The most prominent planet in the November evening sky will be Jupiter, which rises after 8:00 p.m. (local standard time) on the first, and two hours earlier on the 31st. In the constellation Gemini, low in the east, it's so brilliant that you shouldn't have any trouble finding it. After Gemini has climbed higher into the sky, look for the next-door constellation Cancer nearer the horizon. Although its stars aren't very bright, it's the location of the evening's next planet, Mars, about a ninth as bright as Jupiter, but still equal to many brighter stars.

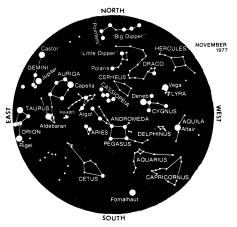
Saturn, a little more than half as bright, rises in the northeast about 12:30 a.m. early in November. By the end of the month it rises before 11:00 p.m. It's in Leo, which you'll see just below Cancer in the early morning. Saturn will be near the bright star Regulus which it passes to the north on Nov. 3.

All month Mercury will be above the southwestern horizon at early twilight and, hence, technically an evening star. It will be so near the sun, however, that you won't be able to see it. Venus, now our morning star, will be very prominent low in the southeast at dawn, shining even more brightly than Jupiter.

Above Gemini, look for Auriga, whose brightest star is Capella, whose scintillating brilliance is quite different from the steadier glow of a bright planet. To the right of Auriga stands Taurus with reddish Aldebaran.

## NOVEMBER STARS

## BY JAMES STOKLEY



To use star map hold over head with directions oriented as indicated.

Dec. 3	9:00 am	Moon south of Mars
	10:58 pm	Moon in last quarter
5	1:00 pm	Moon south of Saturn
9	7:00 pm	Moon south of Venus
11	2:09 am	New Moon
12	7:00 am	Moon nearest
17	4:52 pm	Moon in first quarter
25	12:31 pm	Full Moon
27	4:00 pm	Moon farthest
28	3:00 am	Moon south of Jupiter

Underneath Taurus the most spectacular of our constellations has now come into view. It is Orion, the only constellation with two first-magnitude stars. Rigel, to the right, is about equal to Capella but looks fainter because it's so low. Betelgeuse, similarly dimmed by low altitude, is to the left, almost directly east. A vertical row of three fainter stars, known as Orion's belt, is about half way between Rigel and Betelgeuse. Later in the night, when it's high in the South as it will be on mid-winter evenings, you'll see Orion in its full glory.

The brightest star of the November evening, which slightly exceeds Rigel, is Vega, low in the northwest. It's less prominent than on August evenings when it was directly overhead for much of the United States. Above it is Deneb in Cygnus. To the west and nearer the horizon, look for Aquila in which Altair stands. And low in the southwest you'll still see Fomalhaut.

Directly overhead on November evenings, from mid-latitudes in the United States, Andromeda is prominent, even though it has no first-magnitude stars. The southwesterly star of this group, along with three others in neighboring Pegasus, form the Great Square, a characteristic feature of the autumn evening sky.

Below Andromeda, toward the north, is Cassiopeia, five of whose stars form a letter M. Perseus is just to the east.

## BOOKS

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COMPUTERS AND THEIR SOCIETAL IM-PACT—Martin O. Holoien—Wiley, 1977, 264 p., illus., \$10.95. Written for the student with no mathematics beyond high school algebra, this book covers a historical survey of computers, computer programming, the use of computers in various fields and their possible future applications. With the ever-increasing role that computers play in our world, laymen would find this book useful and informative.

MARS AND ITS SATELLITES: A Detailed Commentary on the Nomenclature—Jurgen Blunck—Exposition, 1977, 200 p., illus., \$10. Traces the origins of the names, some mythological, some geographical, some biographical, of the Martian features, incorporating the latest developments in

Martian nomenclature—those defined at the IAU meeting in August 1976.

MATHEMATICAL MAGIC SHOW: More Puzzles, Games, Diversions, Illusions & Other Mathematical Sleight-of-Mind from SCIENTIFIC AMERICAN—Martin Gardner—Knopf, 1977, 284 p., drawings & photographs, \$8.95. With comments from readers, afterthoughts from the author and a brief glossary of mathematical terms for those not mathematically indoctrinated.

OLORGESAILIE: Archeological Studies of a Middle Pleistocene Lake Basin in Kenya—Glynn LI. Isaac assisted by Barbara Isaac—U of Chicago Pr, 1977, 310 p., illus., paper, \$7. A study of a complex of Acheulean sites conducted as an experiment in the application of various concepts and techniques new to the investigation of Lower Paleolithic culture.

A PRACTICAL INTRODUCTION TO ELECTRONIC CIRCUITS—Martin Hartley Jones—Cambridge U Pr, 1977, 237 p., diagrams, \$19.95, paper, \$6.95. Covers a wide range of circuit building bricks, analogue and digital, discrete and integrated, with information which enables the reader to construct and test the circuits.

PSYCHOLOGICAL AND EDUCATIONAL ASSESSMENT OF MINORITY CHILD-REN—Thomas Oakland, Ed.—Brunnel-Mazel, 1977, 241 p., \$13.50. Identifies various professional, legal, social and ethical issues which should be considered in order to use assessment techniques appropriately with minority group children.

**SOLAR HEATING DESIGN:** By the f-Chart Method—William A. Beckman et al—Wiley, 1977, 200 p., charts & diagrams, \$14.95. Concerned with the selection of the most economical sizes of the solar collector, storage tank and the associated heat exchangers, which, in conjunction with an auxiliary furnance, will supply the entire heating load at the lowest possible cost.

SPUTNIK, SCIENTISTS, AND EISEN-HOWER: A Memoir of the First Special Assistant to the President for Science and Technology—James R. Killian, Jr.—MIT Pr, 1977, 315 p., illus., \$14.95. Gives center stage to the Sputnik episode and concentrates on the 20-month period after Sputnik when science gained a close relationship to the presidency which continued through Eisenhower's second term and extended into the Kennedy administration.

THE UNIVERSE: Its Beginning and End—Lloyd Motz—Scribner, 1977, 343 p., illus., paper, \$4.95. Written for the general public with emphasis placed on the origin, evolution and ultimate collapse of the universe, this book, originally published in 1976, is now available in paperback.

THE WORLD'S WORST WEEDS: Distribution and Biology—LeRoy G. Holm et al—U Pr of Hawaii, 1977, 609 p., illus., \$35. Only in recent years have we become aware of the staggering losses inflicted on a foodshort world by destructive weeds. This is an inventory of the principal weeds of the world's major crops.

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