

Jupiter now prominent

by James Stokley

Jupiter, the only planet visible all evening in March, shines so brightly in the southeast that you can hardly miss it

Its position, in the constellation of Leo, the lion, is shown on the accompanying maps. These depict the sky as it looks about 10:00 p.m., local time, on March 1, an hour earlier at the middle of the month and two hours earlier at the end.

Although not shown on the maps because they set before these times, Mars and Saturn also are visible early in the evening at the beginning of the month. They'll be close together, because Mars passes Saturn on the night of March 3. Both planets, in Pisces, the fishes, are quite faint because they are now far from earth. By the end of March, Sat-

urn, setting with the sun, will no longer be visible. Mars will remain in the evening sky for a few months longer.

Brightest star of the March evening is Sirius, low in the south, in Canis major, the greater dog. The lesser dog, Canis Minor, containing Procyon, is higher. To the right of these figures stands Orion, the warrior, with two stars of the first magnitude: Betelgeuse, above, and Rigel, below. A row of three fainter stars between them forms Orion's belt.

Directly west, at the times for which the maps are drawn, stands Taurus, the bull. Red Aldebaran marks his eye. Above Taurus are Gemini, the twins. Two stars are marked: first magnitude Pollux and second magnitude Castor.

Three other bright stars stand toward

the east. One is Regulus, in Leo, where Jupiter shines many times brighter. Regulus is at the end of the handle of the Sickle, six stars that make a reasonably good outline of that implement.



Nova Planetariums

Are Designed For Any School Anywhere In The World.



Union Hill Road, W. Conshohocken, Pa. 19428 215-825-0434

CELESTIAL TIME TABLE FOR MARCH

_	EEEGTINE TIME TABLE FOR MARKET
EST	
2:00 pm	Moon passes south of Mars
5:00 pm	Moon passes north of Saturn
midnight	Mars passes north of Saturn
2:00 am	Moon farthest, distance 251,400 miles
4:21 am	Moon in first quarter
4:00 pm	Moon passes north of Jupiter
2:40 am	Algol at minimum
1:53 pm	Full moon
9:00 pm	Moon nearest, distance 225,800 miles
11:30 pm	Algol (variable star in Perseus) at minimum brightness
8:20 pm	Algol at minimum
8:22 am	Sun over equator, spring commences in Northern Hemisphere
6:08 am	Moon in last quarter
5:00 pm	Moon passes south of Venus
5:49 pm	New moon; partial eclipse of sun visible from South Pacific
_	and Antarctica
6:00 pm	Moon passes north of Mars
	2:00 pm 5:00 pm midnight 2:00 am 4:21 am 4:00 pm 2:40 am 1:53 pm 9:00 pm 11:30 pm 8:20 pm 8:22 am 6:08 am 5:00 pm 5:49 pm

190/science news/vol. 93/24 february 1968

Below Leo is Virgo, the virgin, with Spica. It is so low that absorption by the earth's atmosphere dims it considerably. To the left, in Bootes, the herdsman, is Arcturus, similarly dimmed.

Another way to find Arcturus is to look to the northeast for the Big Dipper, part of the great bear, Ursa Major. The two pointers in the dipper's bowl indicate the direction of the pole star, Polaris. Follow the curve of the dipper's handle around toward the right to find Arcturus.

Venus continues visible in the morning. Rising about an hour ahead of the sun, it's low in the east at dawn.

Ever since winter started in December, the sun has been moving northward in the sky. On March 20, at 8:22 a.m. EST (subtract one hour for CST, two hours for MST and three hours for PST), it reaches the halfway point. Then it stands directly over a point on the equator, in the Indian Ocean, north of the Seychelles. It's at the point in the sky called the vernal equinox. When the sun gets there, spring begins in the Northern Hemisphere and autumn in the Southern Hemisphere.

Jupiter isn't the only planet in Leo this month. However, you'll need a good-sized telescope to see one of the others: the far-distant Pluto. It's a little to the left of Denebola, which marks Leo's tail. On March 11 Pluto is directly opposite the sun and closest to earthbut still 2,886 million miles away.

