



DECEMBER.

XII Month.]

1874.

[31 Days.

DAY			THE SUN.						THE MOON.					HIGH TIDE.		PHENOMENA.	
of Year.	of Month.	of Week.	Latitude of Boston.		Latitude of New York.		Latitude of Washington.		WASH- ING- TON.	BOS- TON.	NEW YORK.	WASH- ING- TON.	SAN FRAN.	BOSTON.		Moon's Phases.	
			Rises.	Sets.	Rises.	Sets.	Rises.	Sets.	Age at Noon.	Rises.	Rises.	Rises.	Rises.	A.M.	P.M.		d. h. m.
335	1	Tu.	7 12	4 26	7 7	4 32	7 2	4 37	22	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.		
336	2	Wd.	13	26	8	31	3	37	23	0 54	0 54	0 55	1 3	5 51	6 15	NEW MOON	8 6 58 P.M.
337	3	Th.	14	26	9	31	4	36	24	1 55	1 54	1 54	2 1	7 39	8 3	FIRST QUARTER	16 7 16 A.M.
338	4	Fri.	15	26	10	31	5	36	25	2 56	2 54	2 52	2 58	8 28	8 52	FULL MOON	22 11 48 P.M.
339	5	Sat.	16	27	11	31	6	36	26	3 57	3 54	3 51	3 57	9 14	9 37	LAST QUARTER	30 9 28 A.M.
340	6	S.	17	27	12	31	7	36	27	5 1	4 56	4 52	4 57	9 56	10 21		
341	7	Mo.	18	27	13	31	8	36	28	6 5	6 0	5 54	5 59	10 38	11 2	2d Sunday in Advent.	
342	8	Tu.	19	27	14	31	8	36	29	sets.	sets.	sets.	sets.	11 16	11 42		
343	9	Wd.	20	27	15	31	9	36	1	4 41	4 48	4 56	5 7	11 55	—	☽ ♀ ☽ +4° 8' 21" P.M.	
344	10	Th.	20	26	16	31	10	37	2	5 36	5 44	5 51	6 3	0 22	0 33	☽ ♀ ☽ Inf. and Tran. 11° 12' P.M.	
345	11	Fri.	21	26	16	31	11	37	3	6 40	6 46	6 53	7 5	1 1	1 13		
346	12	Sat.	22	26	17	31	11	37	4	7 49	7 54	8 0	8 12	1 42	1 54	☽ ♀ ☽ +4° 11' 2" P.M.	
347	13	S.	23	26	18	30	12	37	5	9 0	9 4	9 9	9 20	2 23	2 36	3d Sunday in Advent.	
348	14	Mo.	24	26	19	32	13	38	6	10 12	10 15	10 19	10 29	3 6	3 22		
349	15	Tu.	25	26	19	32	13	38	7	11 24	11 26	11 27	11 37	3 52	4 12	☽ ♀ ☽ +0° 9' 43" P.M.	
350	16	Wd.	26	27	20	32	14	38	8	morn.	morn.	morn.	morn.	4 44	5 6		
351	17	Th.	26	27	21	33	15	39	9	0 37	0 37	0 37	0 46	5 36	6 2		
352	18	Fri.	27	27	21	33	16	39	10	1 51	1 50	1 48	1 56	6 32	6 59		
353	19	Sat.	27	27	22	33	16	40	11	3 9	3 6	3 2	3 10	7 28	7 57		
354	20	S.	28	28	22	34	17	40	12	4 29	4 24	4 20	4 26	8 25	8 57	4th Sunday in Advent.	
355	21	Mo.	28	28	23	34	17	41	13	5 51	5 45	5 38	5 44	9 23	9 57	☽ cent. by WINTER COM. 6° 14' P.M.	
356	22	Tu.	29	28	23	35	18	41	14	7 9	7 2	6 55	7 0	10 20	10 56		
357	23	Wd.	29	29	24	35	18	42	15	rises.	rises.	rises.	rises.	11 17	11 53		
358	24	Th.	30	29	24	36	19	42	16	6 0	6 7	6 13	6 26	—	0 13		
359	25	Fri.	30	30	25	36	19	43	17	7 15	7 20	7 26	7 37	0 47	1 5	CHRISTMAS DAY.	
360	26	Sat.	30	31	25	37	20	43	18	8 27	8 31	8 35	8 46	1 38	1 56		
361	27	S.	31	32	25	38	20	43	19	9 36	9 38	9 41	9 51	2 27	2 44	1st Sunday after Christmas Day.	
362	28	Mo.	31	33	26	38	20	44	20	10 41	10 42	10 43	10 52	3 13	3 31	♀ stationary 10° 52' P.M.	
363	29	Tu.	31	34	26	39	20	45	21	11 44	11 43	11 44	11 51	4 0	4 20		
364	30	Wd.	32	35	26	40	21	46	22	morn.	morn.	morn.	morn.	4 49	5 11		
365	31	Th.	7 32	4 36	7 26	4 41	7 21	4 47	23	0 45	0 43	0 42	0 49	5 38	6 2	☽ in Perigee 0° 52' A.M.	

