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Dick McCormack
Headquarters. Washington, D.C.
(Phone: 202/755-8583)

Don Witten
Goddard Space Flight Center, Greenbelt, Md.
(Phone: 301/982-4955)

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NASA TO LAUNCH OSCAR-D, EIGHTH RADIO AMATEUR SATELLITE

When a Delta launch vehicle lifts off the pad at the Western Test Range near Lompoc, Calif., in early March to deliver the Landsat C Earth resources satellite into orbit, two smaller passengers will ride along. (See: NASA Headquarters release No: 78-22, Landsat C Press Kit.) One of these will be an amateur radio communications satellite named OSCAR-D. The other is the Plasma Interaction Experiment (PIX), developed by NASA's Lewis Research Center, Cleveland, Ohio.

OSCAR-D will be the eighth in a series of space satellites built by radio amateurs to be placed in orbit as piggyback payloads by U.S. launch vehicles.

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February 22, 1978

OSCAR is the acronym for Orbiting Satellite Carrying Amateur Radio. OSCAR 1, launched in December 1961 was a simple, battery operated radio beacon. Subsequent OSCARs have evolved into long lived communications relay satellites available for use by amateur operators around the world.

OSCAR 6, launched with the ITOS-D in October 1972 operated successfully in orbit for four and one-half years before ceasing to transmit in June 1977. OSCAR 7, launched with ITOS-G in November 1974, continues to function well and is heavily used both for amateur communications and as an educational tool bringing space science and applications into the classroom.

Using curriculum material provided by the American Radio Relay League and assistance from local amateur radio operators, science teachers in school systems throughout the country are being provided an opportunity to give their students a direct hands-on experience working with their own space satellite.

By building simple ground stations, making orbital predictions and operating with the satellites, students are being challenged to develop their skills in science and mathematics while experiencing the excitement of space communications.

Other applications with OSCAR satellites have included small terminal, multiple-access communications experiments; emergency communications exercises; and early tests of the search and rescue location systems currently under development by NASA.

OSCAR-D, to be designated OSCAR 8 once in orbit, is intended as a replacement for OSCAR 6 and will be used for continuation and expansion of the educational program. It is a small solar powered spacecraft, rectangular in shape, weighing 27 kilograms (60 pounds) and containing two communications transponders along with command and telemetry systems. Both transponders use the same uplink frequency passband centered on 145.9 MHz but employ different downlink frequencies with passbands centered on 29.4 MHz and 435.1 MHz. Because of power limitations, plans call for operating only one transponder at a time. Spacecraft stabilization is provided by permanent magnets and permalloy hysteresis damping rods.

OSCAR-D was developed under the auspices of the Radio Amateur Satellite Corp. (AMSAT) in cooperation with the American Radio Relay League, Inc. AMSAT is an international, non-profit organization of radio amateurs based in Washington, D.C., that has been responsible for the last four OSCAR satellites.

OSCAR-D is the product of a cooperative effort by amateur groups in the U.S., Canada, West Germany and Japan.

Additional information about AMSAT may be obtained by contacting the organization directly through Post Office Box 27, Washington, D.C. 20044.

Full information about the OSCAR educational program can be obtained by writing the American Radio Relay League, Newington, Conn. 06111.

Photographs and drawings to illustrate this news release will be distributed without charge only to media representatives in the United States. They may be obtained by writing or phoning:

The Public Affairs Audio-Visual Office
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Telephone No: 202/755-8366 Photo Nos: 78-H-39
78-H-40

