

Astronaut Trio Sees 'Successful' Apollo 9 Mission

A successful mission has been predicted by astronauts who will make America's first space hook-up of two manned spacecraft in next month's scheduled Apollo 9 flight.

NASA astronauts Jim McDivitt, Dave Scott, and Russell Schweickart are the crewmen for the flight aimed at giving the lunar module its first manned test in space. Apollo 9 is scheduled for lift-off on Feb. 28.

Apollo 9 calls for rendezvous and docking between the command and service modules craft and the lunar module, a crew transfer between the two crafts, and a two-hour spacewalk by Schweickart.

McDivitt commented last Saturday, "I certainly hope our mission will be successful. We expect it will be. But we obviously have two vehicles and chances are double that something will stop working. It just depends on what that thing is."

"We think we have the hardware, we've trained for it, and I think everything is going to work," McDivitt emphasized.

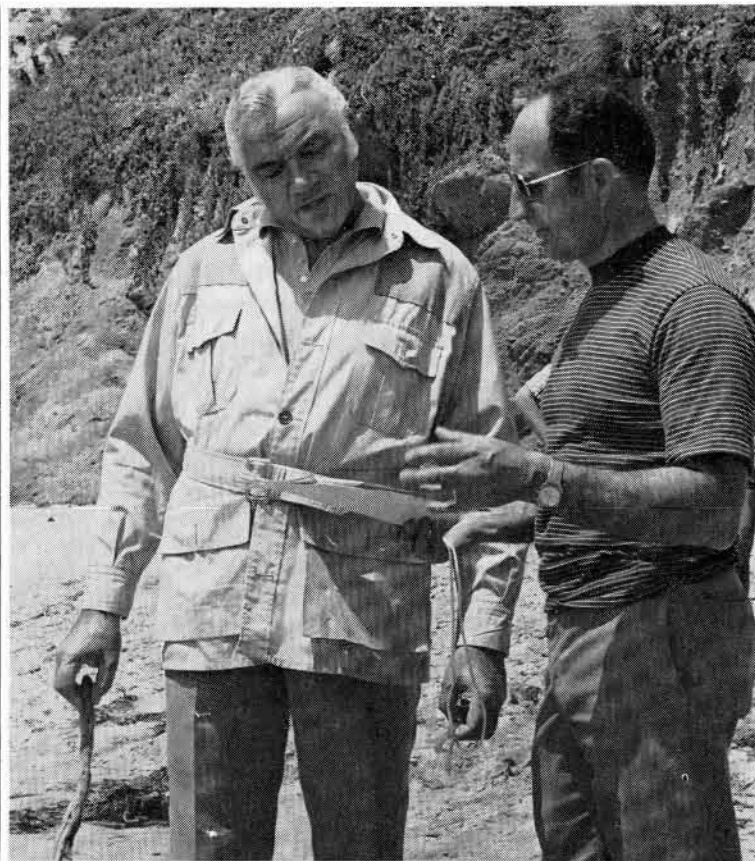
Schweickart added that, "certainly, the success we had on (Apollo) 7 and 8 was not just luck. I think we have every right to expect a successful mission."

Fellowships Are Available for Graduate Study

Applications for 1969-70 Science-Engineering Fellowships are being accepted from eligible Group employees.

E. D. Starkweather, Group vice president, Personnel, and Executive Offices Fellowship Committee chairman, said Aerospace and Systems Group engineering and scientific personnel interested in studying for a graduate degree in engineering, science, or mathematics will find it desirable to investigate the opportunities provided by these fellowships.

More than 60 Group employees have completed their doctor's or master's degree programs through the financial assistance provided by Science-Engineering. (Continued on Page 3, Column 4)



BONANZA STAR — Television star Lorne Greene, left, and Cal Reed of Motion Pictures go over script sequence for new division film, "Ocean of Space," in which "Bonanza" star is featured. Greene will be honored Tuesday with division astronaut Snoopy pin recipients in special Awards Night program in Long Beach.

VIEW FROM THE TOP

Photos From Vastness of Space Map Earth's Hidden Secrets

"The View From Space," one of North American Rockwell's "Man and His Universe" series of specials, will be seen in color on Sunday, Feb. 9 on ABC-TV, 7-8 p.m. PST, offering views of Earth as seen from outer space during the world's first decade of space exploration.

Guides for the spectacular trip into orbit and around the Earth will be astronauts Frank Borman and James Lovell, who just orbited the moon in Apollo 8, and Edwin (Buz) Aldrin, who will describe his feelings as he stood outside Gemini 12 and looked down on Earth from a hundred-odd miles above.

