

vatory of Algiers with the 0.50 m. telescope, by M. Ch. Trépied. On August 23 the apparent position of this comet was :—

Algiers mean time.	Apparent Right Ascension.	Log. fact. parall.	Apparent Declination.	Log. fact. parall.
h. m. s.	h. m. s.			
8 4 29 ...	13 21 11.65 ...	1.656 ...	- 3 2 31.8 ...	0.731

—On some non-linear differential equations, by M. Roger Liouville.—On the algebraic integrals of the problems of dynamics, by M. G. Koenigs.—Notes were submitted by M. Martin on an apparatus reproducing the motions of the heavenly bodies, and by M. L. Hugo on the geometrical forms of the hailstones which fell in Paris on August 23.

BERLIN

Chemical Society, July 26.—C. Liebermann, President, in the chair.—S. Gabriel has further examined isoquinoline obtained by the reduction of monochlorisoquinoline; it melts at 20°. He has also prepared some new derivatives of dichlorisoquinoline.—Biedermann has prepared some derivatives of parahydroxybenzylalcohol.—Raschig communicated a very interesting research on the nature of gold chloride. He has prepared nitrogen compounds corresponding to the three oxidation stages of gold, and these he has analysed by a new method; he points out the analogy between the iodides of nitrogen and gold fulminate and the analogous compounds obtained from gold chlorides and methylamine.—Prof. Pinner reported on the following communications, received by the Society:—Clève, on naphthalenesulphonic acids and on the value of orientation determined with the help of phosphorus pentachloride.—P. Bradley, on thienylglyoxylic acid and its derivatives.—R. H. Mertens, on the nitration of di- and mono-methylaniline with dilute nitric acid.—R. Leuckart and E. Bach, on the action of ammonium formate on benzaldehyde and benzophenone; bases are produced, that from benzophenone having the composition $C_6H_5 > CH.NH_2$. Camphor also reacts with ammonium formate with production of crystalline compounds which, however, have not yet been further examined.—T. H. van't Hoff and Ch. M. von Deventer have studied the question of the temperature at which reaction takes place in chemical decomposition and the accompanying phenomena: first in the case of double salts, e.g. sodium ammonium racemate or copper calcium acetate; and secondly in the case of double decomposition, e.g. the decomposition of magnesium sulphate and sodium chloride with formation of astracamite and magnesium chloride, the reaction temperature in this case being 31°.—B. Tollens describes what he considers the best method for preparing formaldehyde.—Werner Kelbe and H. Stein have a paper on the products of the action of bromine on aqueous solutions of xylenesulphonic acids.—H. von Perger gives a preliminary account of the results obtained from the action of ethyl acetoacetate and ethyl acetonedicarboxylate on hydrazo-compounds.

STOCKHOLM

Geological Society, May 6.—Baron Nordenskjöld gave an account of his researches on the atomic weights of certain rare terrestrial metals, pointing out the peculiar conditions under which they combine in some minerals. He further described the analyses of the dust which had fallen in 1883 in the Cordilleras, believed to be of cosmic origin, being connected with the much-discussed red glows in the autumn of that year. Baron De Geer expressed the opinion that the glow was a natural meteorological phenomenon, though very pronounced in 1883, whilst Prof. Brögger sided with the usual view of its being caused by the Krakatō eruption.—Dr. E. Svedmark exhibited a map of the district of Roslagen, near Stockholm, showing the lakes and valleys which were considered to be caused by the cracking of the earth's crust. He also corrected the reported discovery of basalt at Tolånga, in the province of Scania, which on closer examination had been found to be diabase accompanied by the formation of tophus.—Dr. F. Svenonius read a paper forwarded by Dr. H. Sjögren, on the mud volcanoes in the neighbourhood of Baku, in which locality he has for a long time sojourned, in order to prosecute geological researches. The volcanoes occur in a line along the Caspian Sea some 120 miles in length. One of the greatest mud cones as 1000 feet high, and the crater 2100 feet in diameter, viz. almost equal to that of Etna. Three violent eruptions have

taken place this and last year. They were accompanied by severe emissions of fire, as, for instance, once by a column of are 50 feet in height, visible at a distance of 80 versts. There are also violent discharges of gas, which on one occasion, on being fired, produced a fire-column 20 feet in height. The discharge was so violent that the current could only be fired at a height of 7 feet from the opening. The changes which the surrounding rocks and mountains had suffered through the influence of these volcanoes were of the greatest interest.

BOOKS AND PAMPHLETS RECEIVED

"Journal of Society of Telegraph Engineers," Nos. 62 and 63: List of Members (Spain).—"Pictorial Arts of Japan," part 2, by W. Anderson (S. Low and Co.).—"The Mulberry Silkworm," by C. V. Riley (Washington).—"Record of North American Invertebrate Palaeontology for 1885," by J. B. Marcou (Washington).—"A List of the Mesozoic and Cenozoic Types in the Collections of the U.S. National Museum," by J. B. Marcou (Washington).—"Proceedings of the American Academy of Arts and Sciences," October 1885 to May 1886 (Boston).—"Memoirs of the Geological Survey of India," vol. 1, 3.—"The Fossil Echinoidea." Fasc. vi.—"The Fossil Echinoidea from the Makran Series (Pliocene) of the Coast of Biluckistān and of the Persian Gulf," by P. M. Duncan, and W. P. Sladen (Trübner).—"University College, Bristol: Calendar for the Session 1886-87" (Arrowsmith, Bristol).—"Durham College of Science, Newcastle-on-Tyne: Calendar for the Session 1886-87" (Reid, Newcastle).—"University College, Dundee: Calendar for the Fourth Session 1886-87" (Lang and Co., Dundee).—"Analysis Tables for Chemical Students," by R. S. Taylor (S. Low and Co.).—"Exercises on Mensuration for Junior Students," by T. W. K. Start (S. Low and Co.).—"The Methods of Glass-Blowing," by W. A. Shenstone (Rivingtons).—"First Lessons in Zoology," by A. S. Packard (Holt and Co., New York).—"Fancy Pigeons," parts 11, 12, 13, by J. C. Lyell (U. Gill).—"British Cage Birds," parts 11, 12, 13, by R. L. Wallace (U. Gill).—"Loggia di Igiene Antimicrobica," by I. Giglioli (Napoli).—"Journal of the Logical Society," September (Van Voorst).—"Theses à la Faculté des Sciences de Paris," 1 and 2, by J. Deniker (Poitiers).—"Goolden and Trotter's Dynamos," 4th edition.

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