

# DR. RADWAY'S ALMANAC

FOR

## 1888.

CALCULATED for the Meridian of Washington, D. C., and answering approximately for Meridians of Montreal, Boston, New York, Charleston (S. C.), and New Orleans.

### ECLIPSES IN 1888.

in the Year 1888 there will be three Eclipses of the Sun and two of the Moon.

I. A Total Eclipse of the Moon, January 23, visible generally in the Eastern parts of the United States.

	Dec.	Intercolonial.	Eastern.	Central.	Mountain.	*Pacific.
Eclipse begins.....	23	H. M. eve. 3 30.5	H. M. eve. 4 30.5	H. M. eve. 3 30.5	H. M. eve. 2 30.5	H. M. eve. 1 30.5
Total phase begins.....	23	6 31.1 "	5 31.1 "	4 31.1 "	3 31.1 "	2 31.1 "
Middle of Eclipse.....	23	7 20.1 "	6 20.1 "	5 20.1 "	4 20.1 "	3 20.1 "
Total phase ends.....	23	8 9.1 "	7 9.1 "	6 9.1 "	5 9.1 "	4 9.1 "
Eclipse ends.....	23	9 9.7 "	8 9.7 "	7 9.7 "	6 9.7 "	5 9.7 "

If a phase occurs at any place before sunset, it will usually be invisible at that place.

II. A partial Eclipse of the Sun, February 11, invisible in the United States.

III. A partial Eclipse of the Sun, July 9, invisible in the United States.

IV. A total Eclipse of the Moon, in the evening of July 22nd, and morning of July 23, visible over the whole continent of North and South America.

1888.	July.	Intercolonial.	Eastern.	Central.	Mountain.	Pacific.
Eclipse begins.....	22	H. M. morn. 0 54	D. H. M. ev. 22 10 55	D. H. M. ev. 22 9 55	D. H. M. ev. 22 8 55	D. H. M. ev. 22 7 55
Total phase begins.....	23	0 54 "	22 11 54 "	22 10 54 "	22 9 54 "	22 8 54 "
Middle of Eclipse.....		1 45 "	23 0 45 m.	22 11 45 "	22 10 45 "	22 9 45 "
Total phase ends.....		2 36 "	23 1 36 "	23 0 36 m.	22 11 36 "	22 10 36 "
Eclipse ends.....		3 35 "	23 2 35 "	23 1 35 "	23 0 35 m.	22 11 35 "

V. A partial Eclipse of the Sun, August 7th, invisible in the United States, except in the Northern part of Alaska.

### SEASONS FOR 1888.—(Eastern Standard Time.)

WINTER begins 1887, December, 21 d. 10 h. 5 m. eve., and lasts 89 d. 0 h. 51 m.

SPRING begins 1888, March, 19 d. 10 h. 56 m. eve., and lasts 92 d. 20 h. 18 m.

SUMMER begins 1888, June, 20 d. 7 h. 14 m. morn. and lasts 93 d. 14 h. 39 m.

WINTER begins 1888, December, 21 d. 4 h. 3 m. morn. Tropical Year 366 d. 5 h. 58 m.

### CHURCH DAYS AND CYCLES OF TIME. 1888.

Septuagesima Sunday.....	January 29	Low Sunday.....	April 8
Sexagesima Sunday.....	February 5	Rogation Sunday.....	May 6
Quinquagesima Sunday.....	February 12	Ascension Day.....	May 10
Ash Wednesday.....	February 15	Whit Sunday.....	May 20
Quadragesima Sunday.....	February 19	Trinity Sunday.....	May 27
Mid-Lent.....	March 22	Corpus Christi.....	May 31
Palm Sunday.....	March 25	Advent Sunday.....	December 2
Good Friday.....	March 30	Christmas.....	December 25
Easter Sunday.....	April 1		

### PLANETS REGARDED AS MORNING AND EVENING STARS.

MORNING STARS.—MERCURY to January 16, and from March 3 to May 10, and from July 8 to August 23, and from October 31 to December 23. VENUS to July 11.

EVENING STARS.—MERCURY from January 18 to March 3, and from May 10 to July 8, and from August 23 to October 31, and from December 23 to the end of the year. VENUS from July 11 to the end of the year.

Dominical Letter.....	H & G	Julian Period.....	6601
Epact.....	17	Dionysian Period.....	217
Golden Number.....	8	The year 5649 of the Jewish Era begins at sunset on	
Solar Cycle.....	21	September 6, 1888.	
Roman Indiction.....	1		

### PLANETS BRIGHTEST, OR BEST SEEN.

MERCURY February 16, after sunset; MERCURY March 30, before sunrise; MERCURY June 11, after sunset; MERCURY July 23, before sunrise; MERCURY October 7, after sunset; MERCURY November 16, before sunrise; VENUS not this year; MARS April 10; JUPITER May 17; SATURN January 23.

\* The Pacific dates are one hour earlier than the Mountain.