The special will concern itself primarily with what space exploration means to us in terms of practical applications, such as predicting weather, mapping heretofore inaccessible areas of the world, and locating dam sites, mineral deposits and natural gas and oil fields.

Producer James Benjamin said the special is a composite trip around Earth, based on ac-

tual film and still pictures taken from space. Behind these films we will hear the voices of John Glenn, Richard Gordon and other earlier astronauts as they comment on what they saw.

We will also meet a new type of astronaut, in the person of Harrison (Jack) Schmitt, a geologist with a Ph.D. from Harvard University, who didn't even know how to fly a plane when he was brought into NASA as a potential astronaut.

Schmitt, Benjamin said, is typical of the "new" type of astronaut. "These men are selected for what is in their minds. The important thing about Schmitt is that he has a great knowledge of geology. It is important that we place that mind on the moon," Benjamin added.

"Flying," according to Benjamin, "isn't even a consideration in finding people to send into space. Eventually they'll all be scientists," he concluded.

Benjamin said that the special will take viewers to Washington where William Fischer, Director of the Earth Resources Program, will explain what we are doing with the pictures taken from space.

"We will see things such as the Nile Delta and how all of the over one thousand villages have been numbered and labeled from one picture. We'll also show how they are making maps and even show how Gemini and Apollo photos are being used to hunt for oil in the Delaware Basin of West Texas."

Benjamin explained that if a photo is taken from high enough, it is possible to see the geologic formations that are deep beneath the ground by means of "geological fingerprints," which indicate where natural gas and oil fields are located.

Another practical application of space photography is illustrated in the Florida Keys, where the absence of shrimp has long been a mystery. Now, by examining the photographs

Division's 'Snoopy' Winners to Be Feted

Lorne Greene and Astronaut Pin Recipients Special Guests

A special Awards Night, honoring division Snoopy astronaut personal achievement award winners and television star Lorne Greene, will be sponsored by the division Tuesday night at the Long Beach Elks Lodge.

Hosting the event for Greene and the 250 Snoopy award winners and their spouses will be Executive Vice President Joe McNamara. In the audience will be approximately 100 persons recently nominated for the honor.

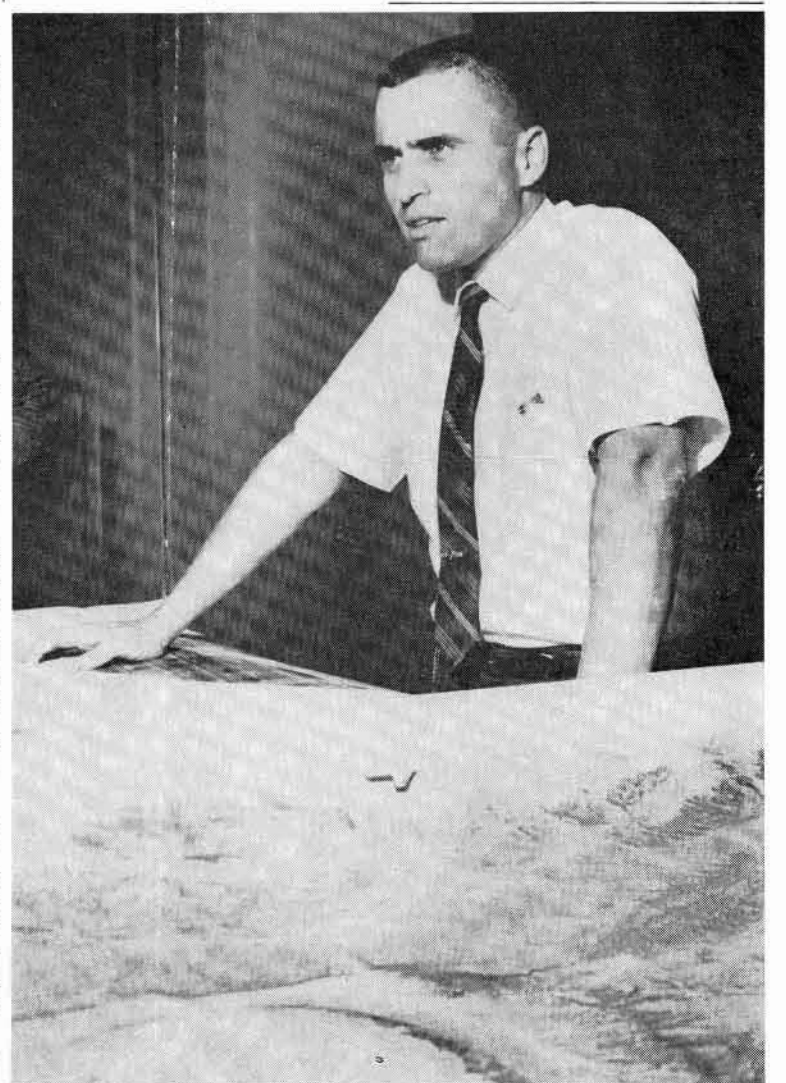
The Snoopy pins are the astronaut's personal symbol of

recognition for persons who make outstanding contributions to the nation's Apollo/Saturn lunar landing program. Division candidates are nominated through the PRIDE program.