Uranus also is opposite the sun this month, on St. Patrick's day. Its magnitude is 5.7, slightly brighter than 6.0, generally considered the limit of nakedeye visibility. But this is under ideal conditions of darkness and clarity of the sky. Near a city, with smoke and glare, it's difficult to see stars much fainter than fourth magnitude.

Just to the right of the word Virgo on the southern sky map (under Denebola, in Leo) three stars form a small triangle. The lowest is beta Virginis, and Uranus is just to the left. A pair of binoculars will help you locate it. In a small telescope it appears as a greenish disc, quite different from the point image of a star. Uranus is now at a distance of 1,671 million miles.

March also brings the year's first eclipse, but relatively few people will see it. On March 28 the moon will come in front of the sun. From some parts of the earth there will be a partial solar eclipse, with up to nine-tenths of the sun being covered.

This will be visible from an area in the South Pacific Ocean, at the southern tip of South America and in Antarctica near the Ross Sea. This region includes Marie Byrd Land, Victoria Land and Wilkes Land. The scientists in Antarctica will watch it.

MAIL SCIENCE FAIR ORDER **HEADQUARTERS**

A selection of products available by mail for readers of SCIENCE NEWS All merchandise sold on a money-back guarantee. Order direct by Stock No. Send check or M. O.



WOODEN SOLID PUZZLES WOODEN SOLID PUZZLES
Here's a fascinating assortment of
12 different puzzles to provide
hours of pleasure and stimulate
ability to think and reason. Animals and geometric forms. Take
them apart and reassemble them.
Lots of fun for the whole family—
young and old. Will test skill, patience and ability to solve problems. Order yours now.

Stock No. 70,205Q____\$3.50 Ppd.

SCIENCE FAIR HEADQUARTERS



CRYSTAL GROWING KIT
Do a crystallography project—illustrate with large beautiful crystals you grow yourself. Study &
demonstrate factors affecting
growth, refraction, piezoelectric effect, symmetry, etc. Incl. beok
"Crystals & Crystal Growing"
plus generous supply of chemicals
to grow 7 large display crystals
(clear, purple, blue-green, green
and red).

Stock M. To CRYSTAL GROWING KIT

and red). Stock No. 70,336Q____\$9.50 Ppd.



AMAZING NEW HOLOGRAMS

HOLOGRAMS

Now evaluate tremendous impact of almost unbelievable new 3-D photo-technique for small cost. Simple transmission-type hologram (on film or glass) result of splitting laser beam. Dimension appears carved in stone. Cut in half repeatedly—parts still contain full scene. Fantastic future potential. Use slide projector light source or flashlight bulb filament. Filter incl.

Stock No. 40 9690

Stock No. 40,969Q (4" x 33/4")___ ___\$11.00 Ppd.

Stock No. 30,574Q (2" x 17/8")____ __\$ 4.50 Ppd.

Stock No. 40,984Q (Glass) (4" x 5")-----\$30.00 Ppd.

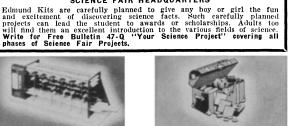


NEW MODEL DIGITAL

COMPUTER

COMPUT

Stock No. 70,683Q____\$5.98 Ppd.



SCIENCE TREASURE CHEST Hundreds of thrilling experiments plus a Ten Lens Kit to make telescopes, microscopes, etc. Incl.: extra powerful magnets, polarizing filters, compass, one-way mirror film diffraction grating, many other tems.

Stock No. 70,342Q____\$5.50 Ppd.

DELUXE CHEST (inc. CRYSTAL GROWING KIT, ELECTRIC MOTOR, MOLECULAR SET & LOTS MORE.)

Stock No. 70,343Q____\$10.50 Ppd.



NOW! WATER THAT CLIMBS UP HILL

Amaze your friends—loads of fun — perfect for Science Fair. Water actually flows up side of glass & siphons freely into other container. To stop flow—cut with scissors — watch it snap back. Secret's in special additive with long molecular structure—req. only ½ tsp. to glass. Friction reducing additive has all kinds of industrial, agricultural, experimental uses—alinch even makes gold fish slide thru water faster. 3 oz. can enough for 84 pints of water. Instr. Stock No. 41,086Q....\$2.00 Ppd. Stock No. 41,086Q____\$2.00 Ppd.



