Arrival of spring relates to celestial equator

Spring officially arrives for the northern hemisphere at 10:02 p.m. Thursday, March 20.

The official start of spring often puzzles people. What does exactly determine the precise moment? The answer is the position of the sum with respect to a line called the celestial equator.

The official start of the precise moment? The answer is the position of the sum with respect to a line called the celestial control of the precise but our planet's axis is tilted 23.5 de-grees so the sun may appear as much as 23.5 degrees above or 23.5 degrees below the celestial equator. In June the sun is at its highest above the equator, because the earth's northern hemisphere is tilted

its most toward the sun, and we have

its most toward the sun, and we have suftuner.

In December the sun is at its lowest point and we have winter.

Obviously there are two points where the sun's pathway crosses the celestial equator. When the sun is raveling from its low point toward its high point, it crosses the celestial equator in the point toward its high point, it crosses the celestial equator moving from south to north. The precision moving from south to north. The precision moving the sun crosses that line is the official start of spring.

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THE POINT of crossing is the vernal equinox. Vernal is the Latin word for spring and equinox means 'equal night.' The length of the day is nearly equal to the length of night during this time. On the vernal equinox the sun rises due east and sets due west. We are rather shortsighted in calling the vernal equinox and the east of the

star Regulus (HEG u lus), the "heart" of the lion.

On the next evening the moon has moved below that star. Mercury is at maximum clongation (greatest apparent angle) from the sun on the evening of the 27th. Mercury is 19 degrees east (left) of the sun and very well placed for seeing. This was not very well placed for seeing. This will be the hest evening appearance of Mercury for the entire year.

Venus is easy to see, 24 degrees above due west; Mercury is slightly orth (right) of due west and 10 degrees above the horizon, 45 minutes after sunset. Observe Mercury with a telescope from night to night and watch as it goes through phases like the mount Venus and Mars-are-45 degrees apart on the evening of the 28th. In three months they will be 28th. In three months they will be within one-quarter of a degree (half within one-quarter of a degree (half of a full moon diameter) of each other.

other.

FULL MOON occurs at 2:17 a.m. m March 30. The moon will rise in the east, on the evening of the 20th, as the sun sets in the west and be systile all right. The moon is fully happened to the statement of the statement of

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Jupiter is about 3.5 degrees to the west (right) of a star cluster called the beta bive, so named because the stars resemble a swarm of bees when seen through a telescope. To the naked-eye the beehive star ch ter looks like a fuzzy patch of light.

County chamber holds mini-expo

The Oakland County Chamber of Gammerer invites the business computing to attend a MINI-EXPO/MEMBER MIXER 5-30-8 p.m. Wednesday March 20, at the Kingsley Inn. 1475 Woodward Ave. Beomfield Bull display their products and explain their services to the bysiness community. Complimentary hors of oesures and cash barville be available. There is no charge for Oakland County Chamber members. Cost is 410 for non-members. For reservatures, call 683-4747 or 644-1299. The Oakland County Chamber of Commerce invites the business com-

Look in the east southeast, two hours affer sunset, on the evening of the 30th. The moon is back in the constellation of Virgo, approaching the star Spica once again. On the following evening, the 31st, the moon-rises 1d degrees directly below Spica.

EASTER is on March 31 this year, but next year it falls in April. Determining the date of this very erratic holiday is not as difficult as you-may think. All you need to know is the phase of the moon and a few rules.

The ground rules for determining Easter were set up in the year 325 A.D. when the Emperor Constantine



called for a Council at Nicea for the purpose of calendar reform.

Based on the advice of his Christian council, he decreed that Easter would be observed on the first Sunday following the first full moon that occurs after the vernal equinox (the start of spring). The reason for

chossing the full moon, rather than the new moon, was so persons mak-ing a piticinage to the Holy Land could travel at night by the light of the moon. Since the start of spring occurs on March 20 or 21, the earliest Easter can be is March 22. But now we have

to consider the inevitable exceptions to the rule. If the first full moon to occur after the start of spring falls on a Sunday, then the following Sunday is Easter. If the full moon happens to be on the same day as the vernal equinox, then the April full moon fails on a Sunday, the following Sunday is Easter unless that date is later than April 25, which is the latest date Easter unless that date is later than April 25, which is the latest date Easter is permitted to fail. If that Sunday does fall after the 25th, then the previous Sunday, the one with the full moon, must be used.

So all things considered, Easter

This year Easter Sunday as March 31, which is just one day after the full moon. Now, wasn't that sample?

Raymond Bullock is the former coordinator of the planetarium and observatory of the Cranhirosk Institute of Science, Bloomfield Bills. He now works for a Trag-company which specializes in laser displays and special effects.

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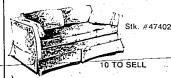
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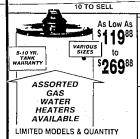
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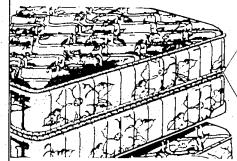
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