Greene, star of television's "Bonanza," will be presented a special division award for his public service contributions in narrating and appearing in a new division-produced film, "Ocean of Space," which will be given its premiere showing Tuesday night.

The 12-minute color, sound film presents a capsule history of the evolution of manned space flight from Alan Shepard's first Mercury flight to the Apollo project, and compares the exploration of space to the ocean voyages of early explorers. Greene contributed his services for the film because of his interest in the national space program.

Also on the program will be the new NASA film, "Apollo 8: Go for TLI." Highlighting the Apollo 8 moon orbiting mission, the film features sequences (Continued on Page 3, Column 4)



SCIENTIST ASTRONAUT — Dr. Harrison (Jack) Schmitt, a new breed of astronaut, with a Ph.D. in geology from Harvard Univ., is being trained to walk on the moon. Schmitt may be the first of the "pure scientists" to venture into space.

Dr. George E. Mueller, associate administrator for Manned Space Flight, NASA, last week sent the following letter to North American Rockwell's President J. L. Atwood:

Dear Lee:

The successful flights of Apollo 7 and Apollo 8 were especially important milestones in the Apollo program. I want to extend my personal congratulations to your organization for its contribution and a job well done.

Apollo 7 demonstrated that our hardware has reached a high state of maturity, and it enabled us to accrue the experience and confidence necessary to proceed with the more advanced Apollo 8 mission preparatory for a manned lunar landing. Less tangible, but perhaps just as important, getting the astronauts back to flying has brought continued and even greater dedication and commitment. These recent successes and our future ones are dependent on a dedicated team having determination and enthusiasm.

I would appreciate it if you would act for me in giving the Apollo team members of your organization their richly deserved praise for helping to make these successful flights possible. I deeply appreciate your personal contributions and look forward to your continued support to maintain the increase in program impetus so evident as a result of these successful missions.

Best wishes and warm regards,

Sincerely yours,
/s/ George E. Mueller



TECH UTILIZATION AWARD—Division Technology Utilization monthly award for December, presented to Facilities and Industrial Engineering, is discussed by, from left, Carl Kiefer, manager of Saturn S-II Facilities; William Leseman, F&IE director, and John Healey, vice president of Manufacturing and Facilities. Kiefer holds "Outstanding Performance" plaque presented his organization as leading function within F&IE.

Third Special . . .

(Continued from Page 1, Column 4) cane Beulah, which was spotted by a weather satellite in 1967, will be shown from the time we were made aware of it in the middle of the Atlantic to the time it descended on Brownsville, Tex. "Without this warning Beulah would have been a disaster when it hit the mainland. Prior knowledge enabled the community to ride out the assault with a minimum of damage," Benjamin said.

The special concludes with a sequence of pictures which show the beauties of space as never seen before as we take a philosophical look into the future of space exploration. "The View From Space" presents us with a challenge to find ways in which to use our knowledge to benefit mankind.

The special was produced by ABC News with Lester Cooper as executive producer.

NR and Miehle-Goss-Dexter Agree on Merger Proposal

North American Rockwell Corp. and Miehle-Goss-Dexter, Inc., Chicago, have reached a preliminary agreement on a proposal for merger of the two companies.

The agreement was announced last week by J. L. Atwood, president and chief executive officer, and Willard F. Rockwell, Jr., chairman of the board, for NR, and E. G. Morrison, president and chief executive officer, and J. W. Coultrap, chairman of the board, for MGD.

Under the proposal, each share of MGD common stock would be exchanged for one share of a new convertible preferred stock, series B, to be issued by NR. The series B preferred stock would rank

equally with NR's series A preferred stock and would have a cumulative annual dividend rate of \$1.35. It would have a liquidation value of \$36 and would be convertible at any time into 9/10ths of a share of NR common stock.

For a period of ten years the conversion privilege would include the right, at the election of the holder, to acquire, upon conversion, an additional .225 shares of NR common stock for \$10.125 cash. The series B stock would be non-callable for seven years and callable thereafter initially at a price of \$38.