AMERICAN MADE OPAQUE PROJECTOR

OPAQUE PROJECTOR
Projects illustrations up to 3" x 30"
3½"—enlarges them to 35" x 30"
if screen is 6½ ft. from projector, larger pictures if screen is further away. No film or negatives needed.
Projects charts, diagrams, color or black-and-white. Operates on 115
volts A.C. current. . 6 ft. extension cord and plug included. Size 12" x 8" x 4½" wide. Weight I
lb. 2 ozs. Plastic case.

Stock No. 70,199Q____\$7.95 Ppd.



SLIDE MOTION POLARIZING

Most practical visual aid since the chalk board—at a tremendous saving! Actually see biological, physical, scientific processes in action. Specially prepared slides combined with rotating polarized disc simulates circular, horizontal and vertical continuous motion. Indispensable teaching aid—perfect for exhibits, demonstrations. 8—2" x2" Slides illustrate fascinating concepts of ear, heart, electricuits, telescopes, geiger counters, sound reproduction, etc. Incl. polarizing disc, base & motor, instr. manual.

Stock No. 70,893Q____\$9.00 Ppd.



CLEAR, SHARP DAY FILM VIEWING

VIEWING
Superior new transmission-projection screen material provides clear, sharp images in daylightboth front and rear projection.
Perfect for meetings, classroom, home viewing. New "Lenscreen" is arrangement of specially treated, highly transparent microscopically small cells. Give richer contrasts, true colors, all details.
Free of "hot spots." Vinyl latex type plastic won't yellow with age. Fire resistant. Flexible. Reversible—one side matted, other glossy. alossy

Stock No. 2508Q_6' wide_\$12.00 Ppd. Stock No. 70,934Q_1' sq._\$ 3.00 Ppd. Stock No. 70,935Q_3' sq._\$20.00 Ppd.



"FISH" WITH A MAGNET

"FISH" WITH A MAGNET
Go treasure hunting on the bottom! Fascinaiting fun & sometimes
profitable: Tie a line to our 5-lb.
Magnet—drop it overboard in hay,
river, lake or ocean. Troll it along
bottom—your "treasure" haul can
be outboard motors, anchors, other
metal valuables. 5-lb Magnet is
war surplus—Alnico V Type—
Gov't cost \$50. Lifts over 150 lbs.
on land—much greater weights
under water. on land-mu under water.

Stock No. 70.5710 ____\$12.50 Pnd.



GIANT WEATHER BALLOONS GIANT WEATHER BALLOONS
"Balls of fun" for kids, traffic
stoppers for stores, terrific for amateur meteorologists. Create a
neighborhood sensation. Great
backyard fun. Exciting beach attraction. Amateur meteorologists
use to measure cloud heights, wind
speed, and temp. Made of heavy
duty neoprene. Inflate with vacuum
cleaner or auto air hose; or locally
available helium for high rise.

Stock No. 60,568Q_ 8'__\$2.00 Ppd. Stock No. 60,632Q_16'__\$7.00 Ppd.

GET FREE CATALOG



SEND FOR FREE
CATALOG "AD"
Completely new
1968 Catalog.
148 pages packed
with nearly 4,000
unusual bargains.
complete the complete complet

mois selection of telescopes, microscopes, bi noculars, magnets, magnifiers, prisms, photo components, etc. For hobbyists, experimenters. workshops. Shop by mail. No salesman will call. Write for Components of the components of the salesman will call write for continuous components. On the components of the salesman will call write for continuous components of the components of the salesman will call write for continuous components of the components of the components of the salesman will call with the components of the component

Name Address City

ORDER BY STOCK NUMBER . SEND CHECK OR MONEY ORDER . MONEY-BACK GUARANTEE SCIENTIFIC CO. 300 EDSCORP BUILDING
BARRINGTON, NEW JERSEY 08007 MUND