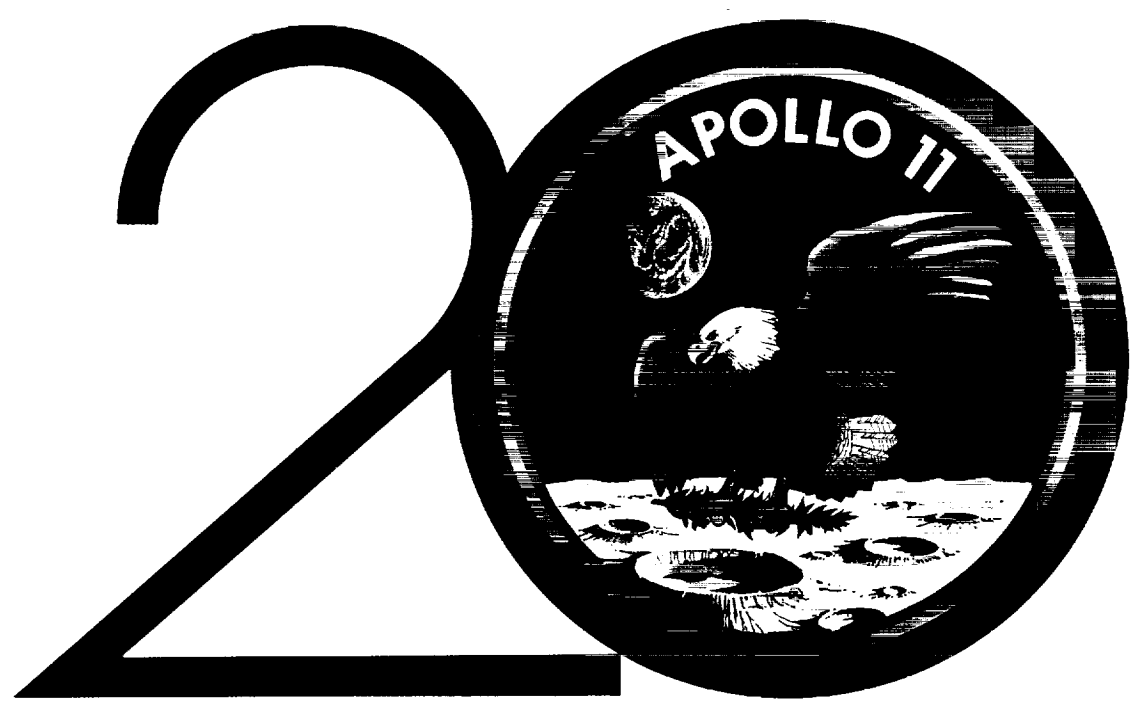


NASA  
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330137  
P.120

# FLIGHT OPERATIONS REUNION FOR THE



## Anniversary

OF THE

FIRST MANNED LUNAR LANDING

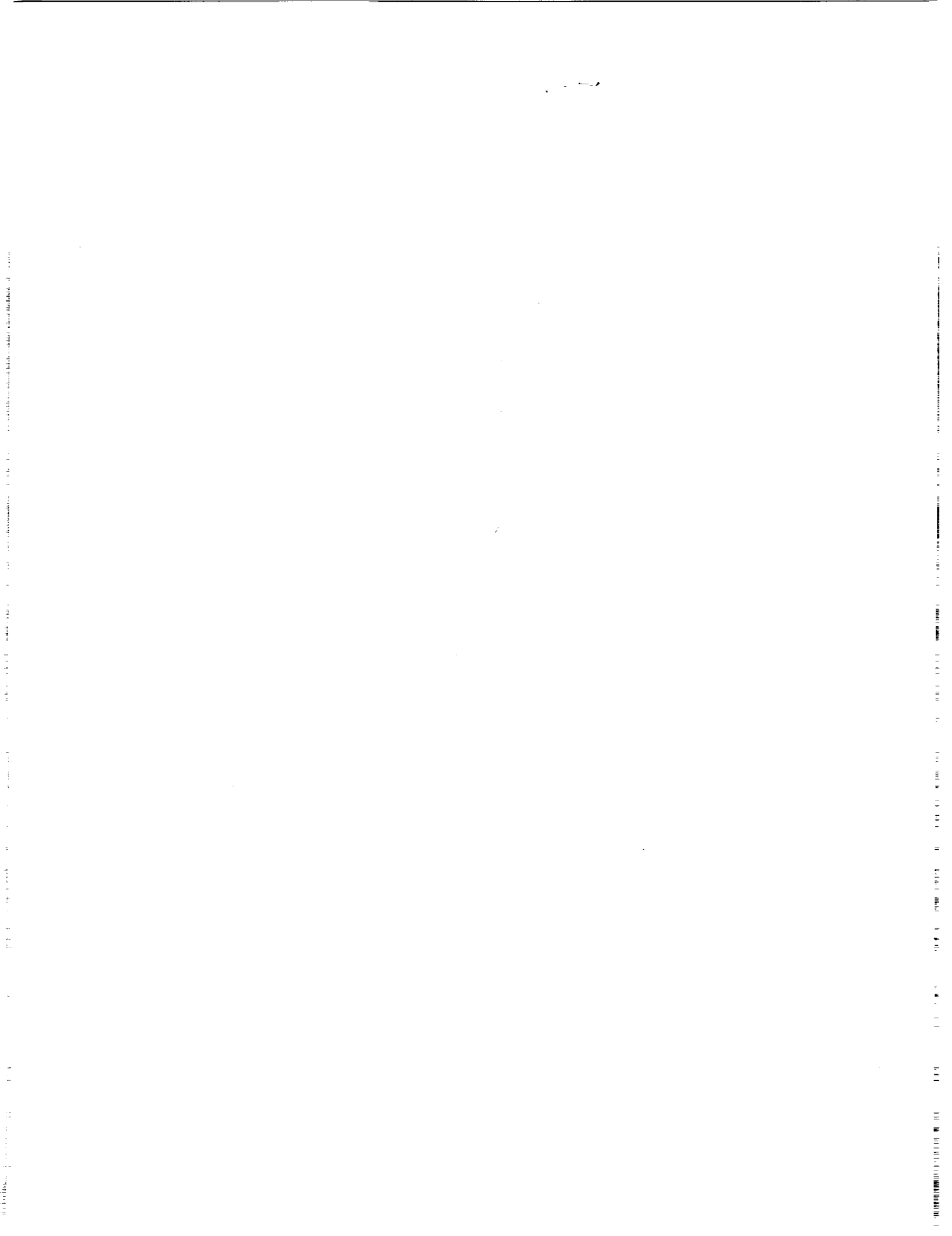
1969 – 1989

***"TOUGH AND COMPETENT"***

(NASA-TM-103373) FLIGHT OPERATIONS REUNION  
FOR THE APOLLO 11 20TH ANNIVERSARY OF THE  
FIRST MANNED LUNAR LANDING (NASA) 120 p  
CSCL 22A

N91-18175

Unclas  
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## **Flight Operations Apollo 11 20th Reunion**

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## **Acknowledgement of Operations Reunion Planners and Helpers**

*A special thanks is provided to the planners and helpers that organized and planned for our Apollo-11 20th Reunion. Countless hours of these dedicated people made the reunion the success that it was.*

### **Apollo 11 Operations Reunion Committee**

Bob Legler, Chairman  
Jerry Borrer  
Larry Davis  
Lillian Egan  
Jack Knight  
Ronnie Lanier  
Bill Molnar  
Dave Ballard

Jim Bilodeau  
Charlie Dumis  
Jim Hannigan  
Gene Kranz  
Rod Loe  
Jan Pacek  
Mel Richmond

Mary Lou Griffith, Data Base Manager  
Rosie Hernandez, Accounting

### **Special Assistants**

Jodi Blanchard  
Dyane Coleman  
Deborah Goff  
Pat Jackson  
Sandra Lewis  
Mary Thomas  
Jim Oberg  
Aldo Bordano  
James Cole

Maynard Huntley  
Paul Del'Osso  
Milton Heflin  
Paul Joyce  
Jim Saultz  
Gordon Andrews  
John Pembroke  
Robert Ibanez

### **Special Thanks**

McDonnell Douglas Space Systems Company  
Xerox Viewpoint Operators

Desiree Gonzales  
Almeta El-Said  
Lanelle Johnson  
Hulene Perkins

ORIGINAL PAGE  
BLACK AND WHITE PHOTOGRAPH



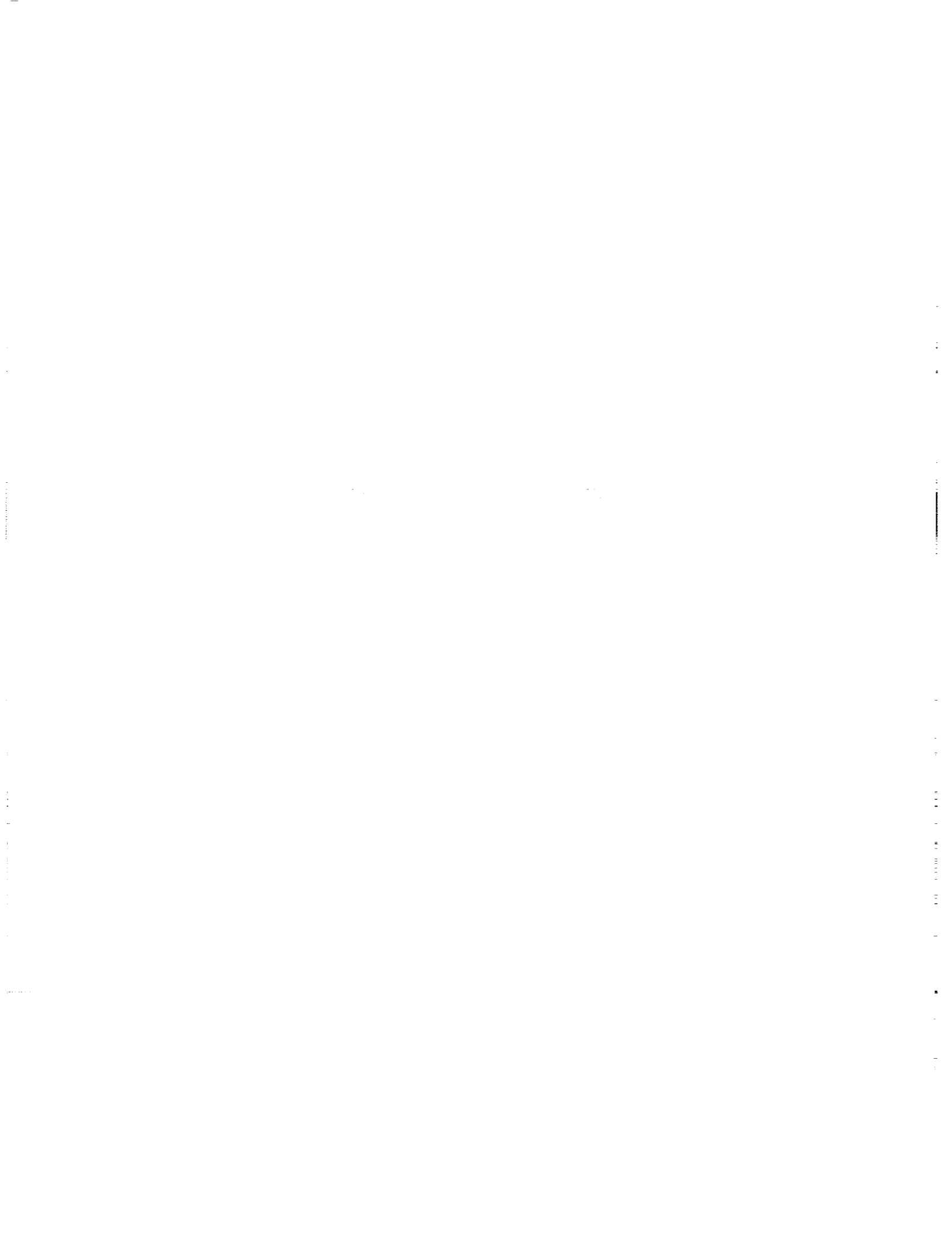
*Christopher C. Kraft, Jr.*  
**Operations Team Leader**

The memory I have of Apollo 11 spans a large number of events and in retrospect some very profound feelings. However, if you ask the question as you have I have to say that the job that Gene Kranz and the flight control team performed during descent will always be the first thing that comes to mind. I think we were all pretty keyed up at the time and when the situation seemed to be deteriorating due to communication problems and the computer overload alarms it really created a dilemma that we hadn't expected. Add to that the problem at the landing site and the impending fuel depletion. The performance of the flight controllers and the Flight Director — and of course the astronauts — and you have the making of some very exciting and apprehensive moments.

