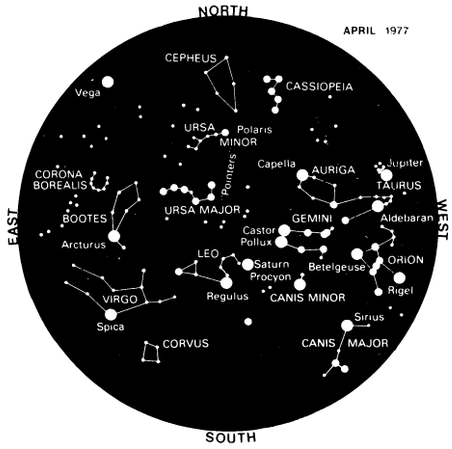
APRIL STARS

BY JAMES STOKLEY

Of the five planets that may be visible to the naked eye, Mercury is the most seldom seen, but in early April we'll have the best chance of the year to observe it. For a couple of weeks before and after the 10th, when it's farthest east of the sun, it will be visible low in the west at twilight. On the 10th it will set latest, about two hours after sunset at 40° north latitude. During this period of visibility it will be getting fainter. On April 12, it will be less than a third as bright as it was on the second.

The innermost planet, Mercury, revolves around the sun every 88 days at a distance of 36 million miles. It catches up to the faster-moving earth every 116 days, which is called its "synodic period." During this time it swings from one side of the sun to the other. Now east of the sun it sets after sunset. Next month, when it has moved to the western side, it will rise before sunrise. It passes behind the sun at the end of April and will reappear in the evening twilight about Aug. 8, even farther from the sun than on April 10. However, it will not be as high as in April, and that will make it set only about an hour after the sun. Thus it will be much more difficult to locate.

Two other planets also will appear on April evenings. Jupiter will be low in the northwest, in Taurus, setting about four hours after sunset on April 1 and two hours after on the 30th. Higher in the western sky in Cancer is Saturn, which sets after midnight. Venus passes between sun and earth on April 6 and won't be visible in the evening. But by the month's end it will be a brilliant object low in the east just before sunrise.



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

April	3	11:09 pm EST	Full Moon, partial eclipse of moon, visible in most of North America
	5	4:00 pm	Moon nearest
	6	1:00 am	Venus between sun and earth
	10	11:00 am	Mercury farthest east of sun
		2:15 pm	Moon in last quarter
	18	5:35 am	New Moon, eclipse of sun visible in Africa
	21	4:00 am	Moon south of Jupiter
		7:00 am	Moon farthest
	26	10:42 am EDT	Moon in first quarter
		9:00 pm	Moon south of Saturn

On the evening of April 3 there will be a partial eclipse of the moon, visible throughout North America except in the extreme northwestern part. The moon will then be full and at 10:30 p.m., EST, its northeastern edge will make its first contact with the earth's shadow. The greatest eclipse will occur at 11:18 p.m., when the shadow will cover about a fifth of the moon's diameter. At 12:06 a.m., the northern edge of the moon will emerge from the shadow.

An eclipse of the sun that will occur on April 18 will not be visible from North America. This will be an annular eclipse. The relative distances of the sun and moon will be such that the moon will appear a little smaller than the sun and will fail to cover it completely, even though it passes directly in front. A bright ring of the solar disk will remain visible around the dark moon. This effect will be seen from a band about a hundred miles wide, passing south over the Atlantic Ocean, then over Africa from Namibia to Tanzania and into the Indian Ocean. Over the southern part of Africa as well as Arabia and India there will be a partial eclipse of the sun.

High in the southern evening sky in April stands Leo, with Regulus, its brightest star. This is at the bottom of the sickle, a hook-shaped group of six stars of varying brightness. In the southeast, lower than Leo, is Virgo, where Spica stands. And to the left of that group is Boötes, with brilliant Arcturus.

Low in the southwest is Sirius, part of Canis Major, and above it you'll see Procyon, in Canis Minor. To the right of Sirius is Orion. □

MEDIA

SCIENCE NEWS prints the latest written word of scientific developments and noteworthy news. We've set this space aside to inform our readers of programs of scientific interest that are scheduled on the broadcast media. Check your local listings for exact times.

• **"Six American Families" (PBS)**-is a documentary series focusing on six U.S. households around the country and reflecting—in microcosm—the strengths and tensions that exist in contemporary American family life. April 4: "The Pasciak Family of Chicago"; April 11: "The Greenberg Family of Mill Valley, Calif."; April 18: "The Kennedy Family of Albuquerque"; April 25: "The George Family of New York City; May 2: "The Stephens Family of Iowa"; May 9: "The Burk Family of Georgia."

• **"Woman Alive" (PBS)**-explores, in three one-hour specials, the changing status of women: April 8: "Job Discrimination: Doing Something About it?"; April 15: "A Time of Change"; April 22: "Men, Women: What's the Difference?"

• **April 5 (PBS)-"Visions of Tomorrow"** looks at plans for living in space: Schemes for everything from growing crops in space to moon mining are examined.

• **April 6 (PBS) NOVA-"The Wolf Equation"** is about the prey and the predator and the balance they comprise in nature. In this case, the prey are Canadian Arctic caribou, which, as recently as 1970 numbered 240,000 animals and now are down to 60,000; the predators are tundra wolves, which, this year, will be the target of massive aerial hunts. Even though the most likely cause for the caribou collapse is overhunting by man, the Alaskan Department of Fish and Game is claiming that the wolf is at fault and must be cut back as well. How much man allows the balance of nature to swing on its own, and how, and how much we intervene are the variables that this program examines.

• **April 13 (PBS) NOVA-"Dawn of the Solar Age"** seriously considers solar energy as a possible source of industrial power. The United States will spend $300 million on solar energy research in 1977, and Japan has allocated $200 million a year to its development through 1999. The frantic activity and spending are due to the fact that natural gas and oil have a life of only 20 to 30 years left, so finding a substitute has become a worldwide concern. But what technology to substitute? Coal and nuclear energy are dangerous or polluting, or both. Solar energy seems to be safe, but, so far, it is expensive. And solar energy may bring with it problems of a new sort—institutional ones. For instance, who owns the sun and who should collect and distribute its energy?

• **April 19 (PBS)-"This Britain: Heritage of the Sea"** is an award-winning National Geographic story of a people and country whose lives have always been shaped by the sea. It explores Britain's staunch traditions and lavish pageantry, which endure and give her life.

• **April 20 (PBS) NOVA-"The Business of Extinction"** explores the huge, often illegal, international trade in animals and examines its effects on vanishing wildlife. NOVA visits a young smuggler who casually demonstrates the best way of hiding a cockatoo or snake for black marketeering. Biologists and ecologists are interviewed about the possibilities of breeding endangered species.