Star Salute

Versatile Artist Bob Moody Paints Marshall's Trail To The Universe

Spectators who tour the clothesline art show circuit in North Alabama will definitely get a busy signal if they check into the background of one of the popular artists.

He's Bob Moody, an artist on the Marshall Center staff, who paints historical scenes as a hobby and futuristic space scenes on the job.

His work has been praised by Mrs. Lyndon B. Johnson, who received a painting a few weeks ago; by scientists and engineers at the space center and by scores of laymen.

In fact, if an illustration wasn't made by a camera at the Marshall Center, chances are excellent that it was done by Moody or a member of his staff.

Even his name is usually associated with an artist, but it's highly inappropriate in the case of Bob Moody. He's a compassionate, jovial fellow with a terrific personality. He's at home with mountain folks or with scientists.

A native of Sand Mountain, Moody is a supervisory illustrator in the Graphic Engineering and Model Studies branch headed by G. W. DeBeek. It's part of the Management Services Office.

About daylight each morning, Moody gets up and reaches for a paint brush. He splashes around with water colors, as sort of a pre-work therapy, for a couple of hours before going to his office in the HIC building.

Spurred by blueprints and limited only by his imagination, Moody starts painting space scenes. He and his staff turned out a very popular and extremely accurate sequence of illustrations on the moon mission. No one knows exactly what the surface of the moon looks like, but it'll be very beautiful if Mother Nature gave it the design that Moody came up with.

Moody was graduated from Auburn University in 1953, where he majored in interior and industrial design, which has many art courses. He went to Dallas as an illustrator with Chance-Vought Aircraft Co. Later, he switched jobs and went to Longview, Texas, to work in the advertising department of the R. G. LeTourneau Co. LeTourneau made giant earth moving equipment. Bob's illustrations made road construction look easy with LeTourneau equipment and they sold vehicles. But after three years, Moody started exploring the possibility of getting back to his native Alabama.

STAR SALUTE—Bob Moody, a supervisory illustrator in the MSO Graphic Engineering and Model Studies Branch, finishes another sketch to be added to MSFC's art dossier. Moody also drew the Saturn V moon mission sequence from blueprints and oral explanations. He draws water color paintings, usually of a historical nature, during his spare time.

The Army Ballistic Missile Agency needed a general illustrator for layout and concept work. Bob, dubious about working for the government, reluctantly accepted.

He has never regretted it. When the Marshall Center was created, he moved over and has remained with the same group. "I think we have the best department in government," he's quick to say.

Quite often, scientists and engineers provide him with a rough drawing of some piece of space equipment. They give him an oral explanation of the mission and the nearby environment where it will operate. They need not do more.

This is how the Lunar Excursion Module sequence evolved. In addition to Future Projects work, he gets involved in displays, brochures and other art.

Almost unanimously, the DeBeek customers like the quality of work. Busy men like Dr. Ernest Stuhlinger, for example, who is "excellent to work with," according to Moody, take time to sit down with the illustrator and go over the project. He's usually in a hurry for the finished product, Moody says, but he usually takes time to write an appreciative note and the artists are grateful.

Mrs. Johnson was delighted to receive a Moody painting of historic Mooresville, which was purchased by the Madison County Women's Democratic group. Moody travels all over North Alabama and parts of Tennessee in his spare time pursuing scenery that might prompt a good painting.

On the job, he and his staff never get caught up. Even after a painting is finished, it has to be updated continuously. They did hundreds of slides used by Marshall officials in briefings and they must be kept up to the minute.

Bob's enthusiasm is shared by those in his section.

One associate said "They're the kind of people who can whip out an illustration in the time that it takes other artists to argue a minor point."

Historical Hi-Lites

April 19, 1963—Tiros V meteorological satellite, launched June 19, 1962, entered its eleventh month of operation, surpassing the previous longevity production record of Tiros III. Since launch, Tiros V had collected and transmitted more than 53,000 cloud-cover photographs.

April 22, 1964—The U. S. S. R. placed Cosmos XV scientific earth satellite in orbit.