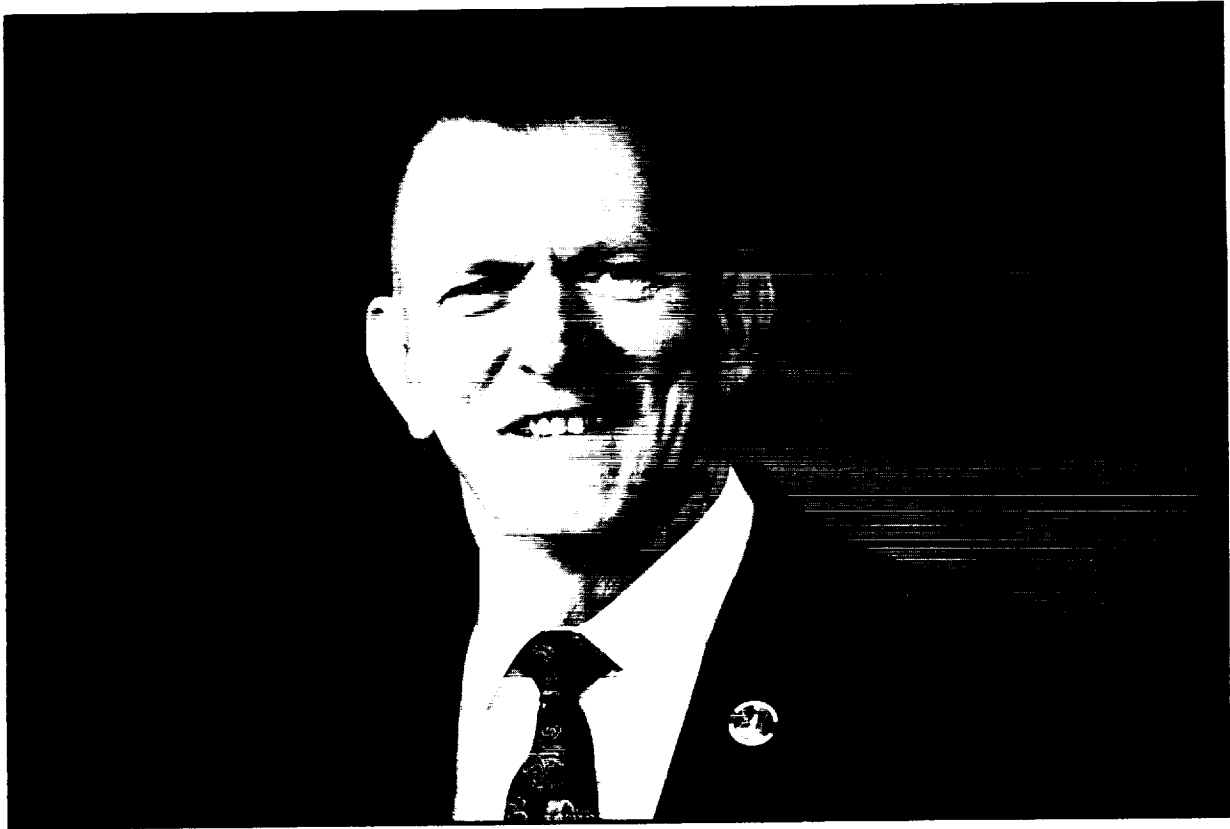
The years preparing for Apollo 11 were filled with challenges that made coming to work each day exciting. I feel I was privileged to have served toward achieving the Apollo 11 success.

Sincerely,

Christopher C. Kraft, Jr.



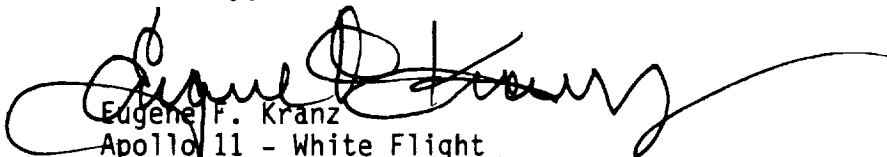
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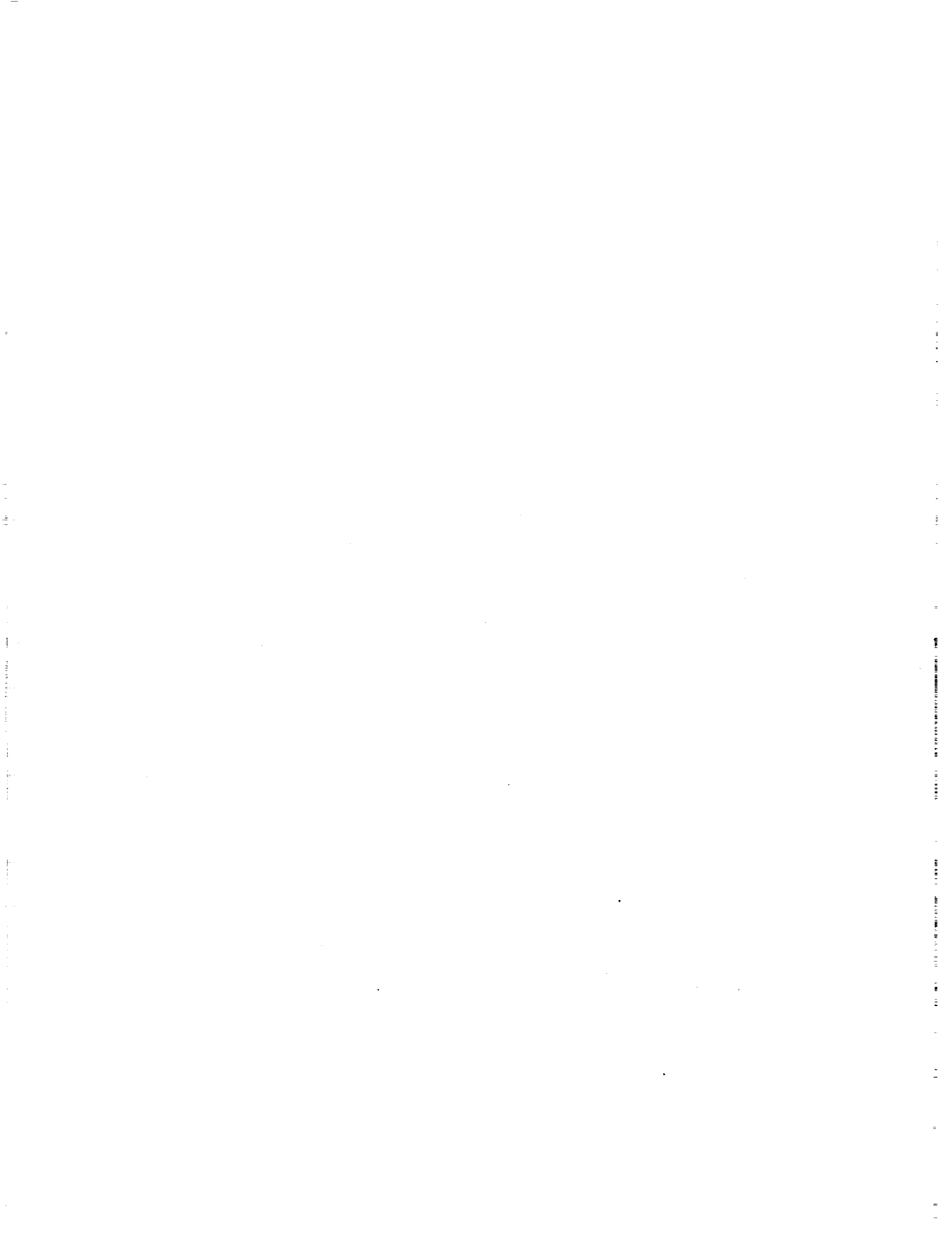


The Apollo 11 accomplishment represents one of the most important eras of technical achievement for all mankind. We were fortunate to have been participants in great events. During the days of July 1969, when man landed on the moon and walked the surface, the world was unified in what "could be" if we truly possessed the courage, conviction, and the strong compelling desire to make things happen. For those few days, humanity lifted its sights to the heavens and looked beyond our earthly existence. We found there was no limit beyond that which we placed on ourselves. We found the freedom, the exhilaration, and the triumph of high achievement. Our Nation provided this gift to all humanity--the shared sense of adventure and the exhilaration of being present during a major event in history. We demonstrated the unity of purpose and for a short time mankind was together as one.

In remembrance of this time, place, and event, we are publishing this book to recognize those who were present and a witness to writing the history on that day. May God once again bless us with the opportunity to do our all for our Nation and for humanity.

Sincerely,

  
Eugene F. Kranz  
Apollo 11 - White Flight





## The Apollo Years

In July 1960 NASA proposed a post-Mercury program for manned flight. It was called Project Apollo. Its goals: Earth-orbital and circumlunar flight of a three-man spacecraft.

In May 1961 President John F. Kennedy made a manned lunar landing by the end of the decade a national goal.

In January 1962 NASA announced the planned development of the largest rocket vehicle ever to fly, the Saturn V.

Later in 1962 NASA announced the development of the Saturn IB, which combined the first stage of the Saturn I and the third stage (S-IVB) of the Saturn V. The vehicle would perform Earth orbital tests of the Apollo spacecraft.

The first phase of the Saturn launch vehicle program was completed in 1965, setting a unprecedented record in rocket development: All of Saturn I's 10 flights were successful.

The new Saturn IB launch vehicle was successfully flown three times in three attempts, in 1966.

Tragedy struck the space program on January 27, 1967. During ground testing at Complex 34, a fire erupted inside an Apollo spacecraft, which resulted in the deaths of Astronauts Virgil Grissom, Edward White II and Roger Chafee.

After an extensive investigation, modifications were made to get the program going again, which it did on November 9, 1967, with the first successful flight test of the Apollo/Saturn V space vehicle (Apollo 4).

The first manned Apollo launch, Apollo 7, was on a Saturn IB, and was the last launch from Complex 34. All subsequent Apollo launches were from Complex 39. Apollo 7 lifted off the pad on October 11, 1968, for an 11-day flight that ended with a precise re-entry and splashdown on October 22. Manned by Astronauts Walter Schirra, Don Eisele and Walt Cunningham, the spacecraft's performance in space was flawless and included the first live television broadcast from a manned space vehicle.

Apollo 8 was launched December 21, 1968. Astronauts Frank Borman, William Anders and James Lovell Jr. made the first manned flight from Earth to another planetary body.



th

Apollo 11 attained the national goal set in 1961. At 9:32 a.m. July 16, 1969, the Saturn V sent the spacecraft on its mission of landing on the moon and returning its astronauts to earth.

The Lunar Module touched down in the Moon's Sea of Tranquility July 20 and Commander Neil Armstrong stepped onto the lunar surface that evening, followed by Lunar Module pilot Edwin E. Aldrin Jr. Command Module Pilot Michael Collins orbited above in the command module, conducting scientific experiments and taking photographs. Their activities were viewed live around the world.

