

Planet.	Rises.		Souths.		Sets.		Right asc. and declination on meridian.	
	h.	m.	h.	m.	h.	m.	h.	m.
Mercury..	7	24	13	1	18	38	12	44'2 ... 5 8 S.
Venus....	7	20	13	3	18	46	12	46'4 ... 3 58 S.
Mars.....	12	23	16	22	20	21	16	6'5 ... 22 29 S.
Jupiter...	11	54	16	11	20	28	15	55'0 ... 19 45 S.
Saturn....	1	57	9	30	17	3	9	13'4 ... 16 52 N.
Uranus...	7	43	13	17	18	51	13	0'5 ... 5 47 S.
Neptune..	20	33*	4	20	12	7	4	2'3 ... 18 58 N.

* Indicates that the rising is that of the preceding evening and the setting that of the following morning.

Occultations of Stars by the Moon (visible at Greenwich).

Sept.	Star.	Mag.	Disap.	Reap.	Corresponding angles from vertex to right for inverted image.	
					h. m.	h. m.
16 ...	30 Capricorni ...	6	...	21 47	...	23 I ... 128° 28'
19 ...	B.A.C. 8274 ...	6	...	20 56	near approach	176 —
Sept.	h.					
19 ...	4 ...					Mercury in conjunction with and 1° 40' south of Venus.
22 ...	15 ...					Sun in equator.

Variable Stars.

Star.	R.A.		Decl.		Sept. 21,	h. m.
	h.	m.	h.	m.		
U Cephei ...	0	52'4	81	16 N.	...	4 54 M
T Arietis ...	2	42'1	17	3 N.	...	21, m
Algol ...	3	0'9	40	31 N.	...	17, 20 15 m
R Leporis ...	4	54'5	14	59 S.	...	18, m
T Monocerotis ...	6	19'2	7	9 N.	...	21, 3 0 M
ζ Geminorum ...	6	57'5	20	44 N.	...	19, 0 0 m
S Canis Minoris ...	7	26'6	8	33 N.	...	19, M
S Cancri ...	8	37'5	19	26 N.	...	22, 1 11 m
V Boötis ...	14	25'3	39	22 N.	...	22, m
U Coronæ ...	15	13'6	32	3 N.	...	16, 1 6 m
S Libræ ...	15	15'0	19	59 S.	...	22, M
S Scorpii ...	16	11'0	22	37 S.	...	16, M
U Ophiuchi... ..	17	10'9	1	20 N.	...	19, 3 22 m
R Scuti ...	18	41'5	5	50 S.	...	19, M
β Lyræ... ..	18	46'0	33	14 N.	...	20, 21 0 m ₂
η Aquilæ ...	19	46'8	0	43 N.	...	18, 23 0 m
T Vulpeculæ ...	20	46'7	27	50 N.	...	19, 21 0 m
W Cygni ...	21	31'8	44	53 N.	...	20, M
δ Cephei ...	22	25'0	57	51 N.	...	20, 3 0 m

M signifies maximum; m minimum; m₂ secondary minimum.

Meteor-Showers.

	R.A.	Decl.	
Near ε Tauri ...	64	21 N.	Swift; streaks.
,, η Aurigæ ...	74	41 N.	Sept. 21. Swift; streaks.
,, χ Orionis ...	89	18 N.	Very swift.
	98	44 N.	Very swift; streaks.

SOCIETIES AND ACADEMIES.

PARIS.

Academy of Sciences, September 3.—M. Janssen, President, in the chair.—Microbism and abscess, by M. Verneuil. The ordinary type of abscess is studied in connection with the new light thrown on the subject by microbic researches on suppuration. The almost constant presence of the micro-organisms described by Klebs, Pasteur, and others, shows that they are in all probability the real and exclusive cause of pyogenesis, a conclusion placed almost beyond doubt by the fact that, when introduced into the animal system, these organisms invariably produce suppuration and abscesses. A classification is given of the microbes in question, which are divided into two distinct groups: (1) pyogenic microbes, properly so called, which are normally present, such as the orange, lemon, white, and other varieties of Micrococcus and Diplococcus; (2) those which occur irregularly in the purulent matter, but which may exist normally in the system apart from any pyogenic symptoms or centres of

