

## OCCULTATIONS.

An occultation of the bright star Antares (a Scorpii) on the morning of March 3. An occultation of the planet Mars on the evening of May 12.

A TRANSIT of Mercury Nov. 11, invisible in this country.

The transits of Mercury and Venus afford the best means of determining the Sun's parallax, and thence the distance of the Earth from the Sun. The transits of Venus are much better for this purpose than those of Mercury, since Venus comes nearer the Earth than Mercury does, and has a larger parallax. The mean distance of the Earth from the Sun is the linear unit of the solar system.

## MORNING AND EVENING STARS.

Venus will be Morning Star until May 11; then Evening Star the rest of the year. Jupiter will be morning Star until Feb. 10; then Evening Star until Aug 30; then Morning Star the rest of the year. Saturn will be Morning Star until Feb. 24; then Evening Star until Sept. 5; then Morning Star the rest of the year.

The year 1861 of the Christian era forms the latter part of the 5621st and the beginning of the 5622d year since the Creation of the World, according to the Jews:

The 2614th year since the foundation of Rome;

The latter part of the 1277th and the beginning of the 1278th year of the Mohammedan era, or the era of Hegira, or flight of Mohammed, which took place on the 16th of July, A. D. 622.

## THE SEASONS.

Winter begins,	1860,	December 21st,	8h. 43m.,	morning.
Spring	"	1861,	March 20th,	9h. 40m. morning.
Summer	"	"	June 21st,	6h. 27m., morning.
Autumn	"	"	September 22d,	8h. 40m. evening.
Winter	"	"	December 21st.	2h. 27m. evening.

## EXPLANATION.

In this Almanac *mean* time is used. This is the time to which clocks and watches are adjusted. In the calendar 'Sun slow of clock,' the time is given which a clock ought to show when the sun is on the meridian, or when it is *apparent* noon. With the aid of this quantity, and a noon mark the error of clock may be found. Thus on April 9th, when the Sun is on the noon mark the clock ought to show 12h. 1m. 34s. The sun is on the meridian at 12 o'clock only four times in a year, —on April 14, June 14, August 31, and December 23, or on the days following these.

The declination of the sun is given for Greenwich mean time.