The proposed transaction is subject to negotiation of a definitive agreement, and appropriate approvals by directors and stockholders of both companies. It is also subject to obtaining a ruling from the Internal Revenue Service that the merger could be effected on a tax-free basis.

One of the world's major manufacturers of printing equipment, MGD makes letterpresses and offset presses; magazine and rotogravure presses; automatic binding equipment; paper cutting machines, and folding carton equipment. It also manufactures pneumatic systems and auxiliary equipment.

In commenting on the proposal, executives of the two companies said: "This is NR's first entry into the graphic arts industry, and the combination of NR's technical resources with MGD's position in the graphic arts field will benefit both companies."

Toastmasters Club Members Expand Scope

Downey Space Toastmaster club members are expanding their activities and scope through a series of meetings with other area Toastmaster clubs.

The most recent of the meetings was with the Wilshire Boulevard Temple Toastmasters. Other sessions, and debates, have been arranged with the Downey Toastmistresses.

The club has dinner-meetings each Wednesday at 5:30 p.m. at the Memory House restaurant in Downey.

Steiner Re-Elected to Electrical Society Post

Rudolf Steiner, a member of the technical staff in Research, Engineering and Test's Components and Parts Standards, has been re-elected secretary of the Aerospace Electrical Society. Steiner has been active in the society for 12 years. Posts he has held include director of services and program chairman.



POINT OF INTEREST—Apollo spacecraft display at State Mutual Savings & Loan Assn. holds attention of noontime visitors in downtown Los Angeles. Display, which concludes today, features full-size and scale mockups and models of spacecraft, Saturn V launch vehicle and photos.

Worcester Elected

Thorne Worcester of Research, Engineering and Test has been elected president of the Santa Ana Coordinating Council.

Worcester has been a member of the council since its inception in 1967. Earlier he served on various council committees.

PRIDE IN PERFECTION

Apollo Manufacturing Workers Give Error-Free Performance

An electronic "black box" with more than 1000 inspection points has been completed without a defect by personnel of Apollo Electrical Panels and Packages Fabrication.

The component is the service module power distribution box for Apollo spacecraft 110. In addition to being fabricated without an error, it was finished ahead of the anticipated schedule, said General Supervisor Marty Walsh.

"The workmanship on the job was outstanding all the way through," said Walsh, "and there also was excellent cooperation between the teams on the two shifts."

Walsh said the box has approximately 50 components, and some 500 solder, lugging, and crimping terminations. In

gaining its error-free rating, the unit went through bench inspection, two functional tests, and vibration testing.

The box plays a vital role in flight, distributing power from the Apollo fuel cells throughout the command and service modules.

The joint first and second shift team that combined its talents in fabricating the component was headed by Supervisors Don Holbrook on days and Lou Baker on nights.

Lulu Williams is the leadwoman for the first shift and Nell Fear is her counterpart on the second shift. Team members were Evelyn Caufer, Jean Hanlon, Dorothy Lynch, Helen Hemple, and Ann O'Neal.

Division inspectors on the job were Max Sisson, Margaret McClain, Mary Owens, and Ann Lynch. Dave Shadid is the inspector for NASA's resident Apollo program office.

Symposium Abstracts Required Before April 30

Eighth International Symposium on Space Technology and Science-Tokyo, 1969, will be held in Tokyo Aug. 25-30. Abstracts of 200 words must be submitted before April 30 to: Prof. Jiro Kondo, Dept. of Aer-

onautics, Faculty of Engineering, University of Tokyo, Bunkyo-ku, Tokyo 113, Japan.

Authors are reminded that U. S. State Dept. clearance is necessary when "exporting" technical information except that

which has been previously available to the general public. This required clearance may be obtained through the Public Relations Dept. and a minimum of 60 days is usually necessary for assured clearance.



PERFECT PART—Apollo Electrical Panels and Packages Fabrication personnel are shown with Apollo Spacecraft 110 "black box" they fabricated without an error. Unit, the service module power distribution box, has more than 1,000 inspection points and approximately 50 components.

PUT **PRIDE** IN YOUR WORK



TROPHY WINNERS — Downey Space Toastmasters Club, composed primarily of division men, was named winner of Club of Area trophy for second straight six-month period. Holding trophy, third from left in front row, is Chuck Yee who was winner of recent Area humorous speech contest.

Graduate Fellowships . . .

(Continued from Page 1, Column 1) ing Fellowships. Some 40 employees are studying presently for graduate degrees under their 1968-69 awards.

Space Division employees may secure additional information and necessary application forms by telephoning their Educational Programs Office. (Downey, Ext. 3141; Florida, Ext. 6733).