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illustrating his remarks by photographs of Noberts' and the microscopic writing of Mr. Webb, of London.

Mr. A. HALL read a paper

ON COMETS AND METEORS.

(This communication is published in full in "The Analyst," vol. i. Des Moines, Iowa, Feb. 1874.)

60TH MEETING.

JANUARY

The President in the Chair.

Hon. PETER PARKER read a short note on the meteor of 24th, 1873, communicating the details of some observations by himself.

Following this communication there were given the names of a number of observers who saw this meteor, and, at the request of Dr. Parker, the President appointed a committee to obtain further information.

Mr. J. J. WOODWARD read a letter from Mr. Ramsey of Scotia,

ON THE TIDES OF THE BAY OF FUNDY.

Mr. G. A. OTIS gave

A DESCRIPTION OF A NEW SPIRQMETER,
illustrating his remarks by means of the instrument itself.

Mr. C. S. PEIRCE communicated a note

ON QUATERNIONS, AS DEVELOPED FROM THE GENERAL THEORY OF THE LOGIC OF RELATIVES.

61ST MEETING.

JANUARY

The President in the Chair.

The President, as chairman of the committee, offered the following resolutions, which were adopted, relative to the Prof. Louis Agassiz:—

LIST OF MEMBERS

OF THE

PHILOSOPHICAL SOCIETY OF WASHINGTON.

JUNE, 1874.

• Absent or removed from Washington.

† Deceased.

CLEVELAND ABBE

ASA O. ALDIS

BENJAMIN ALVORD

*THOMAS ANTISELL

ORVILLE ELIAS BABCOCK

THEODORUS BAILEY

SPENCER FULLERTON BAIRD

JOSEPH K. BARNES

THOMAS W. BARTLEY

HENRY HOBART BATES

STEPHEN VINCENT BENÉT

JOHN SHAW BILLINGS

SAMUEL CLAGETT BUSEY

*HORACE CAPRON

*AUGUSTUS L. CASE

THOMAS LINCOLN CASEY

† SALMON PORTLAND CHASE

JOHN WHITE CHICKERING

FRANK WIGGLESWORTH CLARKE

JOHN HUNTINGTON CRANE COFFIN

ELLIOTT COUES

BENJAMIN FANEUIL CRAIG

ROBERT CRAIG

CHARLES HENRY CRANE

JOSIAH CURTIS

RICHARD DOMINICUS CUTTS

EDWARD SINGLETON HOLDEN
 EDWIN EUGENE HOWELL
 HENRY W. HOWGATE
 ANDREW ATKINSON HUMPHREYS
 *THORNTON ALEXANDER JENKINS
 WILLIAM WARING JOHNSTON
 F. KAMPF
 REUEL KEITH
 JONATHAN HOMER LANE
 WILLIAM LEE
 NATHAN SMITH LINCOLN
 HENRY H. LOCKWOOD
 STEPHEN C. LYFORD
 OSCAR A. MACK
 ARCHIBALD ROBERTSON MARVINE
 *FIELDING BRADFORD MEEK
 MONTGOMERY CUNNINGHAM MEIGS
 WILLIAM MANUEL MEW
 W. MILNER
 ALBERT J. MYER
 WILLIAM MYERS
 SIMON NEWCOMB
 CHARLES HENRY NICHOLS
 WALTER LAMB NICHOLSON
 GEORGE ALEXANDER OTIS
 JOHN GRUBB PARKE
 PETER PARKER
 *CHARLES CHRISTOPHER PARRY
 CARLISLE PATTERSON
 A. C. PEALE
 *TITIAN RAMSAY PEALE
 BENJAMIN PEIRCE
 CHARLES SANDERS PEIRCE
 ORLANDO METCALFE POE
 DAVID DIXON PORTER
 J. W. POWELL

B. PEIRCE.

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31. The heat of the Sun.
 74. Theories of the nature of comets' tails.

C. S. PEIRCE.

35. Appearance of Encke's comet as seen at H. C. Obs.
 63. Stellar photometry.
 68. Geographical distribution of rainfall and illiteracy.
 88. On logical algebra.
 94. On quaternions.
 97. Hypotheses in reference to space.

Prof. PORTER (of Belfast, Ireland).

54. Recent explorations in Syria.

J. W. POWELL.

48. Remarks on the aurora.
 48-51. Geology of the valley of the Colorado.
 96. Mythology of the Numas.
 99. Remarks on volcanic phenom. in Arizona and Nevada.
 102. Remarks on volcanic action.
 104. Genesis and demonology of the Numas.

Mr. RAMSEY (of Nova Scotia).

64. On the tides of the Bay of Fundy.

Lieut. C. W. RAYMOND (U. S. Army).

22. Results of travels in Alaska.

B. F. SANDS

23. Communicates a paper by Prof. A. Hall.

J. H. SAVILLE.

51. New Japanese coinage.

O. STONE.

62. Errors of a provisory catalogue of stars.

W. T. SHERMAN.

63. Remarks on a visit to Egypt.
 65. Remarks on travels in Turkey and the Caucasus.

W. B. TAYLOR.

27. The nature and origin of force.
 43-45. The aurora.