F. G. KATZENSTEIN, Vryheid, Natal.

W. M. DAVIS, Cambridge, Mass.

VRYHEID, DISTR. NATAL,

Aug. 26, 1905.

SCIENTIFIC NOTES AND NEWS.

WE regret to learn that the condition of Dr. William R. Harper, president of the University of Chicago, is now very serious.

PROFESSOR EBERTH, director of the Pathological Institute in Halle and discoverer of the bacillus of typhoid fever, celebrated his seventieth birthday on September 21.

PROFESSOR FRANKLIN C. ROBINSON, head of the department of chemistry of Bowdoin College, has been elected president of the American Public Health Association, which will hold its annual meeting in January in the city of Mexico.

PROFESSOR WILHELM OSTWALD, of Leipzig, who, as we have already announced, will give courses in physical chemistry and philosophy at Harvard University during the first half of the present academic year, arrived at Cambridge on the second instant.

PROFESSOR J. A. HOLMES, of the University of North Carolina, is in Germany to investigate for the U. S. Geological Survey the use of brown lignite briquettes for fuel and methods of protecting railway ties.