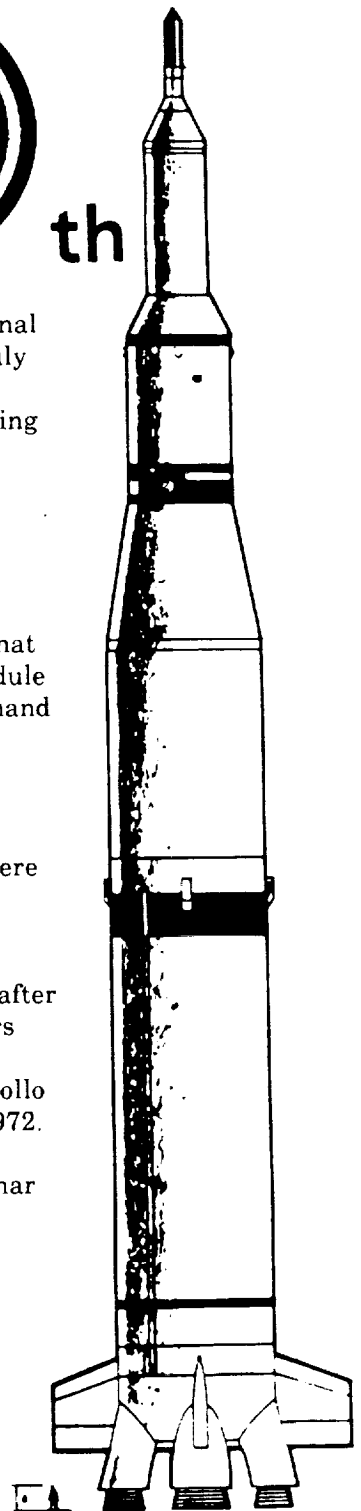
The returning spacecraft splashed down in the Pacific, southwest of Hawaii on July 24 after a flight of eight days, three hours and 19 minutes.

Six lunar landings later, Apollo 17 was launched December 7, 1972. It splashdown on December 19 marked the end of the Apollo lunar missions.

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Information for this article was compiled from *The Early Years: Mercury to Apollo/Soyuz*; and *America's Spaceport*.

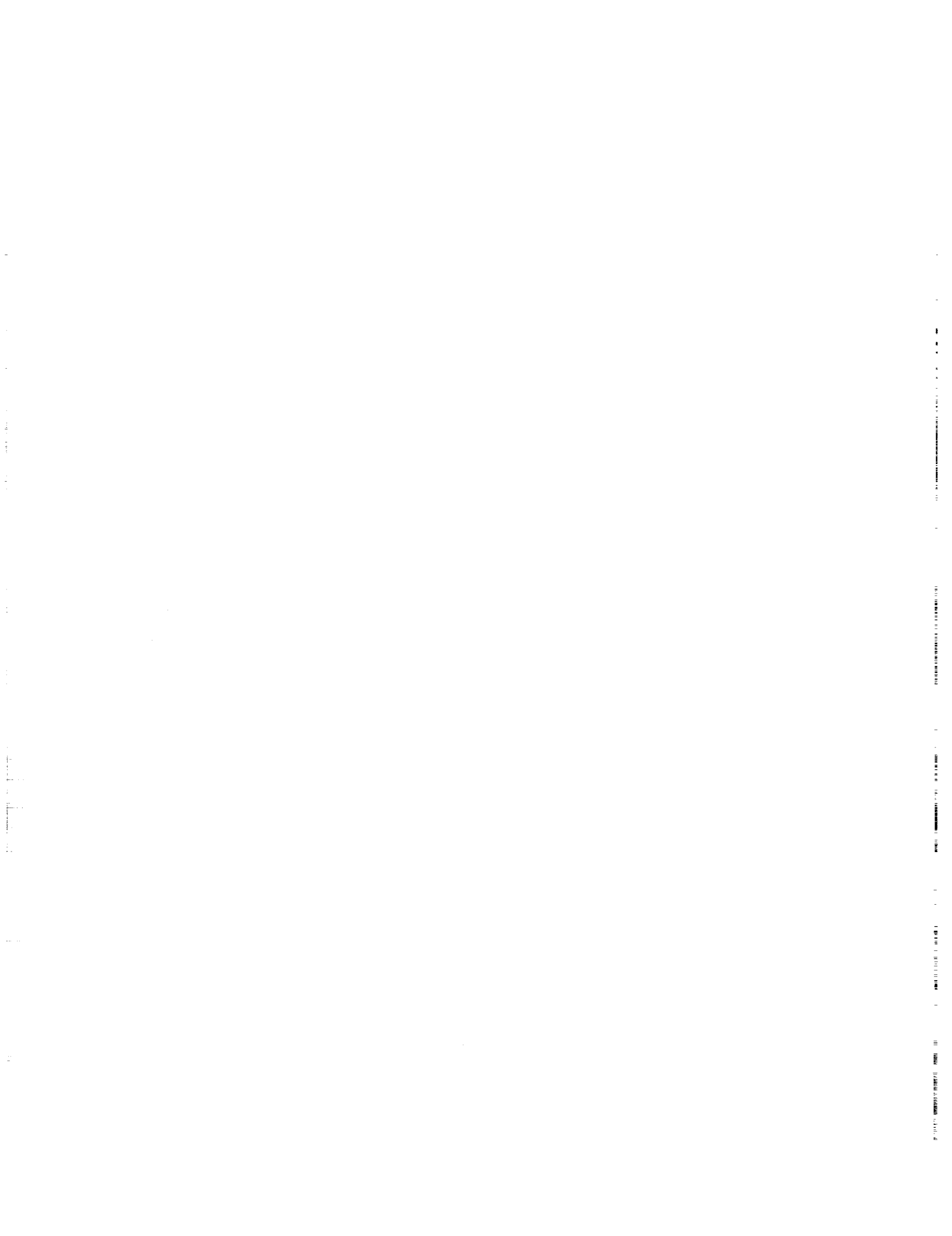
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Saturn V

Height: 363 ft. with payload  
Weight: 6,100,000 lbs.  
First Stage: S-IC  
Length: 138 ft.

Second Stage: S-II  
Length: 80 ft.  
Third Stage: S-IVB  
Length: 59 ft.





**Official Flight Control  
Manning List for  
Apollo 11**



UNITED STATES GOVERNMENT

# Memorandum

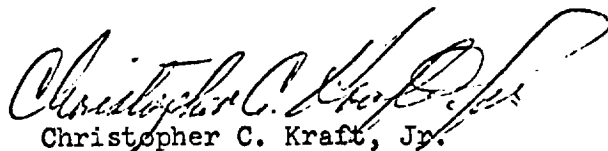
TO : See attached list

FROM : FA/Director Of Flight Operations

SUBJECT : Flight Control Manning for Apollo 11

DATE: June 30 1969

1. Attached for information, guidance, and necessary action is the current manning list for MOCR/SSR badging for Apollo 11. In addition, the temporary badge requirements are identified by mission elements.
2. Action required:
  - a. Security Branch - Request mission badges be prepared as required.
  - b. Further, request names and security clearances be provided AFETR on flight controllers who will participate at these or associated installations.
3. All agencies requiring personnel access not listed in the attached manning list should submit a memorandum of justification and MSC Form 1872 to Mss Joyce E. Gaddy, Flight Control Division, extension 2637. These should be submitted no later than two weeks before the mission.
4. Security will prepare badge request cards, MSC Form 1872, for the names listed on the enclosure to this memorandum. Subsequent badge requests will be submitted and approved as follows: Black A's by the undersigned or Mr. Sigurd A. Sjoberg; Red A's by the Flight Director as appropriate.

  
Christopher C. Kraft, Jr.

Enclosure

# KEY PERSONNEL ACCESS LIST FOR MISSION CONTROL CENTER\*

## MANNED SPACECRAFT CENTER

Robert R. Gilruth  
George S. Trimble  
Wilmot N. Hess  
George M. Low  
Carroll H. Bolender  
Kenneth S. Kleinknecht  
Scott H. Simpkinson  
George W. S. Abbey  
Anthony J. Calio  
William B. Easter (GSF-L)  
Donald K. Slayton  
Alan B. Shepard, Jr.  
Warren J. North  
Charles A. Berry, M.D.  
Allen D. Catterson, M.D.  
Martin L. Raines  
W. Royce Hawkins, M.D.  
Richard S. Johnston  
Christopher C. Kraft, Jr.  
Sigurd A. Sjoberg  
Rodney G. Rose  
Eugene F. Kranz  
Melvin F. Brooks  
Harold G. Miller  
Jones W. Roach  
Glynn S. Lunney  
Clifford E. Charlesworth  
Gerald D. Griffin  
M. P. Frank  
Milton L. Windler  
Jerome B. Hammack  
John P. Mayer  
Howard W. Tindall, Jr.  
Lynwood C. Dunseith  
J. M. Satterfield  
James H. Moore  
Harry P. Gull  
John A. Frere, Jr.  
Samuel D. Sanborn  
Phillip N. Barnes  
Robert H. Jones  
M. A. Faget  
Brian Duff  
Norman H. Brock  
Richard H. Holzapfel  
James E. Powell

Updated for Apollo 11

## NASA HEADQUARTERS

Thomas O. Paine  
George E. Mueller  
Charles W. Mathews  
Samuel C. Phillips  
George H. Hage  
John D. Stevenson  
Alfred P. Alibrando

## DEPARTMENT OF DEFENSE

Major General Vincent G. Huston  
Major General David M. Jones  
Colonel Royce G. Olson  
Colonel James G. Smith  
Commander Robert E. Colopy  
Commander Robert P. Gaardner  
Lt. Col. Frank S. Covey  
Major John F. Rapp  
Colonel Robert A. Van Arsdall  
Mr. R. E. Jones

## ELECTRONICS RESEARCH CENTER

James C. Elms

TEMPORARY BADGE REQUIREMENTS FOR MISSION CONTROL CENTER

<u>ORGANIZATION</u>	<u>MOCR</u>	<u>SSR</u>	<u>WEATHER/RECOVERY</u>	<u>SCA</u>
Director of Flight Operations	2	0	0	0
Flight Director	2	0	0	0
Flight Dynamics (Controlled by Jerry Bostick)	3	0	0	0
Flight Plan Support	1	4	0	0
Booster Systems	4	8	0	0
ASPO/Donald D. Arabian	2	8	0	0
ASPO/Scott H. Simpkinson	3	4	0	0
Procedures/AFD	3	5	0	0
Aeromed (Controlled by Dr. Berry)	2	2	0	0
Environmental Control Systems (Aeromed SSR)	0	2	0	0
Weather/Alan N. Sanderson	2	0	4	0
Department of Defense/Cdr. Colopy	2	0	4	0
Public Affairs Officer	2	0	0	0
Recovery (Controlled by Hal Granger, Jerry Hoisington, John Hoover)	3	0	3	0
ROCR Viewing Room Only (Controlled by G. P. Henderson)	0	0	9	0
Space Environment Console (SEC) (Space Radiation)	1	0	3	0
CSM/EECOM	2	4	0	0
CSM/GNC	2	4	0	0
CSM SPAN/A. D. Aldrich	3	4	0	0
LM/Control	2	3	0	0
LM/TELCOM	2	3	0	0
LM SPAN/J. E. Hannigan	2	2	0	0

