



SOMETHING NEW.—Paul Konewka.

### Eclipses, Etc.

IN the year 1881 there will be four Eclipses, two of the Sun and two of the Moon, and a Transit of the planet Mercury of the disc of the Sun.

I. A Partial Eclipse of the Sun, May 27. Occurring so near sunset, it will be invisible, or nearly so, in most of the United States.

II. A Total Eclipse of the Moon on the evening of June 11, and morning of June 12, visible throughout the United States.

The phases for Washington, D. C., are the following:

|                              | H. | M.       |
|------------------------------|----|----------|
| Eclipse begins, June 12..... | 0  | 3 morn.  |
| Total Eclipse begins.....    | 1  | 5 morn.  |
| Middle of Eclipse.....       | 1  | 46 morn. |
| Total Eclipse ends.....      | 2  | 26 morn. |
| Eclipse ends.....            | 3  | 28 morn. |

For any place the times of the phases are easily found by the following rule:

If the place is *west* of Washington Meridian subtract the difference of longitude expressed in time from the times of the Washington phases, the remainders will be the local time of the phases. But if the place is *east* of the Washington Meridian the difference of longitude from Washington expressed in time *added* to the times of the Washington phases will give their times for the place.

III. An Annular Eclipse of the Sun, November 21, invisible in the Northern Hemisphere.

IV. A Partial Eclipse of the Moon, December 5, invisible in the United States.

V. A Transit of Mercury over the Sun's disc, November 7. The Ingress of the planet on the Sun's disc is visible in the western portion of the United States; but its Egress takes place after sunset in all parts of the United States.

### PLANETS BRIGHTEST.

Venus, March 27 and June 9.

Mars, December 27.

Jupiter, November 13.

Saturn, November 1.

On account of the strong twilight in which Mercury is always immersed, near sunset or sunrise, this planet will be taken to be *brightest*, or *best seen*, when farthest from the Sun, at its greatest elongation; when, moreover, its apparent motion towards or from the Sun is very slow, so that it may be seen with ease several days before and after the time of greatest elongation.

### THE FOUR SEASONS.

Winter begins December 21, 1880, at 5.10 A. M., and lasts 89 days, 1 hour and 2 minutes.

Spring begins March 20, 1881, at 6.12 A. M., and lasts 92 days, 20 hours and 8 minutes.

Summer begins June 21, 1881, at 2.20 A. M., and lasts 93 days, 14 hours and 22 minutes.

Autumn begins September 22, 1881, at 4.42 P. M., and lasts 89 days, 18 hours and 10 minutes.

Winter begins December 21, 1881, at 10.52 A. M. Tropical year, 365 days, 5 hours and 42 minutes.

### MOVABLE FEASTS.

|                           |             |
|---------------------------|-------------|
| Septuagesima Sunday.....  | February 13 |
| Sexagesima Sunday.....    | " 20        |
| Quinquagesima Sunday..... | " 27        |
| Ash Wednesday.....        | March 2     |
| Quadragesima Sunday.....  | " 6         |
| Mid-Lent.....             | " 27        |
| Palm Sunday.....          | April 10    |
| Good Friday.....          | " 15        |
| Easter Sunday.....        | " 17        |
| Low Sunday.....           | " 24        |
| Rogation Sunday.....      | May 22      |
| Ascension Day.....        | " 26        |
| Whit Sunday.....          | June 5      |
| Trinity Sunday.....       | " 12        |
| Corpus Christi.....       | " 16        |
| Advent Sunday.....        | Nov. 27     |

### CYCLES.

|                         |      |
|-------------------------|------|
| Dominical Letter.....   | B    |
| Epact.....              | 30   |
| Golden Number.....      | 1    |
| Solar Cycle.....        | 14   |
| Roman Indiction.....    | 9    |
| Julian Period.....      | 6594 |
| Dionysian Period.....   | 210  |
| Jewish Lunar Cycle..... | 17   |