April 22, 1963—Faith 7 Mercury spacecraft was installed on its Atlas booster at Cape Canaveral in preparation for Astronaut Gordon Cooper's projected 22-orbit MA-9 flight.

April 25, 1963—Relay communications satellite was used to transmit electroencephalograms (brain waves) from Bristol, England, to Minneapolis, Minn., in a demonstration experiment conducted in connection with a meeting of the National Academy of Neurology.

April 25, 1963—Martin-Marietta Corporation announced the signing of a $280 million contract with the Department of Defense for development of the Titan III standardized space launch vehicle.

Toastmaster Makes Orientation Talk To New Employees

A Marshall Center employee, who is a member of the Redstone Toastmaster's Club, presented an orientation talk to new MSFC employees this month as part of his development phase as a speaker.

Andrew Biss, who is seeking new members for the club, said it offers frequent opportunities to present prepared and impromptu speeches which increase speech effectiveness and self confidence.

Biss said those interested in joining may contact him at 876-3995 or 539-4529.

GUARD CONTRACT RENEWED AT MTO

MISSISSIPPI TEST OPERATIONS—The Marshall Center has renewed and modified its contract with Hancock County, Miss., to allow the county to furnish three additional protective guards to its six-man force now patrolling here.

The modified contract, which was renewed for a year, is for $66,887.

In addition to the three new patrolmen, the modified contract will allow the County to furnish an extra pickup truck equipped with firefighting gear. This will give the force two pickup trucks and a sedan to patrol the massive rocket testing site now under development.

Marshall Star

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SPACE INFORMATION DIGEST

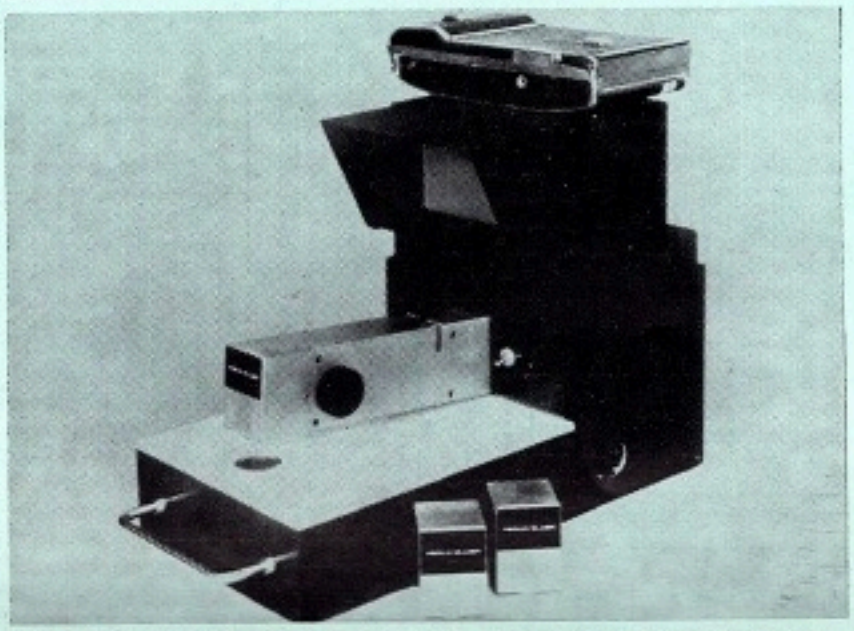
SPACE SYSTEMS INFORMATION BRANCH • GEORGE C. MARSHALL SPACE FLIGHT CENTER

Enlarger Used For Photogrammetry, Reconnaissance

A high-resolution photomicrographic enlarger for quick, easily made print enlargements of selected areas of photographic negatives and film positives has been introduced by the Perkin-Elmer Corp.

The instrument, designed especially for use in reconnaissance and photogrammetry studies, is also highly suited to use in quality control procedures for printed-circuit manufacture, microfilming, optical testing, and in biological research and clinical medicine.