Completed application forms and related documents for 1969-70 Full-Study awards must be filed with divisional Educational Programs Administrators by March 3, 1969. Applications for

Work-Study Fellowships must be on file by April 1, 1969.

Full-Study Awards

The Full-Study Fellowships provide for a number of awards to qualified Group employees who have completed at least three years of continuous service by Sept. 1, 1969, with the Aerospace and Systems Group's divisions. To be eligible for a Full-Study award, an employee must have his master's degree and be seeking his doctoral degree in an approved field of study.

Each award provides for the payment to the recipient of a monthly stipend ranging from \$333.33 to at least 50 percent of the monthly salary, the amount depending upon number of dependents and point of progress toward the degree. In addition, he is reimbursed for up to \$125 for required books and supplies, as well as having his tuition and required fees paid for by the Group. If he attends a university more than 100 miles from his division and within the continental United States, he is also provided certain transportation and moving allowances to the college.

Work-Study Awards

The Work-Study Fellowships provide for a number of awards to qualified employees who are seeking either master's or doctor's degrees in approved fields of study. An employee must have completed at least one year of continuous service by Sept. 1, 1969, with the Aerospace and Systems Group in order to participate in this plan and to receive its benefits. A Work-Study Fellow will work in his normal Group position a minimum of 20 hours, but not more than 32 hours per week while he carries a one-half academic load.

The recipient of a Work-Study Fellowship will be paid his regular salary rate for his scheduled working hours and, in addition, be paid a monthly stipend ranging from \$111.11 to \$138.89, the amount depending on the number of his dependents. The Group pays the full tuition and required non-refundable fees directly to the college. He is reimbursed the cost of required books and supplies up to \$125 for a 12-month period of school attendance.

Copies of the Science-Engineering Fellowship informational brochure are available at the educational bulletin boards located throughout the division, or they may be secured from your Educational Programs Office.

Scholarship Committee Expects Record-Breaking Participation

The Scholarship Committee anticipates record-breaking participation in the 20th Annual Los Angeles Area Management Assn. scholarship competition, said Dick Hoppe, committee chairman.

Two awards of \$3,200 each are stimulating a flow of requests for application forms. Students eligible for the competition are urged to use the "Request for Application" form in *Skywriter* today.

Competition is open to sons, daughters, or dependents of North American Rockwell Corp. employees in the Aerospace and Systems Group or a wholly owned subsidiary administered by the Group, or the General Offices of NR, working within a radius of 125 miles of the General Offices.

Parents need not be members of the LA Area Assn. However, one parent must have completed

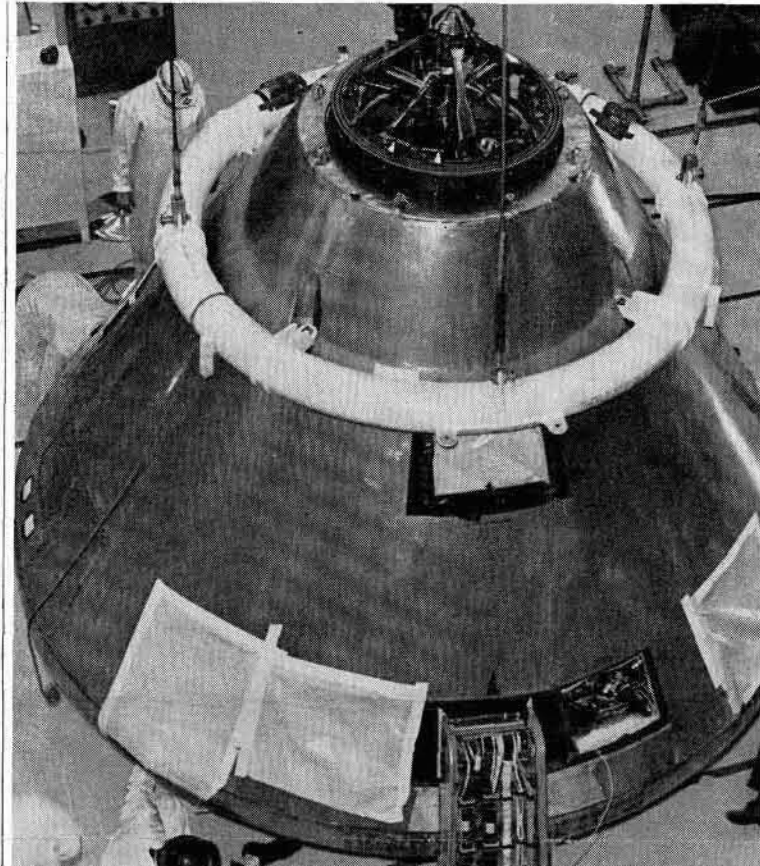
a minimum of six months' employment on or before March 7, 1969, and still be an employee, as described above, at the time awards are made.

