



scope—and special attachments are provided for telescope eyepieces to enable one to make solar observations without danger. Also, when a telescope is pointed to the sun, its image may be projected on a sheet of white paper held a little distance in back of the eyepiece.

With such aids as these, amateur astronomers all over the country will be busy watching the sun on the evening of May 5, to see Mercury crossing it.

Transit's Time Schedule

In New York the planet will start to enter the disc of the sun at 6:56 p. m., EST, just as the sun is about to set. St. Louis will see the beginning of the transit at 5:56 p. m., CST, and at 6:06 CST the planet will be fully in front of the sun. Astronomers around San Francisco will be watching the entrance of the planet on the sun's disc between 3:57 and 4:07 p. m., PST. At about 5:14 PST Mercury will be nearest the sun's center. At 6:19, in the Bay area, the planet will start across the sun's edge again, and at 6:29 PST the transit will be over.

Mercury will be moving from east toward the west so its passage across the sun will be downwards. The whole event will occur near the right-hand edge of the sun, or between two and three if you think of the sun as a clock-face.

During this century there are 14 transits of Mercury, two of which are grazing contacts—ten in November, four in May. The last occurred Nov. 14, 1953, but the last full transit at this time of year was on May 7, 1924. The next will occur Nov. 7, 1960, and the next May transit on the eighth in 1970.

Only Venus and Mercury can undergo transits, since they are the only planets nearer the sun than the earth.

Transits of Venus are far more rare, and there is none in the 20th century. The last happened on Dec. 6, 1882, and the next will come on June 8, 2004.

Since Venus is considerably larger than Mercury, as well as nearer to the earth, during a transit it can be seen in front of the sun without the aid of a telescope.

With smoked glass or other suitable protection for looking directly at the sun, Venus can be seen as a dark, round spot, moving slowly across the bright solar disc.

On May 13 there will be a total lunar eclipse, as the moon passes through the earth's shadow. It will be visible generally in Europe, Asia, Africa and over the Atlantic Ocean but will end 6:10 p. m., EST, before moonrise in the eastern U. S. and Canada.

However, the moon will remain partly in the earth's shadow until 7:17 p.m., and by then it will have risen for some points along the Atlantic Coast.

People at these locations may notice, just after the moon appears, a curious shading of its upper edge, where it has not yet emerged into full sunlight.

Celestial Time Table for May

MAY EST	
3	1:07 p.m. Moon passes Mars.
5	late afternoon Transit of Mercury across face of sun (see text).
8	10:00 p.m. Moon nearest, distance 229,200 miles.
9	1:39 p.m. Moon passes Jupiter.
13	5:34 p.m. Full moon, and total eclipse of moon, visible along eastern coast of U. S. (see text).
15	4:20 a.m. Moon passes Saturn.
21	11:00 a.m. Moon farthest, distance 251,200 miles.
	12:03 p.m. Moon in last quarter.
29	6:39 a.m. New moon.
30	4:56 a.m. Moon passes Venus.
	Subtract one hour for CST, two hours for MST, and three for PST.

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SOCIOLOGY

"FAS" Scores Give Neighborhood Types

► PEOPLE DIFFER psychologically from one neighborhood to another in big cities, with about eight different types of neighborhood. Generally the kinds of people in a given neighborhood remain the same even though the turnover is sizable.

These are some of the conclusions reached by Dr. Robert C. Tryon, psychology profes-

sor at the University of California at Berkeley, in a socio-psychological study he made.

Dr. Tryon made his study of the San Francisco Bay area, but he said the same principles apply to other large urban areas, although the neighborhood types may be more or less than eight, depending on the city.

The psychologist used census statistics of the San Francisco Bay area, especially the statistics for small areas which are called census tracts. In the 1940 Bay area census there were 33 measures of people living in 243 tracts. Dr. Tryon boiled this down to eight subcultural types that could be identified on the basis of three characteristics, family life, assimilation, and socio-economic independence.

Family life ("F") indicates orientation around the home. High scoring "F" people live in their own single-family homes, have large families, the women do not work, and there are more younger age groups.

Where there is low assimilation ("A"), there were relatively more of the less-assimilated minorities, more women in blue-collar jobs and unskilled men. High "A" indicates majority groups.

Socio-economic independence ("S") shows how autonomous people are economically. High "S" people are in the managerial and professional classes, with many college-educated people, living in high quality homes.

Dr. Tryon classed neighborhoods on the basis of "FAS" scores.

In a re-check with the 1950 census, the psychologist found no essential difference over the 10-year period, even though in some areas almost 90% of the people were different from those living there in 1940.

"Our findings add up to the general conclusion that neighborhoods that are alike in their status in family life, assimilation, and socio-economic independence comprise a kind of people that are enduringly different psychologically from the kinds that inhabit other social areas," Dr. Tryon said.

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TECHNOLOGY

Tough New Plastic Can Replace Metals

► A TOUGH NEW plastic that can withstand the blows of a carpenter's hammer has been discovered and developed. The plastic is expected to replace metals and ceramics in some applications.

Called Lexan by its developer, the General Electric Company in Pittsfield, Mass., the plastic is a polycarbonate resin. Now made in small lots, the polymer is being evaluated in the form of molding compound, film, varnish and coatings. It can be produced in a variety of opaque and transparent colors, and has excellent electrical characteristics, high thermal stability, low water absorption and high tensile strength.

Polycarbonate chemistry, which resulted in the development of Lexan, is a new technology that promises newer and better plastics.

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