TEMPORARY BADGE REQUIREMENTS FOR MISSION CONTROL CENTER

<u>ORGANIZATION</u>	<u>MOCR</u>	<u>SSR</u>	<u>WEATHER/RECOVERY</u>	<u>SCA</u>
FCD MCRB/Richard A. Hoover	0	1	0	0
APOLLO GUIDANCE SUPPORT/John R. Garman	1	2	0	0
ALSEP/James E. Saultz	3	4	0	0
ALSEP/Escort Only	0	4	0	0
Mission Planning and Analysis Division (Controlled by Flight Dynamics SSR-Trajectory Support Chief	3	3	0	0
MPAD (Controlled by MPAD Representative position)	0	6	0	0
Flight Support Division	9	0	0	0
Systems Engineering Branch	2	0	0	0
Network	3	0	0	0
Philco	3	0	0	0
Communications	6	0	0	0
Display	6	0	0	0
Technical Operations	3	0	0	0
M & O (Controlled by Robert H. Jones)	0	12	0	0
SWBT/AR&T (Controlled by Houston-Comm Controller)	0	5	0	0
Engineering (Controlled by J. R. Crain)	0	6	0	0
Flight Safety Office (Controlled by Otho Lindsey)	0	1	0	0
Flight Control Division/Joyce E. Gaddy	2	0	0	0
AMPO/John D. Hodge	0	2	0	0
ALSEP SSR/J. Small	1	6	0	0
ALSEP/Escort Only	0	3	0	0



<u>POSITION</u>	<u>MCC/MOCR MANNING</u>			
	<u>SHIFT 1</u>	<u>SHIFT 2</u>	<u>SHIFT 3</u>	<u>SHIFT 4</u>
DIRECTOR OF FLIGHT OPERATIONS	Christopher C. Kraft, Jr.			
FLIGHT DIRECTOR	Clifford E. Charlesworth Gerald D. Griffin	Eugene F. Kranz	Glynn S. Lunney	Milton L. Windler
ASSISTANT FLIGHT DIRECTOR	William E. Platt, Jr. Larry W. Keyser	Charles R. Lewis John H. Temple	Harold M. Draughon David E. Nicolson, Jr.	Charles S. Harlan
CSM/GUIDANCE, NAVIGATION & CONTROL	Gary E. Coen	Briggs N. Willoughby	William J. Strahle	John A. Kamman
CSM/ECONOM	Charles L. Dumis	John W. Aaron	Seymour A. Liebergot	William C. Burton
CSM/MINCO	Joseph N. DeAtkine Earl W. Thompson	Richard T. Brown (NAR) Edward I. Fendell	Thomas L. Hanchett (NAR) James R. Fucci (PHO)	
FLIGHT DYNAMICS OFFICER	H. David Reed	Jerry C. Bostick	Jay H. Greene Phillip C. Shaffer	Edward L. Pavelka, Jr. William J. Boone
RETROFIRE OFFICER	John S. Llewellyn	Thomas E. Weichel	Charles F. Deiterich	James E. F'Anson Bobby T. Spencer
GUIDANCE OFFICER	Willard S. Presley Granville E. Paules C. Roger Wells	Kenneth W. Russell Charley B. Parker	William E. Fenner Stephen G. Bales	J. Gary Renick Jerry W. Mill
BOOSTER SYSTEMS ENGINEER - 1	R. Scott Hamner William L. Brady	Frank L. Van Rensselaer	Don H. Townsend	
BOOSTER SYSTEMS ENGINEER - 2	Paul E. Dixon (MDAC)	William J. Harris (MDAC)	Richard A. Palmer (MDAC)	
BOOSTER SYSTEMS ENGINEER - 3	William H. Hooper	J. Frank Park	John I. Sigler (IBM)	

MCC/MOCR MANNING (CONTD)

<u>POSITION</u>	<u>SHIFT 1</u>	<u>SHIFT 2</u>	<u>SHIFT 3</u>	<u>SHIFT 4</u>
LM/CONTROL	Robert L. Carlton	John A. Wegener	Richard A. Thorson	Harold A. Loden Larry W. Strimple
LM/TELCOM	Donald R. Puddy Gary C. Watros	W. Merlin Merritt	Jack Knight, Jr.	
LM/EMU	James A. Joki	William L. Peters		
SURGEONS	Willard R. Hawkins, M.D.	John F. Zieglschmid, M.D.	Kenneth N. Beers, M.D.	
EXPERIMENTS OFFICER	James E. Saultz, Sr.	Bruce H. Walton, Sr.		
NETWORK CONTROLLER	Richard J. Stachurski George M. Egan (PHO) John A. Monkvic	George D. Ojalehto Douglass R. Wilson (PHO)	Ernest L. Randall Larry D. Meyer (PHO)	David A. Young Ronald L. DeCosmo
ALSEP NETWORK CONTROLLER	Joseph R. Vice	Robert G. Gonzales	Charles M. Horstman	Earl V. Carr (PHO)
OPERATIONS AND PROCEDURES OFFICER	James O. Covington Joe M. Leeper	L. L. D. Armstrong Joseph Lazzaro	Granvil A. Pennington	William Molnar, Jr.
PUBLIC AFFAIRS OFFICER	John E. Riley	Robert T. White	Douglas Ward	
PAO ASSISTANT	William G. Johnson (AV)	Edward L. Worrell (AV)	Charles A. Biggs	
PAO PHOTOGRAPHERS	Andrew R. Patnesky	Charles Turner (AV)	Robert C. Bird (AV)	Gerald Bray (AV) Glenn R. Osborn
TV EDIT	John R. Carter, Jr. (AV)	Jon Rademacher (AV)	John Horton (AV)	Tom Winston (AV)
AUDIO/TV COORDINATOR	Carl R. Hart			

MCC/MOCR MANNING (CONTD)

<u>POSITION</u>	<u>SHIFT 1</u>	<u>SHIFT 2</u>	<u>SHIFT 3</u>	<u>SHIFT 4</u>
CAPCOM	Charles M. Duke James A. Lovell Fred W. Haise Harrison H. Schmitt	Ronald E. Evans William A. Anders Don L. Lind	Bruce McCandless II Thomas K. Mattingly Owen K. Garriott	
FLIGHT ACTIVITIES OFFICER	Spencer H. Gardner	Tommy W. Holloway	Ted A. Guillory	Turnage K. Lindsey
<u>NASA HEADQUARTERS</u>				
MISSION DIRECTOR	George H. Nage	Chester M. Lee	Thomas H. McMullen	
MISSION DIRECTOR STAFF	John E. Holcomb George P. Chandler	Fred E. Stout Robert C. Turgeon	Philip J. Bayer William M. Wallace	
ARTIST	Peter Hurd	Lamar Dodd	Franklin McMahon	

FLIGHT DYNAMICS SSR

<u>POSITION</u>	<u>SHIFT 1</u>	<u>SHIFT 2</u>	<u>SHIFT 3</u>	<u>SHIFT 4</u>
FIDO SUPPORT	William M. Stoval	Maurice G. Kennedy		
RETRO SUPPORT	Jerry C. Elliott	L. Dean Toups	George C. Guthrie	
GUIDANCE SUPPORT	Raymond F. Teague			
TRAJECTORY SUPPORT CHIEF	Larry D. Davis Ronald D. Davis Stanley D. Holzaepfel	E. Ray Hischke William R. Pruett	Charles E. Allday Ted L. Turner, Jr. Hector Garcia, Jr.	
ENGINEERING AIDE	Patsy J. Smith (ITT)	Priscilla L. Nichols (ITT)	Evelyn D. Langford (ITT)	
ENTRY SPECIALIST	Jon C. Harpold	John K. Burton	Joseph Rogers	
DATA MANAGEMENT	Michael A. Collins, Jr.		Richard E. Sinms	
GUIDANCE SPECIALIST	Richard O. Nobles	Aldo J. Bordano	Herbert S. Estes	
CONSUMABLES SPECIALIST	Arnold J. Loyd Richard M. Swalin Roy E. Stokes	Samuel O. Mayfield Harry E. Kolkhorst Marlow D. Cassetti	Walter Scott, Jr. Martin L. Alexander	
CMC SUPPORT	John E. Williams John R. Garman	John W. Jurgensen Thomas F. Gibson, Jr.	C. David Sykes	
LGC SUPPORT	Rama M. Aiyawar (MIT) John L. Norton (TRW)	James A. Martin	Peter W. Weissman (MIT)	
AGS SUPPORT	G. R. Shook	K. L. Baker		
MIDCOURSE SPECIALIST	Kenneth T. Zeiler	Quentin S. Holmes	Charles H. Drinnan (TRW) David S. Scheffman	
LOI SPECIALIST	Robert F. Wiley	George A. Weisskopf		
RTE SPECIALIST	Robert S. Davis Donald M. Gafford (TRW)	William R. Lee (TRW) Thomas P. Garrison (TRW)	Donald R. Davis (TRW) Frances M. Northcutt (TRW)	
POSTFLIGHT OBSERVER	Donald J. Incerto	Frank J. Smith	William R. Lacy	

FLIGHT DYNAMICS SSR (CONTD)

<u>POSITION</u>	<u>SHIFT 1</u>	<u>SHIFT 2</u>	<u>SHIFT 3</u>	<u>SHIFT 4</u>
RENDEZVOUS SPECIALIST	Robert R. Regelbrugge James D. Alexander Kenneth A. Young Jerome A. Bell	William A. Sullivan Ronny H. Moore Edgar C. Lineberry Ted H. Skopinski	Robert W. Becker	
SEPARATION SPECIALIST	Michael E. Donahoo	Mariand L. Williamson	Dale A. Davidson (TRW)	
DESCENT SUPPORT	Willis M. Bolt	Edwin G. Dupnick	James H. Alphin	
ASCENT SUPPORT	Joe D. Payne	James V. West	Veit Hanssen	
ABORT SUPPORT	Edward M. Henderson Charles T. Hyle	Charles E. Foggett	Samuel R. Newman Dalls G. Ives	
MPAD REPRESENTATIVE	Emil R. Schiesser Richard P. Parten Martin D. Jenness Harold D. Beck William J. Bennett Carl R. Huss * David H. Owen * Charlie C. Allen Alexander H. Treadway	James C. McPherson John R. Gurley Rocky D. Duncan Knowles H. Henley (NAR) Ronald L. Berry John P. Mayer * Bruce J. Gordon (TRW) Floyd V. Bennett Bobbie D. Weber	John A. McAnulty Jerome D. Yencharis James R. Elk George Michos (GAEC) Robert E. Ernull Howard W. Tindall, Jr. * F. A. Evans (TRW) Claude A. Graves Morris V. Jenkins	
MIT REPRESENTATIVE	Phillip G. Felleman (MIT) Romilly Gilbert (MIT)	George W. Cherry (MIT) Russell A. Larson (MIT)	Bruce J. McCoy (MIT) Robert R. Covelli (MIT)	

AUXILIARY CONTROL ROOM

<u>POSITION</u>	<u>SHIFT 1</u>	<u>SHIFT 2</u>	<u>SHIFT 3</u>	<u>SHIFT 4</u>
ENGINEERING AIDE	Deborah L. Shore (ITT)	Sylvia L. Park (ITT)	Joelene S. Welborn (ITT)	
RUN COORDINATOR	Billy N. Ferguson			

VEHICLE SYSTEMS - CSM

<u>POSITION</u>	<u>SHIFT 1</u>	<u>SHIFT 2</u>	<u>SHIFT 3</u>	<u>SHIFT 4</u>
GUIDANCE AND CONTROL	Charles T. Esmeier William E. Price (NAR)	Frank J. Mussato (NAR)	Richard B. Benson Frank DiGenova (PHO)	Gerald P. Walsh Richard A. Freund (AC)
PROPULSION	Nathan J. Adams Albert W. Barker (PHO)	Joseph E. Borches (NAR)	Orville Hoksen W. C. Young	William G. Weppner John E. Walsh (PHO)
EPS	William J. Moon Charles M. Jones (NAR)	James J. Kelly (NAR) Joseph L. Pringle (PHO)	Myron S. Staggs (NAR) Paul Barringer (NAR)	Lyle M. Vande Zande (PHO) Henry E. Warden (PHO)
COMMUNICATIONS	William P. MacGregor (PHO)	W. Lawrence Wafford (PHO)	James Ward (NAR-Downey)	
CLERICAL SUPPORT	Katherine J. Spencer	Frances R. Vasquez	Olivia D. Merrell	

