What is the probable period of the ring?—The showers of 1093-6 and 1122-3 at once suggest a period of from 26 to 30 years. The nodal passage of the densest portion of the ring at the former epoch may be placed anywhere between 1093 and 1096, and that of the latter, in either 1122 or 1123. The entire interval from B. C. 687 to A. D 1803 is 2490 years, or 88 periods of 28 y. 295 each; and the known dates are all satisfied by the following scheme :—

B.C.	687 to B.C. 15	672.000 yrs.	=24	periods of	28.000 each.
	15 to A.D. 582	597.000 ,,	=21	,,	28.429 ,,
A.D	582 to 1093.714	511.714 ,,	=18	,,	28.429 ,,
	1093.714 to 1122.143	28.429 ,,	= 1	,,	28.429 ,,
	1122.143 to 1803	680.857 ,,	=24	,,	28.369 ,,

These coincidences indicate a period of about $28\frac{1}{3}$* years, corresponding to an ellipse whose major axis is 18.59. Hence the distance of the aphelion is very nearly equal to the mean distance of Uranus. It will also be observed that the time of revolution, which seems to have been somewhat lengthened about the Christian era, was previously one-third of the period of Uranus.

II. The Meteors of December 11-13.

In the catalogue of Quetelet we find the four following extraordinary displays which belong undoubtedly to this period. Observations made in England, 1862, indicate also a more than ordinary number of meteors at the December epoch in that year.

1. A.D. 901. "The whole hemisphere was filled with those meteors called falling stars, the ninth of Dhu'lhajja (288th year of the Hegira) from midnight till morning, to the great surprise of the beholders, in Egypt."—*Modern part of the Universal History*, 8vo. vol. 2, p. 81. Lond. 1780. The date of this phenomenon corresponds to the December epoch, A.D. 901.

2. 930. "Averse remarquable d'étoiles filantes en Chine."

3. 1571. "On vit à Zurich 'du feu tomber du ciel.'"

4. 1830, 1833, and 1836. The maximum seems to have occurred in 1833, when as many as ten meteors were seen simultaneously. "Dans la nuit du 14 au 12 décembre, on vit, à Parme une grande quantité d'étoiles filantes de différentes grandeurs, qui se dirigeaient presque toutes avec une grande vitesse vers le SSE. A 10 heures et ¼, entre les seules constellations du Bélier et du Taureau, on en compta environ une dizaine."

5. (Doubtful.) 1861, 1862, and 1863. Maximum probably in 1862. The meteors at this return were far from being comparable in numbers with the ancient displays. The shower, however, was distinctly observed. R. P. Grey, Esq., of Manchester, England, says the period for December 10-12 was, in 1862, "exceedingly well defined."†

These dates indicate a period of about $29\frac{1}{8}$ years. Thus :—

901 to 930.....	1 period of 29.000 years.
930 to 1571.....	22 periods of 29.136 years.
1571 to 1833.....	9 periods of 29.111 years.
1833 to 1862.....	1 period of 29.000 years.

III. The Meteors of October 15-21.

The showers of the following years (see Quetelet's Catalogue) belong to this epoch :—

1. 288. "Apparition en Chine."

2. 1436 and 1439. In each year a remarkable apparition was observed in China.

3. 1743. (Quoted from Herrick, in Silliman's Journal for April 1841.) "A clear night, great shooting of stars between 9 and 10 o'clock, all shot from S.W. to N.E. [*Qu.* N.E. to S.W. ?] One like a comet in the meridian very large, and like fire, with a long broad train after it, which lasted several minutes; after that was a train like a row of thick small stars for twenty minutes together, which dipt N."

4. 1798. "Brandes marque, à Goettingue, un grand nombre d'étoiles filantes dans les observations simultanées qu' il fait avec Benzenberg."

These dates indicate a period of about $27\frac{1}{4}$ years :—

288 to 1439.....42	periods of 27.405 years each.
1439 to 1743.....11	,, 27.636 ,,
1743 to 1798..... 2	,, 27.500 ,,

If these periods are correct, it is a remarkable coincidence that the aphelion distances of the meteoric rings of April 18th—20th, October 15th—21st, November 14th, and December 11th—13th, as well as those of the comets 1866 I, and 1867 I, are all nearly equal to the mean distance of Uranus.