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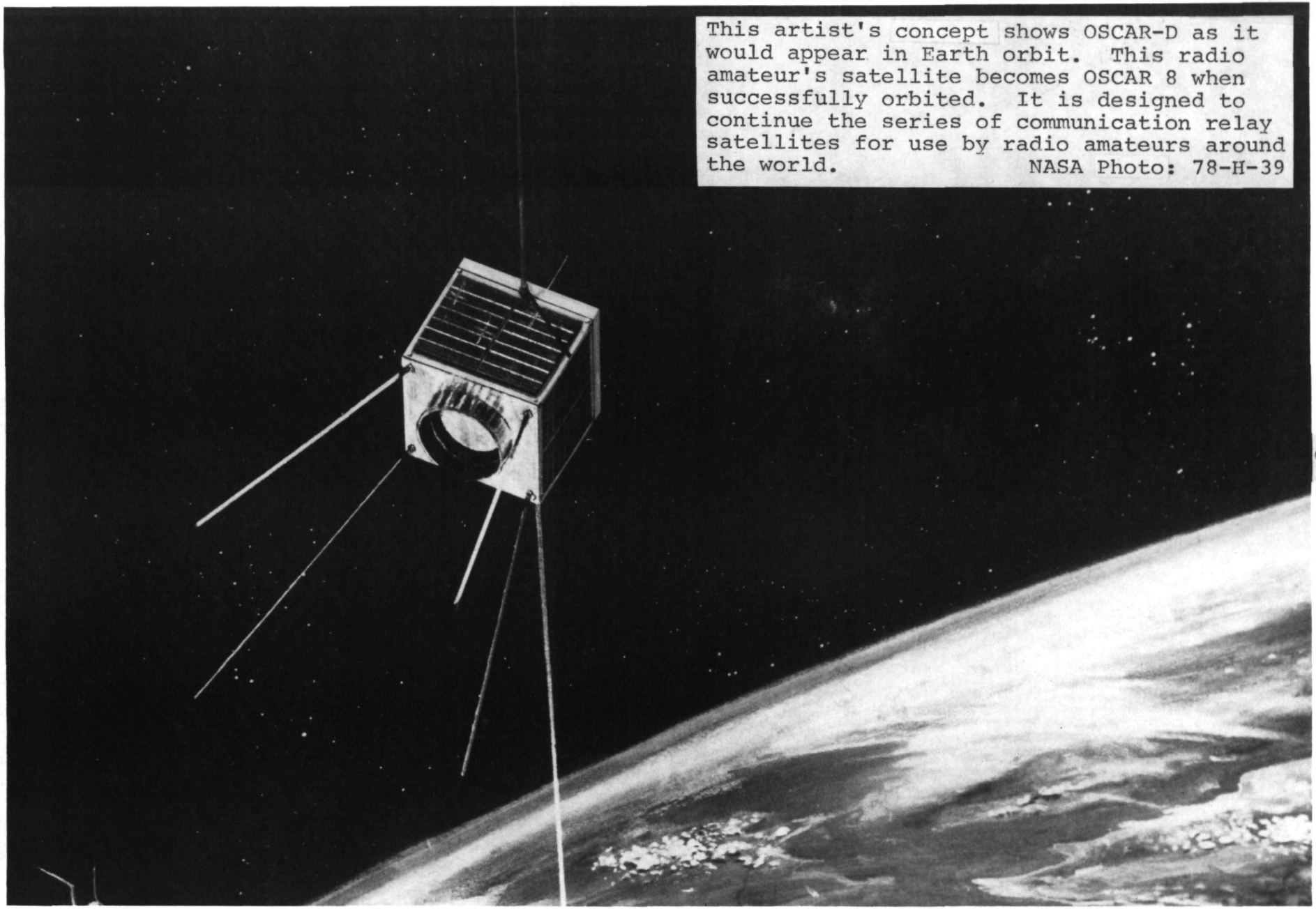
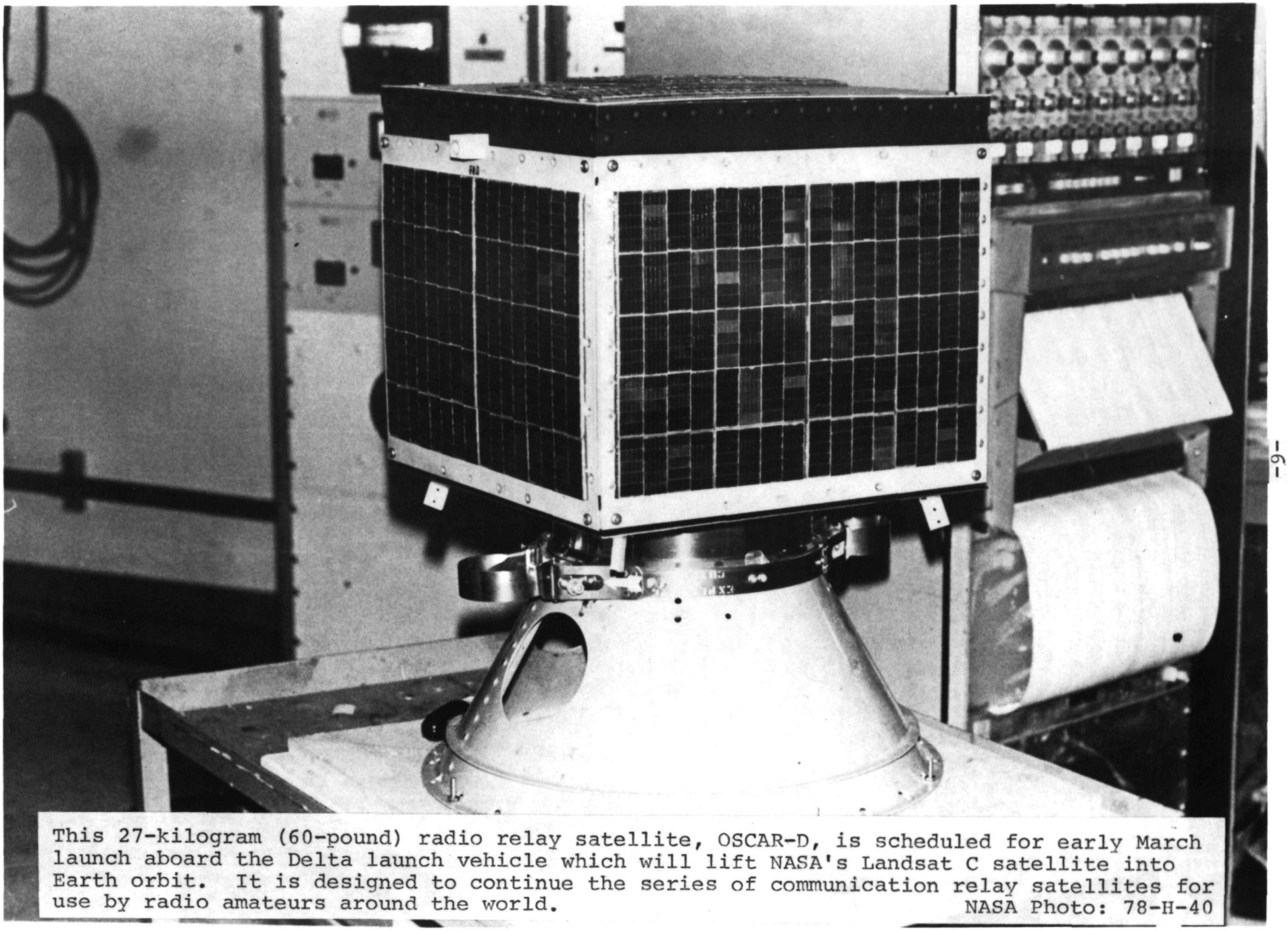


This artist's concept shows OSCAR-D as it would appear in Earth orbit. This radio amateur's satellite becomes OSCAR 8 when successfully orbited. It is designed to continue the series of communication relay satellites for use by radio amateurs around the world. NASA Photo: 78-H-39



This 27-kilogram (60-pound) radio relay satellite, OSCAR-D, is scheduled for early March launch aboard the Delta launch vehicle which will lift NASA's Landsat C satellite into Earth orbit. It is designed to continue the series of communication relay satellites for use by radio amateurs around the world.

NASA Photo: 78-H-40