VEHICLE SYSTEMS - BSE

BSE - LLS	Curtis D. Hanks	Michael M. Harrington		
BSE - ENG	Maurice L. McNeely (MDAC)			
BSE - STG	Hugh A. Barnwell (MDAC)	Arthur A. Puccetti (MDAC)	Therald E. Ward (MDAC)	
BSE - ACS	Wayne F. Huning (MDAC)	William R. Davidson (MDAC)	Paul A. Hoffman (IBM)	
BSE - CONS	Paul A. Green (MDAC)		Michael H. Davidson (MDAC)	
BSE - GND	William H. Shook (IBM)	Rudy C. Tunello (IBM)		
BSE - ENS	Roger T. Goers (IBM)	Daryl D. Anderson (IBM)	M. Ray Coker (IBM)	
BSE - CMD	John A. Smith (IBM)			
IBM MANAGER	Roy E. Day (IBM)			
MDAC MANAGER	K. J. Pateliski (MDAC)			

VEHICLE SYSTEMS - LM

<u>POSITION</u>	<u>SHIFT 1</u>	<u>SHIFT 2</u>	<u>SHIFT 3</u>	<u>SHIFT 4</u>
LM PGNS	John L. Nelson Herbert K. Fanning (AC)	Charles L. Gruby (PHO)	William W. Fink Floyd E. Page (GAEC)	Bernard A. Durand
LM AGS	William E. Sturm (PHO)	Don G. Clark (GAEC)	Edwin F. Marzano	Darrell E. Stamper
LM PROP	Robert S. Nance	John E. Essing	Carroll E. Hopkins	Glenn W. Watkins
LM EPS	William D. Reeves	Leonard E. Nicholas	Robert D. Legler (PHO)	
LM COMM/INST	David W. Whittle Lawrence S. Bourgeois	Hershel R. Perkins (PHO) Harold L. Moore (PHO)	J. O. Saylor (GAEC)	
LM ECS	James F. Nelson (GAEC)	Harry Smith (GAEC)	Fred A. Frere (GAEC)	
LM EPS CONSUM	Frederick R. Wentland	Robert H. Heselmeier		
LM ECS/PLSS CONSUM	Monty S. Taylor (PHO)	Quarance J. Patin		
LM PLSS 1	William V. Bates	Donald C. Eaton (PHO)		
LM PLSS 2	Wolfgang H. Weber	Sergio O. Milian (PHO)		
LM PROP CONSUM	Vincent A. Fleming (GAEC)			



AEROMED SSR

<u>POSITION</u>	<u>SHIFT 1</u>	<u>SHIFT 2</u>	<u>SHIFT 3</u>	<u>SHIFT 4</u>
SURGEON	Gilbert J. Sales, M.D.	Samuel L. Pool, M.D.	George F. Humbert, M.D.	
FLIGHT SURGEON			Charles A. Lapointa, M.D. Emmett B. Ferguson, Jr., M.D. (Lt. Col. USAF, Patrick AFB)	
DATA ENGINEER	Edward L. Moseley	Frank Michelli		
LOGISTICS OFFICER	Marvin A. Bernhard Roy Laird			
BIOMED ENGINEER	Robert N. Hahn	Don W. Mangold (B)	Russell J. Kelly	
CLERICAL SUPPORT	Donna Osborne Martha B. Taylor	Fran Moore Margery Weaver	Phyllis Johnson Donna L. Sanders	Jackie Rogers Adrienne P. Foster
ENVIRONMENTAL CONTROL SYSTEMS	George W. Conway (PHO) Kenneth E. Haithcoat (PHO)	Lloyd V. Howard Hubert V. Grogan (NAR)	John P. Byers (NAR) George M. Bliss	Larry E. Sheaks (AR) Floyd E. Claunch (PHO)
AEROMED REPRESENTATIVE	H. Russell Hair *			

\*Also requires MOCR Badge

FLIGHT DIRECTOR SSR

<u>POSITION</u>	<u>SHIFT 1</u>	<u>SHIFT 2</u>	<u>SHIFT 3</u>	<u>SHIFT 4</u>
FLIGHT CREW PROCEDURES	Leonard J. Riche	William R. Killian (TRW) Elvin B. Pippert	Richard J. Rogers (TRW)	George M. Colton
FLIGHT CREW EXPERIMENTS	Robert H. Nute	George Laski	Marion F. Griffin	Gerald L. Shinkle
ANALYSIS MANAGER	Helmut A. Kuchnel			
CLERICAL SUPPORT	Dixie M. Scurlock (ITT)	Gloria G. Gammon (ITT)	Cherry L. Brewer (ITT)	James N. Leech
CSM PROCEDURES	Frank E. Hughes	Pleddie M. Baker		
LM PROCEDURES	Robert L. Pearson	Charles W. Floyd		
MISSION REQUIREMENTS ENGINEER	Mason Hagan	George I. Pettitt		
REQUIREMENTS CONFIGURATION CONTROLLER	Robert C. White	Richard A. Hoover *		
CALIBRATION SUPPORT	Edward B. Beauty (PHO)			
TELEMETRY SUPPORT	James L. Ippoliti (PHO)	Russel L. Robertson (PHO)		
EXPERIMENT SUPPORT	Robert T. Savely	Gary A. Ransford	Paul T. Pixley	
CLERICAL SUPPORT	Joyce E. Gaddy *			
PLANS	Paul G. Stokholm	Howard C. Johnson Alan C. Glines	Leo Pavlow Joseph C. Fanelli (PHO)	
CAPCOM SUPPORT	M. R. Wash *	D. K. Warren *	J. O. Rippey *	C. O. Lewis *

\*Also require MOCR Badge

SPACECRAFT ANALYSIS SSR

<u>POSITION</u>	<u>SHIFT 1</u>	<u>SHIFT 2</u>	<u>SHIFT 3</u>	<u>SHIFT 4</u>
SPAN OPERATIONS MANAGER	Scott H. Simpkinson*	Ronald W. Kubicki*	John G. Zarcaro*	
SPAN OPERATIONS MANAGER (PRE-LIFTOFF)	Owen Maynard*	Aaron Cohen*		
SPAN OPERATIONS MANAGER (ALTERNATE)	James L. Tomberlin*	Owen Morris		
MISSION STAFF ENGINEER	James Peacock John Sevier*	Charles Glancy	Robert W. Ward	
LOG MANAGER	Gilbert Symons	Billy W. Pratt	Jeff L. Vyrner	
ADMIN. SUPPORT	Robert Bailey	Curtis Collins		
SPAN DOCUMENTATION	Hebert Tach	Sam Weathersby	Robert Phillips	
TEAM MANAGER	Donald D. Arabiant*	Sid Jones	Joe Dodson* Robert Malley*	
ASSISTANT TEAM MANAGER		T. Libby	J. Mechelay	
NORTH AMERICAN MGMT. REPRESENTATIVE	George Jeffs C. Felts	Michael Vucelic	George Merrick	
GAEC MGMT. REP.	Thomas Kelly	H. Wright	J. Coursen	
NORTH AMERICAN SENIOR REPRESENTATIVE	D. Levine A. Kehlet	R. Hartley	R. Thomas	
FCD REPRESENTATIVES	Melvin F. Brooks*	Jones W. Roach*	M. P. Frank*	

SPACECRAFT ANALYSIS SSR (CONTD)

<u>POSITION</u>	<u>SHIFT 1</u>	<u>SHIFT 2</u>	<u>SHIFT 3</u>	<u>SHIFT 4</u>
CSM SPAN REPRESENTATIVES	Neil B. Hutchinson*	Arnold D. Aldrich* L. Wm. Blair (NAR)	Thomas R. Loe*	Lawrence S. Canin*
LM SPAN REPRESENTATIVES	Charles V. Whitmore (GAEC) James E. Hannigan*	*Frank L. Edelin (GAEC)* Jackson B. Craven*	Elmer L. Keesler (GAEC)*	

\*Also require MOCR Badges

ALSEP SSR

<u>POSITION</u>	<u>SHIFT 1</u>	<u>SHIFT 2</u>	<u>SHIFT 3</u>	<u>SHIFT 4</u>
ALSEP SENIOR ENGINEER	Burton L. Sharpe	Keith K. Kundel	Cecil N. Bassham	
ALSEP SYSTEMS ENGINEER	Donald J. McDonald (PHO)	Joseph L. James (PHO)	Hubert I. Straw (PHO)	
ALSEP DATA ENGINEER	Franklin W. Brizzolara	James R. Gauthier	Jesse M. Walker	
ALSEP EXPERIMENTS SUPPORT ENGINEER	Rhea Q. Linney	James F. Moser (PHO)	Bernard R. Brabant (PHO)	
BENDIX REPRESENTATIVE	Robert R. Miley (BEN)			
LUNAR GEOLOGY EXPERIMENT (LGE)	John H. Cooper Richard C. Jacobs			
S&AD MISSION MANAGERS	J. Small D. Moke	W. Stephenson	P. Gerke	
EASEP BENDIX REPRESENTATIVES	C. Weatherrod (BEN) Jack Dye (BEN) Ron Redick (BEN)	D. Breseke (BEN) David Fithian (BEN)	L. Lewis (BEN) Ronald Howell (BEN)	
COURT STENO	D. Thacker	K. Welch		
PRINCIPAL INVESTIGATORS	D. Schleicher R. Batson C. Alley G. Swann J. Crane (GE) E. Goddard	E. Shoemaker G. Schaber G. Latham M. Hait R. Fry (GE) N. Costes	N. Bailey R. Sutton L. Van Hemelrijck G. Barnes (GE) A. Waters	
CO-PRINCIPAL INVESTIGATORS	J. Sulester W. LeCroix S. Cazemier J. Langford J. Lowery	A. Carraway D. McCormb J. Harris P. Maloney J. Chandler	T. Foss E. Weeks G. Kenney D. Wiseman C. Newsome	

ALSEP SSR (CONTD)

<u>POSITION</u>	<u>SHIFT 1</u>	<u>SHIFT 2</u>	<u>SHIFT 3</u>	<u>SHIFT 4</u>
MAPPING SCIENCE	Robert O. Hill James H. Sasser	Lewis C. Wade Michael C. McEwen	Kenneth J. Hancock John W. Dietrich	

WEATHER ROOM

<u>POSITION</u>	<u>SHIFT 1</u>	<u>SHIFT 2</u>	<u>SHIFT 3</u>	<u>SHIFT 4</u>
SEC - INSTR. SPEC.	S. N. Hardee	W. G. Davis	D. E. Robbins*	
SEC-- DOSE SPEC.	T. T. White	A. C. Hardy	S. C. Fredeen**	
SEC - SOLAR PHYSICS SPEC.	J. W. Snyder*	M. D. Lopez*	C. S. Warren	
SEC - TEAM LEADER	R. G. Richmond	J. R. Bates**		
GODDARD NASCOM REP.	Leonard C. Manning			
SPACE ENVIRONMENT CONSOLE	Charles M. Barnes Robert English (K-S)	Vernon Bailey Richard E. Benson	Edward D. Liles (B)	
SPACE ENVIRONMENT OFFICER	Billy T. Hervey Merril A. Lowe	John D. Whitler Joseph Fuller	Gary B. Scott John D. Holt	
METEOROLOGIST	Alan N. Sanderson Ken Nagler Ernest A. Amman	Richard K. Siler Searl Richards	Rober K. Carter Edward F. Mitros	