Black and white or color Polaroid prints 3.25 x 4.25 in. (8.26 x 10.80 cm) in size are obtained in seconds through three simple steps: the film area of interest is selected on a ground glass screen, the shutter is tripped, and the film tab is pulled for processing. Magnifications of 15X, 33X, and 64X are available through use of three interchangeable objective heads. Film widths up to 9.5 in. (24 cm) are accepted, and the instrument provides high-contrast enlargement resolution of 180 to 635 lines per millimeter.



PHOTOMICROGRAPHIC ENLARGER—This Perkin-Elmer Corp. device produces Polaroid print enlargements of 15X, 33X, or 64X magnification from small areas of photographic negatives and film positives.

The microscope objective and ocular are housed together in a hinged arm that extends forward over the film support table. Exposure and fine-focus adjustments are provided for occasional trim-up or filter use, but are not normally required. The instrument is suited to table-top operation under normal room illumination. Easily portable, it measures 9 in. (22.9 cm) wide by 16 in. (41 cm) high by 16.5 in. (42 cm) long and has 29 lbm (13 kg). (Source: Data supplied by PERKIN-ELMER CORP.)

Weather System Considered

To Expand World Coverage

The US Weather Bureau is considering a system to enhance both the coverage and the data-collecting speed of its global observation network. Called SCOMO, for Satellite Collection of Meteorological Observations, the system would include a satellite to gather 34 kinds of information on atmospheric and sea conditions. The data would be received from ships, buoys, and remote ground stations for transmittal to the National Weather Satellite Center (NWSC) at Suitland, Md.

A new type of atmospheric tracer balloon is being considered by the Weather Bureau to augment the system. The balloons, placed 600 naut mi (1100 km) apart in a free-floating network, would have transmitters made of thin-film circuitry deposited on their surfaces. The balloon network could provide data on winds and other conditions at altitudes of 18,000 to 20,000 ft (5500 to 6100 m). The balloons could be located by radar or Loran-C, but the ideal method would be location by signals received by SCOMO or relayed to SCOMO by ships or buoys.

Reporting Stations

Both ships and buoys would provide weather data for the SCOMO system. In each case, digitized weather and location data would be stored for transmission upon command by the satellite. Later versions of the buoys will be used as automatic land stations.

The network will include the Navy's NOMAD (Navy Oceanographic Meteorological Automatic Device). Manned stations on Pacific islands will also become part of the network.

If the concept is found to be workable, hardware contracts will follow. The satellite will be

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Scientist Theorizes All-Plasma Radar

An Air Force scientist at the Air Force Cambridge Research Laboratories (AFCRL) has theorized the construction and operation of an all-plasma radar system.

In his theoretical model, all major operations of a radar transmitter-receiver can be performed by plasma devices. Some of these devices have already been developed, some represent techniques presently available and awaiting application, and others are simply theoretically promising.

Sheldon B. Herskovitz of AFCRL's Microwave Physics Laboratory has taken all these available and promising techniques and has described a hypothetical radar system based upon them.

Herskovitz's system would employ plasmas for power sources, oscillators, amplifiers, waveguides, detectors, antennas, and display devices. For these components, he has drawn upon the results of plasma research at AFCRL and laboratories over the world.

Most simply and popularly defined as "The Fourth State of Matter," a plasma consists of an ionized gas, a formation of electrically charged particles. The process of ionization causes the atoms or molecules of an element to free an electron. These freed electrons are the basic ingredients of most plasma devices.

Among the potential advantages of a plasma radar system would be large bandwidth operation, high power handling capability, and high tolerance to the effects of radiation. Current plasma devices are limited to about one megawatt peak power operation.

The power source for such a system could be one of several plasma power sources presently being studied—thermonuclear, magnetohydrodynamic, or thermionic. Power from the source would be supplied to a plasma oscillator-amplifier to produce microwave pulses. Experimental work indicates that a suitable plasma oscillator-amplifier can be constructed.

Plasma techniques for oscillation multiplication are being studied by a number of workers and are particularly promising for the generation of millimeter or submillimeter waves. These wavelengths are useful because they make possible high resolution of closely situated targets.

The transfer of energy within the hypothetical all-plasma radar system can be accomplished with plasma waveguides. Plasma

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