## Nights long for viewing meteors, stars

HE month of December brings us the least amount of sunlight for the year, two meteor showers, and the start of winter. The planets which are visible after sinset are Mars and Jupiter. Venus dominates the morning sky, Mercury and Saturn are too close to the sun to

ne seen.

'The amount of sunlight we receive this month decreases by a mere 10 milnutes. On Dec. 1, sunrise is at 7:42 a.m. and sunset is at 5:01 p.m., al-

am. and sunset is at 5:01 p.m., al-jewing for a possible nine bours and 19 minutes of sunlight. On Dec. 31, tiese times are 8:01 am. and 5:10 p.m., for a possible nine hours and nine minutes of sun. ; The moon is at first quarter phase op Dec. 1. It is in the constellation of Leo the lien and will be in the south, about 45 minutes before surrise, on tight ist. The bright star to the west (right) of the moon is Regulus (REG i hus), the "heart" of the lion.



FACE EAST northeast on Dec. 2, 45 minutes after sunset, and you'll see the planet Jopiter.

Jupiter will look like a bright star. Above and to the left of Jupiter is the Pleiades (PLEE a deed) star cluster. The Pleiades is the "shoulder" of Taurus. Below and to the left of Jupiter is the orange-red star Alchearan, the bull's "eye."

On the morning of the 4th, the moon has moved into the constellation of Virgo. The star to the left of

The waning crescent moon has passed Spica and is approaching Venus on the next morning. On the 6th the moon its seven degrees to the south (right) of Venus, both of which are in the constellation of Libra.

New moon occurr at 12:36 a.m. on Dec. 9. The moon is located between the carth and the sun and is not visible.

ONE OF THE BEST meteor showers of the year reaches its maximum on the 12th and 13th of December. This is the Geminid (GEM in nid) meteor shower, named for Gemini, the constellation from which the meteors appear to radiate.

Meteors are more commonly known as "falling stars" because they look like little stars falling from the sky. Some American Indi-ans 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 rubbish tumbling around. If one of these objects falls into our atmosphere, it heats up because of friction and burns, giving off light. A patient skywatcher can expect to see a few sporadic (occasional) meteors any clear night.

Many of these meteors are orbit-ing 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 disin-tegrated 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.

predict precisely when that happens.

THE GEMINID swarm is one of the richest. A patient observer can expect to see an average of 50 meteors every bour, which its about one every minute. The best meteor display occurs between 2 a.m. and sunrise. Although Geminal is nearly overhead, the meteors can appear in any part of the sky. Their trails can be traced back to Gemini.

Meteors burn up about 20 miles above the aurace of the earth, but if an exceptionally large meteor falls to burn completely, it could strike the earth and produce a crater.

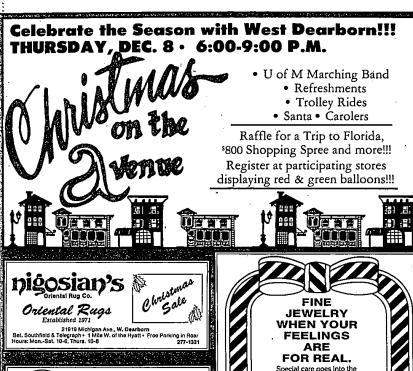
Most of Earth is covered with water, so any meteor failing to burn completely is more likely to produce a big splash than a big crater. Is it possible to be hit by a meteor? The chances of that happening are "astronomical!"

ronomical!"
First quarter moon is at 12:40 a.m., on the morning of December 16. The moon has completed one-quarter of its orbit around the earth.

The moon is approaching Mars on the evening of the 16th. Both are located in the faint constellation of; Pisces. On the next night the moon has passed Mars.

has passed Mars.

Look for the Moon on the night of the 20th. It is in Taurus, above, twelve degrees above Altebrars, Above and to the south (right) of the moon is the Pleiades. The Pleiades will be difficult to see with the bright moon scattering so much light. Farther the south of the moon is Jupiter.







Stationary

OPEN 7 DAYS

- Tights

- Leg Warmers
- PostersMugsCalendarsLeotards • Much More

Little Professor **Book Center** 

entertainment:89

22174 Michigan Ave. 278-1022 • 278-6633

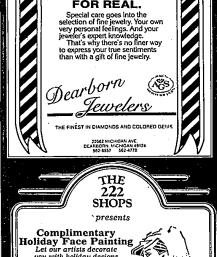
We Have Gift Certificates

€ LYNCH'S∙

Warren, MI (513) 751-1780

939 Howard Dearborn, MI (313) 565-5425

3361 Third Wyandotte, Mi (513) 281-8108





22266 Michigan Ave. . Dearborn . Parking in the rear



Holiday Cocktail Apparel plus 18 departments

> 22370 Michigan Ave. 561-9200 Holiday Hours: M-F, 10-9; SAT. 10-6



COMPACT DISC PLAYER
SYSTEM REMOTE CONTROLLABLE
Auto function. 3 beam less
skckup. Double oversampling
sigital filter. DP-57

\$169

KENWOOD

DOUBLE CASSETTE DECK WHIGH SPEED DUBBING Minion SPEED DUBBING
Dolby C & B NR. Relay play.
Auto Ispe selector. Time record/play function. KX57CW

\$169

Hurry into Walter's today

and save on these special Kenwood sound values.

\$799

OPEN DAILY: 10 A.M.-8:30 P.M. . SUNDAYS: 12 P.M.-5 P.M.

38 Years Walter's HOME APPLIANCES