* Herrick assigned a value of 27 years. See Silliman's Journal for April 1841, p. 365.

† Silliman's Journal for May, 1863, p. 461.

DIARY

THURSDAY, APRIL 28.

ROYAL SOCIETY, at 8.30.—On the organs of Vision in the Common Mole: Dr. R. J. Lee.—On an Aplanatic Searcher applied to Microscopes: Dr. Royston Pigott.—On a cause of error in Electroscopic Experiments: Sir Chas. Wheatstone.

ZOOLOGICAL SOCIETY, at 8.30.—Notes on a North-American Batrachian (*Spelerpes rubra*): Mr. St. George Mivart.—Notes on some points in the anatomy of certain Kingfishers: Dr. Cunningham.—On a new gigantic Amphibian, allied to *Lepidosiren* from Queensland :—Mr. G. Krefft.

ROYAL INSTITUTION, at 3.—Electricity: Prof. Tyndall.

FRIDAY, APRIL 29.

ROYAL INSTITUTION, at 8.—Popular Myths: Prof. Blackie.

ZOOLOGICAL SOCIETY, at 1.—Anniversary Meeting.

SATURDAY, APRIL 30.

ROYAL INSTITUTION, at 3.—Comets: Prof. Grant.

MONDAY MAY 2.

ENTOMOLOGICAL SOCIETY, at 7.

SOCIETY OF ARTS, at 8.—Cantor Lecture on Fermentation: Prof. A. W. Williamson.

ROYAL ASIATIC, at 3.

ROYAL INSTITUTION, at 2.—Annual Meeting.

TUESDAY, MAY 3.

ANTHROPOLOGICAL SOCIETY, at 8.—The Aboriginal Tribes of the Nilgiri Hills: Major Ross-King.—The Armenians of Southern India: Dr. John Shortt.—The Kajahs of Southern India: Dr. John Shortt.

ROYAL INSTITUTION, at 3.—Moral Philosophy :—Prof. Blackie.

THURSDAY, MAY 5.

ROYAL SOCIETY, at 8.30.

SOCIETY OF ANTIQUARIES, at 8.30.

CHEMICAL SOCIETY, at 8.—Vapour Densities: J. T. Brown.—New Cornish Minerals, No. 7: Prof. Church.

ROYAL INSTITUTION, at 3.—Electricity: Prof. Tyndall.

LINNEAN SOCIETY, at 8.

BOOKS RECEIVED.

ENGLISH.—On Natural Selection: A. R. Wallace (Macmillan and Co.).—Sketches of Creation, illustrated by Prof. Winchell: (S. Low, Son, and Co.)—The Population of an Old Pear Tree, translated from the French of E. Van Bruyssel (Macmillan and Co.).—Records of the Geological Survey of India. Vol. I., parts 1, 2, 3; vol. II., part 1.—Contributions to Botany: J. Miers; vol. 2 (Williams and Norgate).—Symons's Monthly Meteorological Magazine; vol. for 1869.—Trees and Shrubs for English Plantations: A. Mongredien (Murray).

FOREIGN (through Williams and Norgate).—Die Schule der Chimie: Dr. J. A. Stöckardt.—Der Elektromagnetische Telegraph: Dr. H. Schellen.—Le Darwinisme et les générations spontanées: D. C. Rossi.—Catalogus Musei Botanici Lugduno-Batavi: Prof. Miguel.—Verzeichniss von 4793 teleskopischen Sternen: Dr. J. V. Lamont.—Annalen der königlichen Sternwarte; vol. 17.—Der rationelle Wiesenbau: L. Vincent.—Die fünf Sinne des Menschen: W. Preyer.—Zeitschrift für die gesammten Naturwissenchaften; vols. 33, 34: Drs. Giebert und Siewert.—Handbuch der Mathematik: Physik, Geodäsie und Astronomie: Dr. A. Wolf.—Die Erfindung des Fernrohrs und ihre Folgen für die Astronomie.—De la Reforme de l'enseignement supérieur et des libertés Universitaires: C. Schützenberger.—Mémoires de la société royale des Sciences de Liége; vols. 1, 2.

CONTENTS

ERRATA.—In No. 24, page 630, second column, line 10: for "Acalephic" read "Acalephæ."—Page 635, column 1, line 5 from bottom, for "Von Martins," read "Von Martius; and column 2, line 4: for "Martins," read "Martius."