To qualify, applicants must be high school seniors graduating either in January or June, 1969.

The scholarships provide \$800 per year over a four-year period to the boy and girl selected as winners. If the winner pursues an accelerated schooling program, payments may be made other than annually.

Requests for application should be forwarded to the Management Assn. office. Upon receipt of request, the Association office will issue the official "Application Form" which must be completed and returned to the office by March 7.

Date of the examination has been set for Saturday, March 22. Announcement of the winners will be made in early May.



PROBE ASSEMBLY — High-angle shot of Apollo Spacecraft 107 command module, now undergoing checkout at Kennedy Space Center, provides good view of arrow-shaped docking probe that will play important role in Apollo 9 flight. Probe is part of docking system that connects command/service module craft to lunar module so that two astronauts can transfer to the lunar module for their descent to the surface of the moon. Apollo 9 will be first manned checkout in Earth orbit of the lunar module.

(REQUEST FOR APPLICATION)
**LOS ANGELES AREA MANAGEMENT ASSOCIATION
 TWENTIETH ANNUAL
 SCHOLARSHIP COMPETITION**
 Management Association Office E-10
 North American Rockwell Corp.
 1700 E. Imperial Hwy.
 El Segundo, Calif. 90245

I am a high school senior interested in the 1969 Management Association Scholarship competition. Please send me an application form.

PLEASE PRINT OR TYPE

My name _____ (first) (initial) (last)
 Address _____
 City _____ State _____ Zip Code _____

Dr. Loh Writes Unique Book On Propulsion

A new propulsion book, designed for college text use and industry research, and authored and edited by Space Division's Dr. W. H. T. Loh, is available at book stores.

The book is entitled, "Jet, Rocket, Nuclear, Ion and Electric Propulsion — Theory and Design." Dr. Loh, manager of Science and Technology, says it is the first written to cover the complete spectrum of advanced propulsion and theory and design.

Dr. Loh said contents of the book are based partly on notes taken by university students attending his advanced propulsion lectures during the past 15 years, and on manuscripts of university professors.

Among the contributors are Profs. Howard Seifert of Stanford; Antonio Ferri, NYU; Martin Summerfield and Sin-I Cheng of Princeton; Andrew Charwat, UCLA; A. K. Oppenheim, UC Berkeley, and G. L. Dugger of Johns Hopkins.

Company co-authors include Dr. John McCarthy, Dr. Krafft Ehrlicke, and Dr. George Sutton, who was the author of the early text on "Rocket Propulsion Elements."

Awards Night . . .

(Continued from Page 1, Column 5) showing the crew inside the spacecraft, and scenes of the Earth and the moon from space.

The division Motion Pictures Dept. produced "Ocean of Space." Cal Reed was writer-director; Sid Brownlee, Paul Hipp, and Bob Metz were cameramen, and Marlene Swenson was film editor. Graphics for the film were provided by Hank Lozano and Bert Winthrop of Design Graphics.

Jackie Benington Vies for National Junior Miss Title

Jackie Benington, 17-year-old daughter of Orch Benington of Apollo Contracts, will represent California in the 1969 Junior Miss national finals in May.

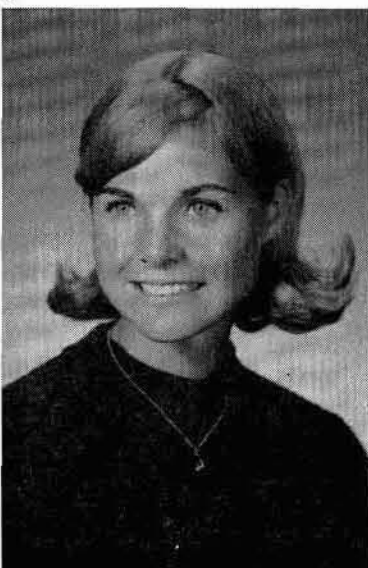
The Marina High School senior won the state title in competition against 22 other finalists. The program is sponsored by Junior Chambers of Commerce across the nation.

The competition is aimed at finding the ideal high school senior girl. Entrants are judged on talent, scholarship, physical fitness, poise and appearance.

Taking the top honors in the first such competition she has entered, the attractive young blonde won a \$1000 scholarship and a \$500 Savings Bond. She says she will use the awards to further her ambition to become a biologist.

Jackie has a 4.0 grade point average in her studies. She also is a songleader, has been a

member of the California Scholastic Federation for three years, and is president of her school's American Field Service program.



Jackie Benington

Mick O'Mach & Buster



"What's the matter Buster, flu bug bite you?"

