

Meteor showers 'rain' in December skies

December has several highlights in 1991:

- Two meteor showers, one of which is the among the year's best.
- Mercury puts in its best appearance for 1991 in the morning sky.
- A partial eclipse of the moon.

The amount of sunlight we receive really bottoms out this month. On Dec. 1 the sun rises at 7:42 a.m. and sets at 5:01 p.m. This allows for nine hours and 19 minutes of sunshine. On the 31st, these times are 8:02 a.m. and 5:10 p.m., allowing for nine hours and eight minutes of sun. The least amount actually occurs on the solstice, when we see only nine hours and five minutes of sunlight.

All five of the naked-eye planets will be visible, though Mars will be difficult. Mercury, Venus, Mars and Jupiter are morning objects; Saturn is visible after sunset.

Look for the moon, high in the southeast, on the morning of the 1st. The brilliant star 14 degrees to the left of the moon is Venus. Four degrees to the right of Venus, below a line drawn to the moon, is the star

Spica (SPY ca) in Virgo. On the following morning, the moon has shifted considerably; it is six degrees below Spica. Make a note of the relative positions of Venus, Spica and the moon. The moon will pass through this part of the sky again at the end of the month.

The star 8 degrees to the left of the moon on the morning of the 3rd is named Alpha Librae. It is the brightest star in the constellation of Libra the scales, so it is given the first letter of the Greek alphabet as its name. The second brightest star in a constellation gets the second letter, and so on.

Well, to be perfectly honest, it turns out that Beta Librae is actually slightly brighter than Alpha, but only by 0.14 magnitude. (Not a whole heck of a lot.) Did the Ancient Greek astronomer Eratosthenes make an error when he assigned the letters of the alphabet? Did Alpha get dimmer over the centuries? Did Beta get brighter? The controversy continues to rage on today.

Alpha Librae also goes by the Arabic name Zuben el Genubi (ZOO ben



skywatch
Raymond E. Bullock

el gen YOU be), which means "the Southern Claw."

ORIGINALLY THIS STAR was part of Scorpius the scorpion, the neighboring constellation to the left, but the Scorpion's claws were severed in antiquity and Zuben el Genubi ended up in a new pattern that was called Libra. Venus will pass above Alpha Librae in two weeks.

New Moon occurs at 10:56 p.m. on Dec. 5. The moon is located between the earth and the sun and is not visible. It will appear in the evening sky in just two days.

The planet Mercury is located at inferior conjunction on the 8th. It is located between the earth and the sun and is not visible. Mercury be-

comes a morning object and will be very well placed for viewing in eight days.

Saturn is easy to identify on the evening of the 9th; it's the "star" six degrees to the left of the crescent moon. On the following night the moon is six degrees above and to the left of Saturn.

One of the year's best meteor showers, the Geminids (GEM in ids), reaches its peak on the morning of Dec. 14. Meteor showers are named for the constellation from which they appear to radiate, in this case Gemini.

Meteors are more commonly known as "falling stars" because they look like little stars falling from the sky. Some American Indians thought they were stars running from danger. But they have nothing to do with stars; meteors are rocks falling out of the sky.

Out in space there are rocks, stones, grains of dust, and other junk tumbling around. If one of these objects falls into our atmosphere it heats up because of friction, burns

and gives off light. A patient skywatcher can expect to see a few sporadic (occasional) meteors any clear night.

Many of these meteors are orbiting around the sun in well-defined orbits. They may be trailing along as the debris of a comet, or they may be the remains of a comet that disintegrated long ago. When the earth passes through the orbit of a meteor swarm, many more meteors than usual can be seen, and we can predict precisely when that happens.

THE GEMINID SWARMS is one of the best. A patient observer can expect to see an average of 50 meteors every hour, which is about one every minute. The best meteor display occurs between 2 a.m. and sunrise. Gemini rises in the east northeast around 7 p.m., is nearly overhead at 2 a.m. and has moved to the west northwest by sunrise. Although the Geminids can appear in any part of

the sky, their trails can be traced back to Gemini.

The moon is at first quarter phase at 4:32 a.m. on Dec. 14. It is one-quarter of its way around the earth. The moon sets at 1:35 a.m., so its light will not interfere with the Geminid shower this year.

Look for Mercury, 25 degrees to the lower left of Venus, on the morning of Dec. 17. Mercury is about 8 degrees (16 Full Moon diameters) above the southeast horizon. Use binoculars and look about 45 minutes before sunrise. Mercury will be very well placed for viewing for the rest of the month.

Raymond Bullock is former coordinator of the Planetarium and observatory of the Cranbrook Institute of Science, Bloomfield Hills. Now he works for a Troy firm specializing in laser displays and effects.

County genealogists meet

The Oakland County Genealogical Society presents a free program entitled "Researching Irish Records" by Richard M. Doherty of Troy on Tuesday.

Doherty is a past president of both OCGS and the Detroit Society of Genealogical Research and has 20 years of genealogical experience. He

has made eight research trips to Ireland, most recently to attend the First Irish Genealogical Congress held at Trinity College in Dublin. He'll discuss that experience and share some new ideas on using Irish records.

For more information, contact Judy Rossman at 357-3193.



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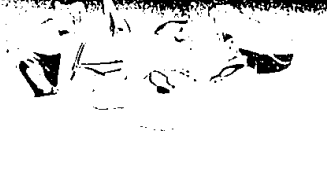
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