sciences and engineering enrollment turned around in 1974, and enrollment in these areas continued to grow in 1975. The mathematical and physical sciences have been holding steady.

Psychology was the only area of science to show a drop in full-time enrollment in 1975, a reversal of a growth spurt in 1974. The study says the dropoff may be due to word that many new Ph.D.'s in psychology have had difficulty finding jobs.

Due to the increases in 1974 and 1975, there are more full-time graduate students in science and engineering now than there were in 1971 in all areas except the mathematical and physical sciences. □

The earth-Venus asteroid shuttle

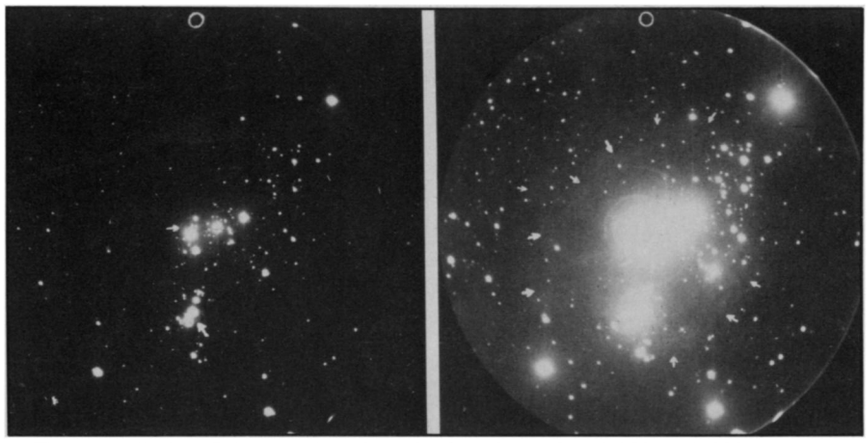
Sometimes asteroids wander outside the asteroid belt. The most displaced yet of such wanderers has now been found by Charles Kowal of the California Institute of Technology. The object is officially designated 1975 YA (Fast-Moving Object Kowal), and its claim to fame and significance is that it spends all of its time between the orbits of the earth and Venus. Its aphelion distance is only 1.04 times the mean radius of the earth's orbit.

Asteroids that sometimes come within the orbits of the inner planets have been known, but all previous ones had aphelion points in the asteroid belt and spent part of their time there. This is the first to appear wholly detached from the asteroid belt. Kowal believes it is probably an asteroid of the Apollo group that strayed within the earth-Venus neighborhood and was trapped here by the planets' gravity. He suspects there may be more such asteroids.

Brian G. Marsden of the Smithsonian Astrophysical Observatory, who calculated an orbit for Object Kowal, points out in International Astronomical Union Circular 2897 that the object has the smallest mean distance from the earth of any body yet recorded. Although this flying rock, which is estimated to be about a kilometer in diameter, approaches within three million kilometers of the earth, a collision with either the earth or Venus is considered extremely unlikely because of the high inclination of its orbit (32 degrees from the plane of the ecliptic).

Observations by Kowal and by observers at the Lowell and Harvard Observatories and possibly elsewhere are being continued through February to determine the orbit more closely. After that, Object Kowal will disappear from view for three years. (Its orbital period is nine months, so four of its orbits and three of the earth's will bring them close again.) Each close pass to earth or Venus will alter the object's orbit severely, and Kowal expects that in a short time, astronomically speaking, the object will be ejected from the earth-Venus neighborhood. □

Orion's 'star nursery' in far ultraviolet



The constellation Orion as viewed in the far ultraviolet (1,250 to 2,000 angstroms). The Orion neighborhood is a "nursery" for newborn stars, which start life radiating in the ultraviolet. Several of the bright objects shown in these rocket-borne pictures from the U. S. Naval Research Laboratory are faint if they appear at all in visible light. Conversely, the red giant Betelgeuse (position marked by circle) does not show up in the ultraviolet. The left photo, a 30-second exposure, shows the Orion nebula and a nebula near the star Zeta Orionis (arrows). The 100-second exposure (right) shows an extended nebulosity known as Barnard's Loop. □

Science adviser: Politics and surrogates

When the Ford Administration, in the person of Vice President Nelson Rockefeller, approached Congress last year on reinstituting a White House science adviser position, all sides expressed hope for quick approval. But a welter of conflicting approaches soon scotched that possibility (SN: 6/21/75, p. 397). The Administration's proposal for a loosely described Office of Science and Technology Policy (OSTP) finally gained House approval in early November, but the Senate is now pushing for a substantially stronger, more clearly defined White House unit. As the legislative process dragged on, two informal advisory groups were formed to "facilitate planning" for OSTP, and these have now begun to work on selected problems for the President.

Failure to secure Senate approval of the House-passed OSTP legislation appears to be another example of the inept communication that has plagued the Administration in its dealings with Congress. Though White House staffers worked carefully with House leaders to hammer out a compromise bill, Senators complain that they were not consulted. Now, led by Sen. Edward M. Kennedy (D-Mass.), the Senate has been trying to add provisions to have members of OSTP individually confirmed, give the science adviser some independent authority on setting R&D budget priorities, and have the adviser be formally a member of the Security Council—all opposed by the Administration.

Meanwhile, two informal advisory groups were formed of such science establishmentarians as ex-science adviser Edward E. David Jr., leading academic researchers, some Nobel laureates and corporate executives. The group on "Contribution of Technology to Economic Strength" is chaired by Simon Ramo (the "R" in TRW, Inc.). The group on "Anticipated Advances in Science and Technology" is chaired by William O. Baker, president of Bell Labs and a veteran unofficial adviser to Presidents (SN: 7/28/73, p. 52).

Ramo told a small group of science correspondents in Washington this week that the informal advisory set-up should be able to generate "momentum" to help OSTP once it is established. He emphasized the need for a new formula of cooperation between Government and industry in technical matters and said the scientists hope to identify areas where "things need to be done and won't be done without help from the White House." A task force on food and nutrition has been set up.

SCIENCE NEWS has learned that new compromises between the Senate and Administration positions on OSTP are under consideration. These include having the adviser make his budget recommendations to the Office of Management and Budget (OMB), rather than act autonomously; dropping the confirmation requirement for OSTP members other than the chairman; and discussing further with the Administration the nature of the science adviser's relationship to the Security Council.

The legislation is expected to hit the Senate floor by the first week in February and perhaps go to conference committee a week later. Says one knowledgable Senate aid: "We don't see a huge confrontation." □