

# Leap year means longer wait for Spring

By Raymond E. Bullock  
special writer

**S**KYGAZERS in February will be treated to a variety of events.

The two brightest planets in the sky, Venus and Jupiter, continue to draw closer to each other. There will be a conjunction (close grouping) between Mars and Saturn. There will be some excellent opportunities to find faint Uranus by using Mars and Saturn, and the Pleiades star cluster will be accented (covered) by the moon.

February is the shortest month of the year, usually containing only 28 days. People often wonder why one month should be so short when all the other months are 30 or 31 days long.

February could have had 30 days if one day had been taken from January and another from March, resulting in three consecutive months of 30 days. The reason is politics in Roman times.

The ancient Roman calendar originally began with the month of March and ended with February. It was an imperfect calendar, and, over

## skywatch

the course of many centuries, had gotten out of synchronization with the seasons. Calendar reform was badly needed.

The calendar would have been much easier to deal with if our year (the time it takes the earth to complete one orbit around the sun) were exactly 360 days long. There could be 12 months, each having 30 days. Unfortunately the earth takes 365.25 days to complete its orbit and those extra 0.25 days complicated matters.

JULIUS CAESAR brought the calendar back into step with the seasons, decreeing that the months would alternate in length, having either 31 or 30 days.

March, the traditional first month of the year, was given 31 days. April followed with 30 days, May had 31 and so on. By the time February, the last month of the year, rolled around

there needed to be only 29 days to add up to a total of 365. February would have its full 30 days only once every four years to allow for leap year.

Pleased with the results, Julius Caesar named one of the months "July" to honor himself.

His successor was his nephew Augustus, who felt that he was entitled to have a month named for him as well, hence the month August. But because August followed a month of 31 days, it had only 30 days of its own. Believing he was every bit as good as Julius, Augustus decided that his month should have just as many days as July, so he took one day from February and added it to August.

That left February with only 28 days, or 29 on leap years. Because this is a leap year, February does have a full 29 days in 1988. Unfortunately that makes it one day more to spring!

cent of the light it receives from the sun and because it is also a close neighbor of the earth.

Jupiter's atmosphere reflects about 73 percent of the light it gets from the sun. Jupiter is much farther away than Venus, but it is the largest planet in the solar system and its size allows it to reflect a lot of light.

FULL MOON was on Feb. 2. The moon rises in the east, as the sun sets in the west, and is visible all night.

Venus and Jupiter will be 26 degrees apart on the evening of Feb. 7. Watch Venus get closer to Jupiter during the month.

Last quarter moon is on Feb. 10.

**NOTICE THE Saturn-Mars-Anares are again on the morning of**


Feb. 11. The moon is approaching Anares on Feb. 11, has passed Saturn and is approaching Mars on Feb. 12, and is below Mars and Saturn on Feb. 13, in fact the moon, Mars, and Saturn form a nice triangle on Feb. 13.

Uranus can be located on Feb. 13 by using Saturn as a guide. Find Saturn in the south southeast, about 45 minutes before sunrise. (Mars is six degrees above and the west (right) of Saturn.)

To find faint Uranus, you will need binoculars, if not a low power telescope. Center your binoculars on Saturn. The planet Uranus will be 3.3 degrees directly below Saturn.


(Note: If you use an inverting telescope to observe Saturn and Uranus, you will find Uranus above Saturn.)

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