\* Also require access to Flight Dynamics SSR

\*\* Also require access to Aeromedical SSR

RECOVERY OPERATIONS CONTROL ROOM

<u>POSITION</u>	<u>SHIFT 1</u>	<u>SHIFT 2</u>	<u>SHIFT 3</u>	<u>SHIFT 4</u>
RECOVERY COORDINATOR	Harold E. Granger	Jerry E. Hoisington	John E. Hoover	
ASSISTANT RECOVERY COORDINATOR	William G. Robinson			
EVALUATION	Richard D. Snyder	Raymond S. Watson	Wylie C. Hendrickson	
STATUS MONITOR	Laurence D. Roberts	George L. Richeson	J. T. Chapman	
LOGISTICS	Paul H. Kruppenbacher			
TECHNICAL WRITER	David H. Cordiner			
CLERICAL SUPPORT	Paul N. Jones	M. Beth Grimsley	Jean Ellis	
LRD REPRESENTATIVE	Peter J. Armitage			
DOD RECOVERY	Lt. Col. Elwin W. Smith LCdr Herman A. Spanagel Major Theil S. Naegle	LCDR Harvey E. Smith Major Jerry D. Harris Capt. Jerome C. Shaw	Major Donald E. Alford Lt. Larry E. Cook Col. Emil G. Beaudry	Brig. Gen. A. C. Brooks Col. W. R. Reynolds LCDR G. A. McLeod
ARIA	Major L. L. Jacobs			
Apollo Ships	Capt. J. P. Baker	Capt. J. P. Porter		
RECOVERY PAO-DOD	Lt. Jack M. Battle	Lt. R. L. Peck		
WEATHER RECOVERY	Lt. Col Robert H. Dowd	Lt. Col Kenneth Pitchford	Capt. J. E. Dearman	Lt. W. F. Zuna
RECOVERY COMM	Morris F. Schwartz James A. Robinson James F. Golden	Thomas F. Samsel Paul L. Rafford	H. R. Lundy	



REAL-TIME COMPUTER COMPLEX

<u>POSITION</u>	<u>SHIFT 1</u>	<u>SHIFT 2</u>	<u>SHIFT 3</u>	<u>SHIFT 4</u>
SELECT SUPPORT	Howard G. deVezin Robert F. Wiley	Matthew M. Grogan Paul F. Flanagan	Wilbur R. Wollenhaupt Richard K. Onburn	
COMPUTER SUPERVISOR	James L. Hall* John V. Schnurbusch (IBM)	Douglas B. Sperry (IBM) Elden G. Clayton	Lawrence K. Tharp (IBM) Ronald J. Mayes	
DATA SELECT	Robert D. Allen John A. Layton (IBM) Thomas M. Conway	Guy R. Stockton (IBM) Earl L. Shinpaugn	Robert A. Folk (IBM) Alfred H. Kircher (IBM)	
COMPUTER DYNAMICS	Rowland B. Williams Homer A. Abr (IBM)	James H. Dobbins (IBM) Robert J. Torres (IBM)	Jimmie L. Donald (IBM) Robert C. Arndt	
COMPUTER COMMAND	Eugene L. Campbell (IBM) John W. Bormann	Jackie L. Barnes (IBM) George B. Neff (IBM)	Christopher W. Zinn Joe Tezeno (IBM)	
COMPUTER TELEMETRY	Morris V. Fanelli (IBM) John E. Cools	James D. Bogwell William B. Thoman (IBM)	Ronald E. Sickler Jimmy D. Long (IBM)	
ASCENT/DESCENT SUPPORT	Doyl D. Goodale (IBM) Grady N. Long (IBM)	Larry A. Murrell (IBM) Gary L. Warner (IBM)		
RTOS SUPPORT	Holly Hensley (IBM)	James T. Buckley (IBM)		Fred R. White (IBM)
CMCC SUPPORT	Bluford L. Brady			

\*Also require MOCR Badge

CCATS

<u>POSITION</u>	<u>SHIFT 1</u>	<u>SHIFT 2</u>	<u>SHIFT 3</u>	<u>SHIFT 4</u>
REAL TIME COMMAND CONTROLLER	Glenn H. Spears (PHO) Robert L. Chapman	Bob C. Conner (PHO)	Julius X. Conditt (PHO)	Hank Jenkins (PHO)
COMMAND LOAD CONTROLLER	John L. Dent (PHO)	Donald L. Blake (PHO)	Donald H. Baerd (PHO)	Eugene Isiah (PHO)
CCATS COMMAND CONTROLLER	Albert R. Heinz (PHO)	Martin S. Sheridan (PHO)	John T. Bowen (PHO)	John D. Pride (PHO)
TELEMETRY INSTRUMENTATION CONTROLLER	Wayman B. Boatman (PHO) Donald J. Flippin (PHO) James E. Mager	August H. Degner (PHO) Roddie A. Crouch (PHO)	Walter H. Hrab (PHO) John V. Watson (PHO)	Norman R. Talbott (PHO) Paul D. Dell'Osso
CCATS TELEMETRY CONTROLLER	Robert V. Grilli (PHO)	Harry G. Straw (PHO)	Art M. Reid (PHO)	Orlis V. Pike (PHO)
INSTRUMENTATION TRACKING CONTROLLER - 1	Donald E. Webb (PHO)	Kenneth D. McDonald (PHO)	Walter E. Soetaert (PHO)	
INSTRUMENTATION TRACKING CONTROLLER - 2	Donald E. Halter (PHO)	George T. Williams (PHO)	Richard J. Robertson (PHO)	John J. Blackburn (PHO)
INSTRUMENTATION TRACKING CONTROLLER - 3	Rodney J. Reining	Thomas W. Sheehan	Roger W. Williams (PHO)	
DOCUMENTATION COORDINATOR	Robert J. Reaves (PHO)	Celeste E. Head (PHO)	Doris Kluge (PHO)	Robert G. Stone (PHO)
COMMUNICATIONS CONTROLLER - 1	Charles T. Ritchie	Steve D. Richards (PHO)	Donald G. Snyder (PHO)	
COMMUNICATIONS CONTROLLER - 2	Oliver E. Allen (PHO)	Frank W. Pitts (PHO)	A.E. Smith (PHO)	
COMMUNICATIONS CONTROLLER - 3	Gerald L. Coppens (PHO)	Raymond L. Smith	Marcus D. Garner	
COMMUNICATIONS TECHNICIAN	Charles Brantley (PHO)	George E. Metcalf	Verlin L. Fox (PHO)	Charles G. Nelson (PHO)

CCATS (CONTD)

<u>POSITION</u>	<u>SHIFT 1</u>	<u>SHIFT 2</u>	<u>SHIFT 3</u>	<u>SHIFT 4</u>
HOUSTON TELEMETRY CONTROLLER	William M. Essl (PHO)	Alden L. Tucker (PHO)	Louis H. DeFore	
DISPLAY TECHNICIAN	Lorimer A. Parker (PHO)	Richard J. StMarie (PHO)	Charles E. Smith (PHO)	
TECHNICAL OPERATOR - 1	James V. Hovendick (PHO)	Kendall L. Bleam (PHO)	Jack V. James (PHO)	Earl F. Boone (PHO)
TECHNICAL OPERATOR - 2	Richard M. Hart	Lelan R. Whitaker	Peter K. Birk	Jimmy C. White
INTERNAL VOICE CONTROLLER	Armando E. Gonzales (PHO)	George E. Thomas (PHO)	James A. Wilbarger (PHO)	
CP	Glyn R. LeBlanc Joseph Vicker (U)	Kenneth W. Guillory	James M. Malone (PHO)	George Ortego (U)
FOD TV	Eddie A. Tarkington	Tom C. Moore	Howard L. Marler	Robert L. Bryant

## SIMULATION CONTROL AREA (SCA) ACCESS LIST FOR APOLLO 11

Carl B. Shelley	NASA
Jay F. Honeycutt	NASA
Gerald D. Griffith	NASA
Richard H. Koos	NASA
Gordon M. Ferguson	NASA
Leo A. Reitan	NASA
Chester A. Lowe	USAF
Goodwill S. Murray	USAF
Robert J. Williams	NASA
Robert J. Myers	NASA
Charles R. Edwards	NASA
Robert K. Holkan	NASA
William P. Gravett	NASA
Tandy N. Bruce	NASA
Charles K. Alford	NASA
Leon H. Payne	NASA
Edward L. Heinz	USAF
John T. Cox	NASA
Richard E. Cox	USAF
William D. Dupee	USAF
Lamar E. Ledbetter	USAF
Paul M. Joyce	NASA
John A. Lavender	NASA
John D. Blalock	NASA
Donald H. Clegg	USAF
Clyde E. Middleton	NASA
Glenn H. Cress, III	NASA
Raymond A. Randolph	DAC
Leonard G. Asher	PHO
Earl Faupell	PHO
Arthur C. Hughes	PHO
James A. Ideker	PHO
Raymond C. Overhouse	PHO
D. Clayton Pollard	PHO
Thomas L. Reeves	PHO
Donald E. Siglinger	PHO
Dunham T. Swift	PHO
Gordon F. Wenneker	PHO
Eugene B. Chmielewski	PHO
William F. Weber	PHO
John R. Wills	NAR
Peter Klapach	PHO
Rex L. Lutes	PHO
Jack M. Mibeck	PHO
Hiram G. Baxter	PHO
Milton J. Neubauer	GAEC
Harold B. Stenfors	PHO
Philip R. Dasch	PHO
Ray Morris	SL

## SIMULATION CONTROL AREA (SCA) ACCESS LIST FOR APOLLO 11

Donald D. Hill	PHO
Alfred B. Mercier	PHO
Robert F. Poirier	PHO
J. R. Smith	NASA
W. A. Hill	NASA
B. G. Casserly	NASA
A. M. Crowder	NASA
L. E. Harth	NASA
Q. J. Vandervort	NASA
J. C. Gillis	NASA
D. R. Kirbie	NASA
L. V. Conn	PHO
Peter Segota	NASA
Pontaleon Moreno	NASA
A. Lawrence Kirk	NASA
Oscar W. Olszewski	NASA
Miles G. Springfield	NASA
Dennis L. Goeddel	NASA
William G. Barker	NASA
Jimmy R. Gilbert	NASA
W. Neil King	NASA
John C. Lyon	NASA
Mile G. Rodda	PHO
Graham Collins	PHO
Henry Otten	GAEC
Don F. Finley	NAR
Charles Gay	PHO
Peter Lanther	PHO
Leroy Flowers	PHO
Ray Halyard	MAC
Myron Hayes	IBM
John K. Holcomb	NASA Headquarters
George P. Chandler	NASA Headquarters
Fred E. Stout	NASA Headquarters
Robert C. Turgeon	NASA Headquarters
Philip J. Bayer	NASA Headquarters
William M. Wallace	NASA Headquarters

### POSTFLIGHT OBSERVERS

*Donald J. Incerto	NASA
*Frank J. Smith	USAF
*William R. Lacy	NASA *Require Badging for SSR Flight Dynamics

KLATE HOLT COMPANY

Klate Holt	"X" All other areas
Martin Gracey	"X" All other areas
Wallace R. Kirk	MOCR
Mose Boyd	MOCR
George Foster	MOCR
Joe Ashford	RTCC
Samuel Jeffery	CCATS
Leo Franklin	MOCR
Riley Nobles	MOCR
Joe Dickins	CCATS
Godfrey Whiting	MOCR
Emil Ray	RTCC
Harry Q. Wilkins	MOCR
Johnny Clark	SPAN-Bldg. 45
Hoxie Little	SPAN-Bldg. 45
Chester Johnson	MOCR
Rubin White	RTCC
Robbie J. Winston	RTCC