suppuration—various kinds of Bacteria, Vibriones, Bacilli, &c. A classification follows of abscesses themselves, based on the etiology of pyogenesis as well as on their pathological anatomy and physiology.—Inscription giving the details of a lunar eclipse, by M. Oppert. This inscription, the text of which was first published by Strassmaier in the *Zeitschrift für Assyriologie*, vol. ii., is referred to the year 24 B.C., 232 of the era of the Arsacides. It describes the eclipse as having been predicted by the astronomer Uruda (Orodes), and as taking place, as predicted, in the month of Nisan, on the 13th night, at the hour of 5 and 51 parts, which is reduced to Monday, March 23, 9h. 30m. p.m., Paris mean time.—The fluorescent compounds of chromium and manganese, by M. Lecoq de Boisbaudran. These substances are studied and prepared synthetically with a view to determining their several degrees of oxidation.—Note on the position of some points on the Brazilian seaboard, extracted from a memoir of the Comissão de Longitudes, by M. Cruls. The places, whose positions are here astronomically determined by the officers attached to the Brazilian Hydrographic Service, are Cape Frio, oh. 4m. 34'05s. (with probable error 0'12s.), east of Rio de Janeiro; and Santos, oh. 12m. 33'44s. (with probable error 0'20s.), west of Rio de Janeiro.—On the measurement of the refraction indices of crystals with double axis, by M. Charles Soret. These measurements are here effected by the observation of the limiting angles of total reflection on any facets.—Physiological action of the chloride of ethylene on the cornea, by M. Raphael Dubois. In a previous paper (*Comptes rendus*, vol. civ., No. 26, 1887) the author showed that the chloride of ethylene (C₂H₄Cl₂) introduced in any way into the system produces in the dog, several hours after waking, an opacity of the cornea of a very remarkable character. Here he studies the nature of this phenomenon, and determines the mechanism by which it is produced.

BOOKS, PAMPHLETS, and SERIALS RECEIVED.

Eclectic Physical Geography: R. Hinman (Cincinnati).—Solutions of the Examples in an Elementary Treatise on Conic Sections: C. Smith (Macmillan).—Chart for Great Circle Sailing, Nos. 1 and 2: R. A. Proctor (Stanford).—Les Tremblements de Terre: F. Fouqué (Baillière, Paris).—Die Structur und Zusammensetzung der Meteoriten, Liefg. 1, 2, 3: A. Brezina and E. Cohen (Stuttgart).—The Speaking Parrots, Part 5: Dr. K. Russ (U. Gill).—The Flowering Plants of Wilts: Rev. T. A. Preston (Wilts Archaeological and Natural History Society).—Results of Experiments at Rothamsted on the Growth of Root Crops: J. H. Gilbert.—Memoranda of the Origin, Plan, and Results of the Field and other Experiments at Rothamsted.—On Infant Feeding and the Value of Preparations of Pure Alpine Milk: Dr. Nachtigal (Ridgway).—Proceedings of the Bristol Naturalists' Society, vol. v. Part 3 (Bristol).—Proceedings of the American Academy of Arts and Sciences, New Series, vol. xv. Part 1 (Boston).—Meteorological Record, vol. vii. No. 28 (Stanford).—Quarterly Journal of the Royal Meteorological Society, July (Stanford).

CONTENTS.

	PAGE
Experiments on the Growth of Wheat	465
The Japanese Volcanic Eruption	466
Calculation of Ranges, &c., of Elongated Projectiles. By Rev. F. Bashforth	468
The British Association	469
Section B—Chemical Science.—Opening Address by Prof. William A. Tilden, D.Sc. Lond., F.R.S., F.C.S., President of the Section	470
Section D—Biology.—Opening Address by W. T. Thiselton-Dyer, C.M.G., M.A., B.Sc., F.R.S., F.L.S., President of the Section	473
Section E—Geography.—Opening Address by Colonel Sir C. W. Wilson, R.E., K.C.B., K.C.M.G., D.C.L., LL.D., F.R.S., F.R.G.S., Director-General of the Ordnance Survey, President of the Section	480
Notes	485
Astronomical Phenomena for the Week 1888	
September 16-22	487
Societies and Academies	488
Books, Pamphlets, and Serials Received	488