Book Slated for Spring Publication

A book on motion picture technique, emphasizing the creative process, has been authored by Henry Provisor of Documentation.

"How to Create the 8mm/16mm Film" is slated for publication in the spring, and will be printed simultaneously in New York and Toronto, Canada, by Doubleday/Ampho- to of New York.

The two-volume work covers the selection of equipment, lighting in the studio and on location, editing, titling, continuity, and script writing for independent production.

Five-Session Organ Classes to Begin Soon

A new series of electric organ classes will be presented for employees at the Downey Recreation Center beginning in early February.

The five-class course is for beginning and intermediate students, and will cost \$10.

Plans are being finalized for the initiation of an organ club at the Rec Center for employees and their families. Information about the course and the club may be obtained by calling the Rec Center at Ext. 6094.



THUNDERBIRDS VISIT — Norm Casson, center, manager of Apollo Spacecraft Checkout, explains details of Apollo 8 command module systems to two members of famed Air Force Thunderbirds formation flying team during visit to Space Division. At the left is Maj. Jack Dickey; Capt. Mack Angel is at right.

Annual Bowling Tournament Application Cards Available

Bowling enthusiasts are sharpening their shooting eyes for the division's Seventh Annual Bowling Tournament.

Applications cards for the event are available through Feb. 10 at the Recreation and Welfare offices at both Downey and Seal Beach. The tournament will be Feb. 15 at the Pioneer Bowl in Norwalk.

Entry fee is \$3 for doubles and singles matches and \$2.55 for singles competition only, and must accompany application cards.

Eligible for the tournament are all division employees, full-time associate employees and members of their families 18 years-of-age and older. Also able to compete are company personnel playing in a division-sanctioned league who have

rolled 21 or more games in the 1968-69 season, or who have a 1967-68 book average.

Further information may be obtained by contacting R&W.



PRACTICE MAKES PERFECT — Joyce De Angelis of Television and Film rolls a strike as she sharpens her shooting eye for division Seventh Annual Bowling Tournament. Registrations for Feb. 15 event are being accepted at Recreation and Welfare.

Lollar Becomes VP of Safety Council

Felix Lollar, of Industrial Safety, was installed as vice president of the Downey Safety Council.

One of the founders of the organization, Lollar last year served as the council's treasurer.

Classified Ads

FOR SALE

- HOMES**
- 3 br, 2 ba, Torrance 213/324-2869.
- 3 br remodeled, Lakewood, 213/630-5565.
- APPLIANCES**
- Washer, Maytag Auto, 714/826-1396.
- MOTORCYCLES**
- '66 Triumph, 650cc TR6. 213/869-7463.
- PETS**
- Poodle M/Toy, 2 mo. AKC. 941-1732.
- Basset Hound Pups, AKC. 941-5870.
- Geese, Gray Toulouse. 644-6627.
- MISCELLANEOUS**
- Cedar Chest, Lane, Maple. 213/397-7082.
- Air Compressor. 213/596-0645.
- Skis, Hd. Standards, 190CM. 372-4059.
- Piano, uprt., \$50. 714/629-0573.
- Piano, Spinet, \$300. 213/ED 3-0989.
- Bike, 10 spd racer. 521-6488.
- Transicord, take paymts. 714/839-0702.
- Skis, Childs, \$5. 842-3056.

Skywriter

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NR REPORTS SALES, EARNINGS IN FISCAL YEAR'S 1ST QUARTER

North American Rockwell Corp. (NR) this week reported net earnings after taxes for its first fiscal quarter ended Dec. 31, 1968, of \$15,826,000 or \$.60 per common share, compared with \$17,297,000 or \$.66 a share for the first quarter of the previous year.

Sales for the first quarter of the current fiscal year were \$610,610,000, compared with \$603,262,000 for the like period of the preceding year. Amounts for both periods include the operating results of companies acquired during 1968.

J. L. Atwood, president and chief executive officer, and Willard F. Rockwell, Jr., chairman of the board, said that although sales increased slightly in the current period, earnings were lower. Among factors contributing to lower first quarter earnings were less favorable profit rates on certain Aerospace and Systems Group contracts. Reduced space program activity and expenses associated with the company's competition for new military aircraft also had an unfavorable effect on sales and profits for A&SG.

While aerospace sales and profits were down, the commercial businesses were experiencing substantial over-all gains. Textile machinery sales volume was about the same as in the comparable period last year, but there were significant sales increases in automotive products, commercial aircraft, and marine products.