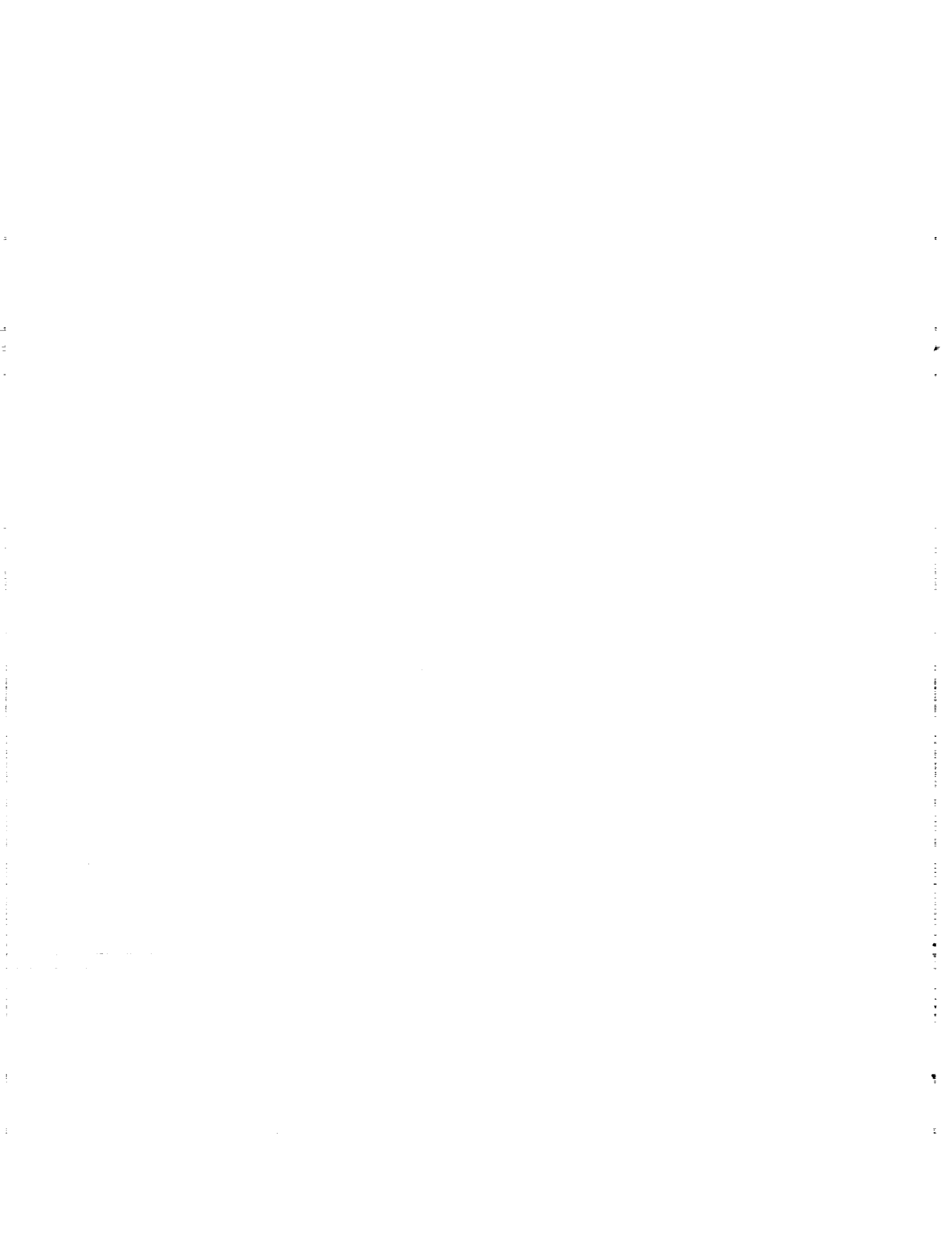
ENGINEERING MAINTENANCE & OPERATIONS PERSONNEL

SSR BADGING

James R. Crain	NASA/BN
Harold F. Kosel	NASA/BN
Lewis A. Rose	STC
Maurice C. Hoffpowier	STC
William F. Pearson	STC
Sidney C. Hoover	STC
Homer E. Donaldson	STC
William E. Raygor	STC



**Original Mission Control  
Emblem**







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## THE MISSION CONTROL DIRECTORATE EMBLEM

---

This emblem was developed for the Mission Control Team to recognize their unique contribution to the Manned Space Program. To date, we have flown 47 space missions during the Mercury, Gemini, Apollo Programs. These missions have succeeded due to the efforts of the Mission Control Team. In selecting the theme of the emblem we centered upon the "Sigma" as the dominant element.

This sigma represents the total mission team. In addition, it represents the individual flight control teams from all programs past, present, and future. Within the teams, it represents all engineering, scientific, and operations disciplines and tasks in support of the spacecraft and aircraft program elements. To a great extent, it can represent many other things such as the benefits for all mankind that are possible through space.

The rocket launch represents the dynamic elements of space, the initial escape from our environment, and the thrust to explore the universe. The energy of the program must be maintained by the mission team if the space program goals are to be achieved.

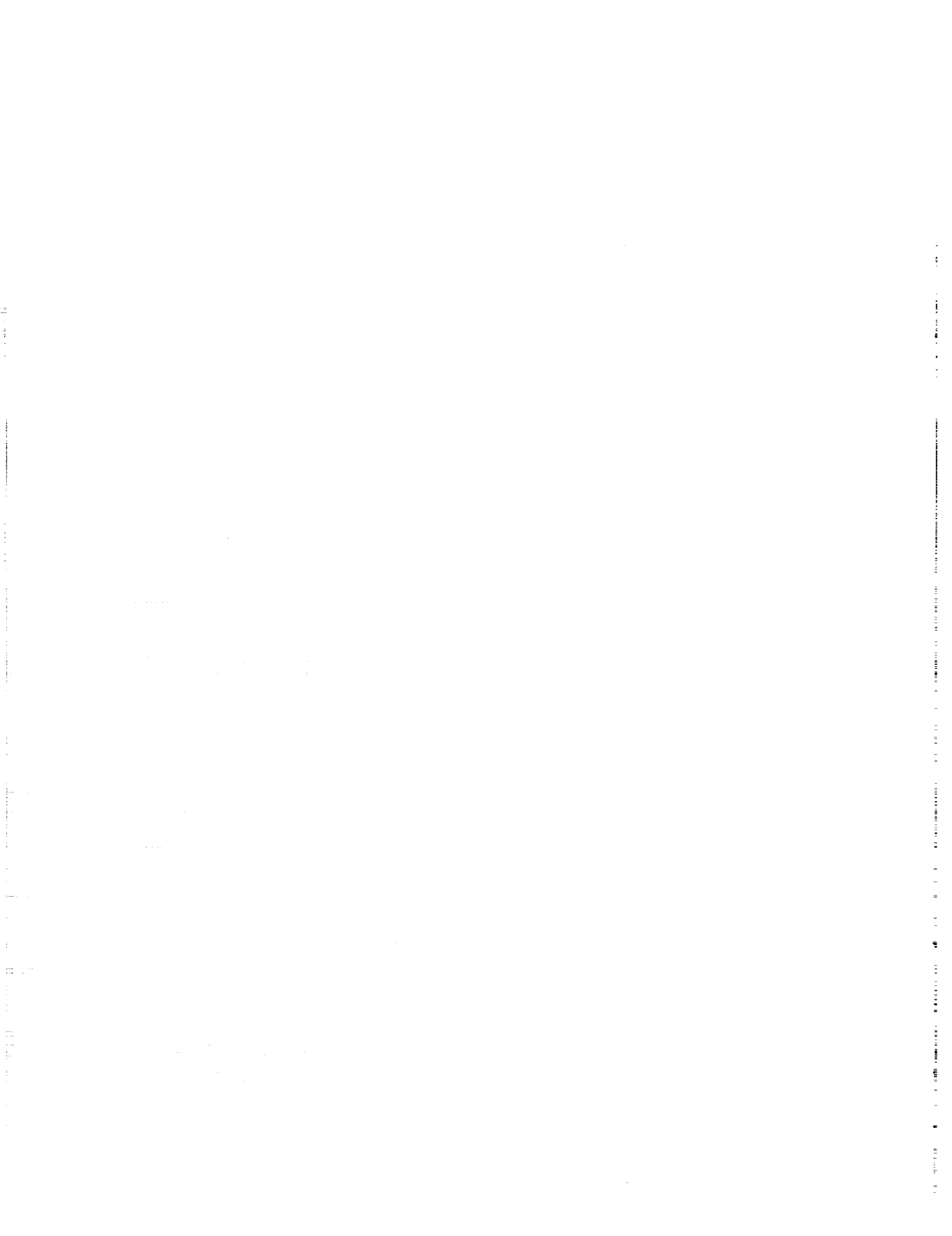
The remaining elements are the Earth, planets and stars. The Earth is our home and will forever be serviced by both manned and unmanned spacecraft in order to improve the quality of life of our present home. The stars and planets represent a major source of scientific study as well as the challenge of exploration for the future

mission control teams. At no time should we lower our sights below the quest for the stars, for only in this way are we challenged sufficiently to be better than we are.

The border of the patch contains symbols to represent the three major programs that have been supported by the team. The Mercury, Gemini and Apollo Programs have seen a succession of many great moments. These programs succeeded due to the dedication of the many people who formed the teams and committed their being to the team.

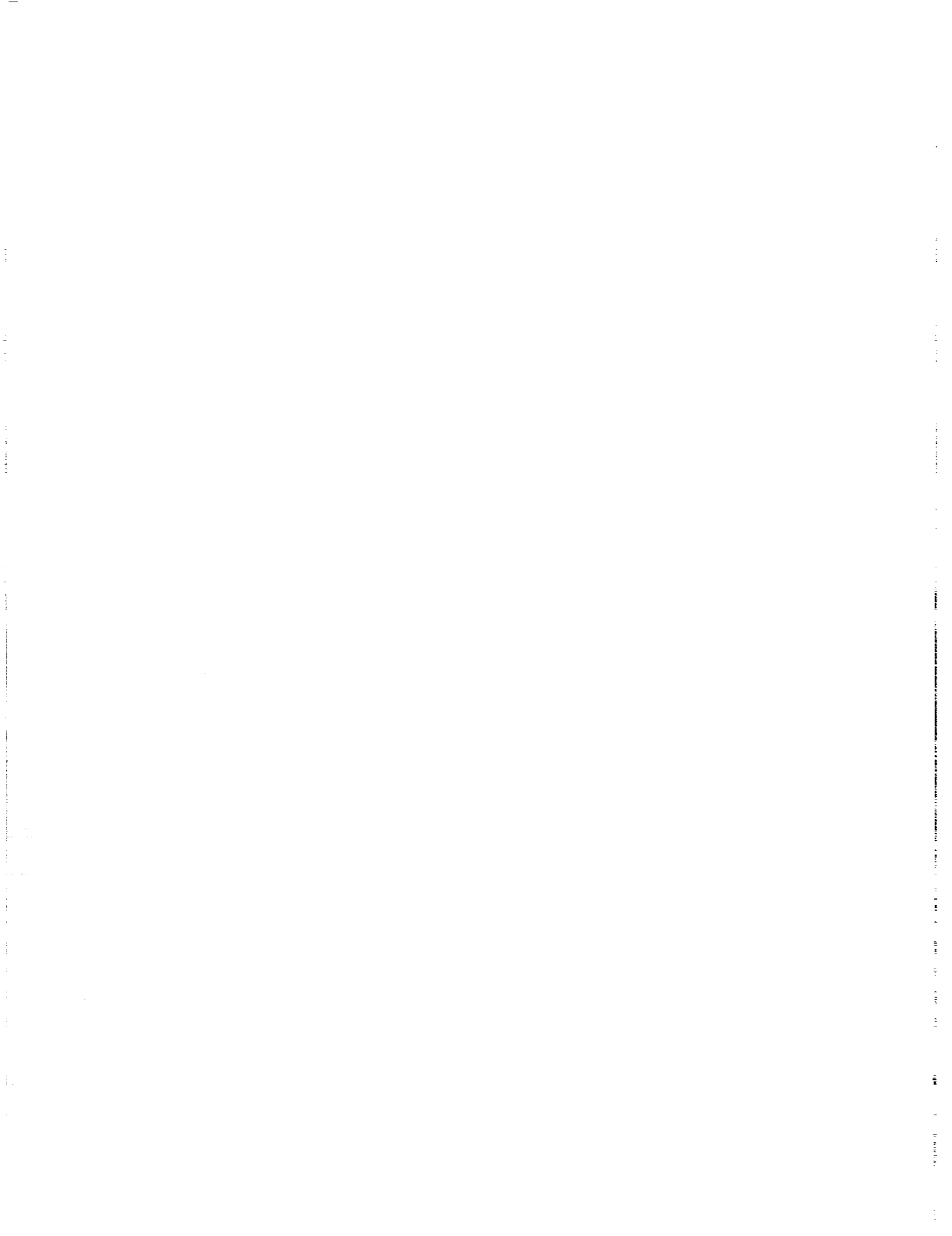
The four stars represent the current and future programs: Skylab, Apollo-Soyuz Test Project, Earth Resources Aircraft Program, and the Shuttle.