Hatteras Yacht had record sales in the quarter and demand for Aero Commander and Sabreliner aircraft was very strong. Sales for the Commercial Products Group were up 16 percent over those for the first quarter of last year and operating profits were up 19 percent over the comparable period of last year.

Total backlog of unfilled orders was \$3.4 billion on Dec. 31, 1968, compared with \$3.5 billion a year earlier. The backlog total on Dec. 31, 1968, included commercial and funded aerospace orders amounting to \$1.6 billion and \$1.8 billion of authorized work not yet funded but being negotiated. The comparable figures for the year earlier date were \$1.4 billion and \$2.1 billion, respectively.

Coulombe Presents Apollo Lunar Landing Program to Students

The Apollo lunar landing program has a special spot in the minds of youngsters at Mountain View School in Claremont—thanks to the efforts of Roger Coulombe of Apollo Test Operations.

Coulombe, a member of the division Speaker's Bureau, has visited the school four times, twice before the flight of Apollo 7 and twice since. He also has appeared before the school's Parent-Faculty Assn. to explain the Apollo program.

Roger made his first trip to the school at the request of his daughter, Joanne, a fifth-grader there. In his initial program he showed the youngsters films on Apollo 7, followed this with a visit to answer any questions they might have after the mission, and then discussions of Apollo 8.

The youths wrote to Cou-

lombe thanking him for presenting the Apollo 7 program and Coulombe, in turn, showed these letters to NASA astronaut Jack Swigert, a former division employee.

Swigert sent this letter to the youngsters:

"I wish to thank all of you for your enthusiasm and interest in the Apollo program, and above all, for your support and prayers for our success."

"You, our nation's children, are the Leaders, Scientists and Astronauts of tomorrow and therefore have a great responsibility. In order that you may fulfill this responsibility, you need the best education possible—day by day—to acquire the knowledge required for your keeping pace with the rapidly changing technological world we live in today."

APOLLO 8 EVENTS BOX SCORE (from NASA's Manned Spacecraft Center)

	Ground Elapsed Times	
	Planned hr:min:sec:	Actual hr:min:sec:
Liftoff	6:51:00 am CST	6:51:01 am CST
S-IC stage cutoff	00:02:31	00:02:33.8
S-II stage ignition	00:02:33	00:02:35.2
S-II stage cutoff	00:08:40	00:08:44
S-IVB stage ignition	00:08:44	00:08:45
S-IVB stage cutoff	00:11:28	00:11:25
Insertion, 99x103 nm Earth orbit	00:11:38	00:11:35
S-IVB stage restart for translunar injection burn	2:50:38	2:50:37.1
S-IVB stage cutoff	2:55:58	2:55:58
Velocity added by TLI burn	9,998 fps	10,500 fps
Total velocity after TLI	35,566 fps	35,644 fps
S-IVB/CSM separation	3:15:00	3:21:00
Midcourse correction No. 1 (24 fps)	TLI + 6 hr	11:00:00
Midcourse correction No. 2	TLI + 25 hr	Unnecessary
Midcourse correction No. 3	LOI - 22 hr	Unnecessary
Midcourse correction No. 4 (2 fps)	LOI - 8 hr	61:08:54
Lunar orbit insertion burn No. 1 (-2994 fps, 60.4x168 nm)	69:08:52	69:08:52
Lunar Orbit insertion burn No. 2 (-135 fps, circularized to 60.5x60.9 nm)	73:35:05	73:35:05
Transearth injection burn	89:19:16	89:19:16
Velocity added by TEI burn	3520 fps	3522 fps
Midcourse correction burn No. 5 (5 fps)	TEI + 15 hr	104:00:00
Midcourse correction burn No. 6	TEI + 33 hr	Unnecessary
Midcourse correction burn No. 7	Entry - 2 hr	Unnecessary
CM/SM separation	146:34:00	146:31:00
Entry (400,000 feet)	146:49:00	146:46:13
Entry velocity	36,221 fps	36,221 fps
Splashdown	147:00:00	147:00:11

Vasuari Named AIAA Fellow

Michael Vasuari of Apollo Applications Program Reliability has been elected an Associate Fellow of the American Institute of Aeronautics and Astronautics.

Vasuari has been in the AIAA since its inception in 1963. Earlier he was a member of the American Rocket Society, one of the two forerunners of the AIAA.

FIRST BLOOD BANK DUE NEXT WEEK

Downey facility's first Blood Bank of the new year will be held Tuesday and Wednesday.

For all first shift employees, the Blood Bank will be in the Bldg. 1 Assembly Room from 9:30 a.m. to 3 p.m. on both days. Employees interested in contributing to the bank who did not receive donor cards should contact Recreation and Welfare, Downey Ext. 6734-5, as quickly as possible.