At the conclusion of these programs, modifications to the emblem will be made to replace the star with an appropriate symbol for the program. The wording on the patch was chosen to stress the very positive attitude used by the Mission Control Team to assure crew safety and mission success "Achievement through Excellence" is the standard for our work. It represents an individual's commitment to a belief, to craftsmanship, and perseverance. With the above qualities, a positive approach is created that assures objective accomplishment and the return of the crew. The emblem thus recognizes your contribution to history, and a commitment to current and future programs, and will assure continuity of the great teams of the past.





**Foundations of Flight  
Control**



# Foundations of Flight Control

---

## 1. To instill within ourselves these qualities essential to professional excellence

**Discipline...**Being able to follow as well as to lead, knowing that we must master ourselves before we can master our task.

**Competence...**There being no substitute for total preparation and complete dedication, for space will not tolerate the careless or indifferent.

**Confidence...**Believing in ourselves as well as others, knowing that we must master fear and hesitation before we can succeed.

**Responsibility...**Realizing that it cannot be shifted to others, for it belongs to each of us; we must answer for what we do, or fail to do.

**Toughness...**Taking a stand when we must; to try again, and again, if it means following a more difficult path.

**Teamwork...**Respecting and utilizing the abilities of others, realizing that we work toward a common goal, for success depends upon the efforts of all.

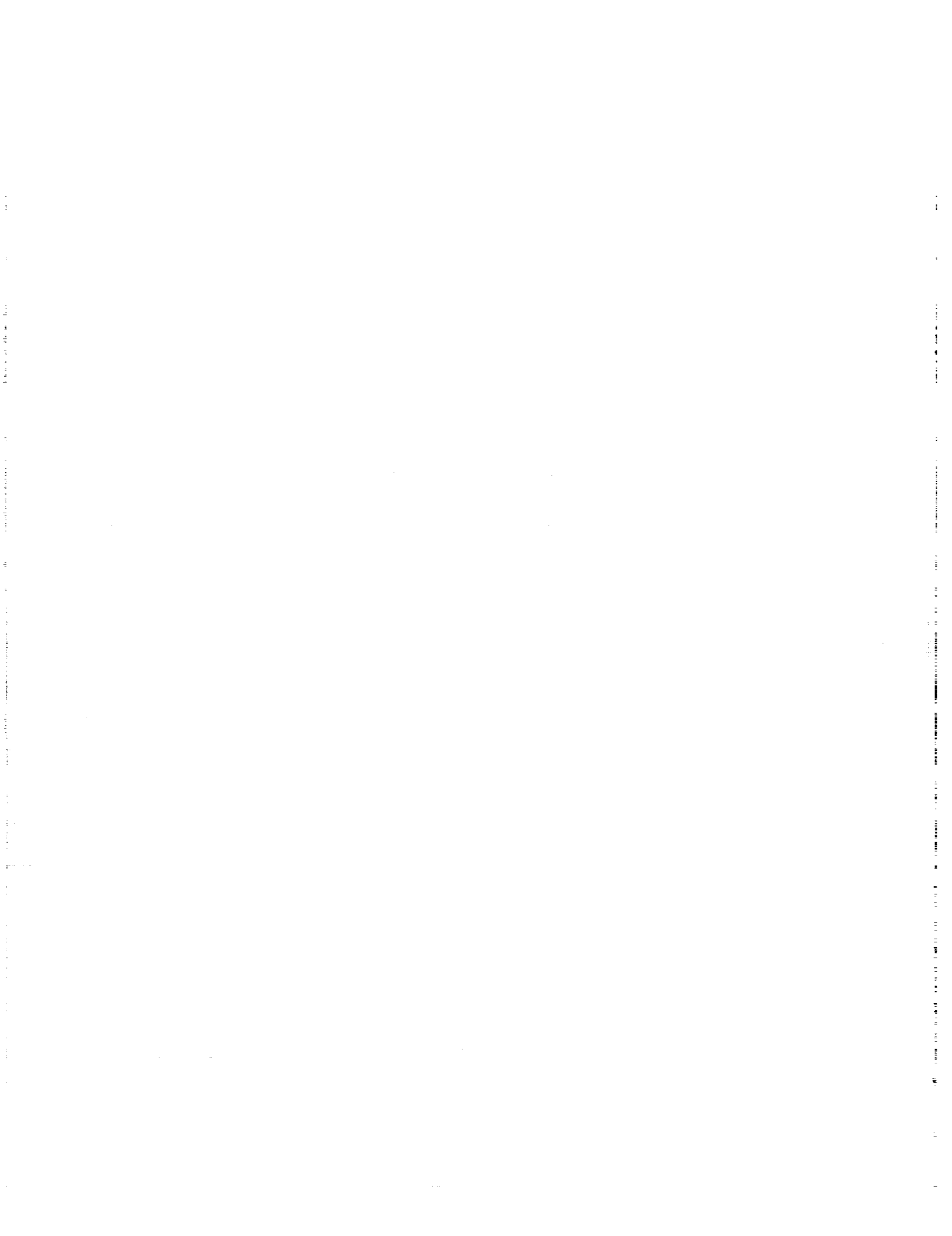
## 2. To always be aware that suddenly and unexpectedly we may find ourselves in a role where our performance has ultimate consequences.

## 3. To recognize that the greatest error is not to have tried and failed, but that in the trying we do not give it our best effort.



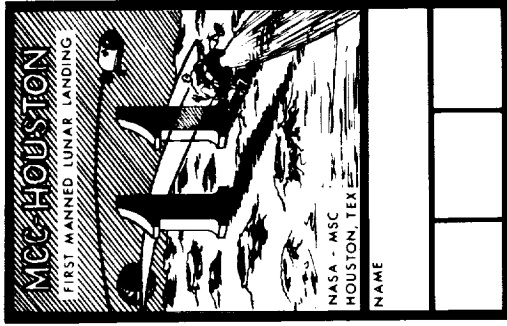


**Apollo 11  
20th Anniversary  
Program and Events**





# Apollo 11 ANNIVERSARY



## APOLLO 11 20TH ANNIVERSARY EVENTS

- Monday, July 17 - 1 PM - Flight Controller recreation of Lunar Landing with students at Challenger Center in Houston
- 5 PM - Operations Hospitality Suite at Kings Inn
- Tuesday, July 18 - 5:30 PM - Operations Lunar Landing Party Dinner/Dance Program at Gilruth Recreation Center. Music by Contraband
- Wednesday, July 19 - 5 PM - Operations Hospitality Suite at Kings Inn
- Thursday, July 20 - 4 PM - JSC Splashdown Party at Gilruth Center
- 8:30 PM - Operations Splashdown Party at Gilruth Center
- Friday, July 21 - Gala - Dinner and dancing at Hyatt Regency Imperial Ballroom, Walter Cronkite Keynote Speaker
- Saturday, July 22 - 9 AM - LM picnic at Galveston County Park
- 8 AM - JSC Open House
- 9:30 - JSC Homecoming Parade

Apollo 11  
ANNIVERSARY

Flight Operations  
Lunar Landing Party  
Tuesday, July 18, 1989  
5:15 PM, Teague Auditorium  
7:15 PM, Gilruth Center

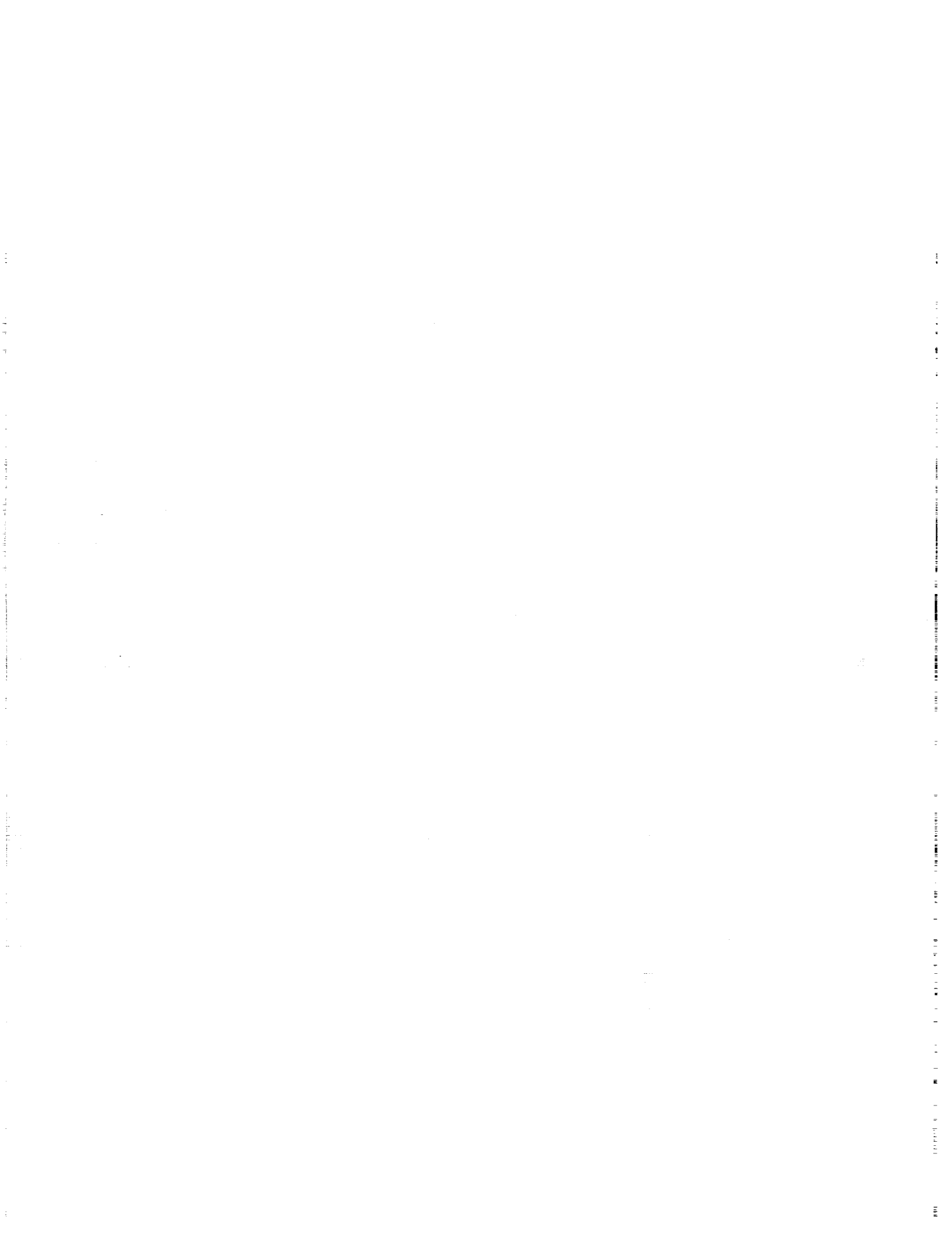
Number

**APOLLO 11**  
20TH ANNIVERSARY REUNION  
OPERATIONS PERSONNEL INVITED

**PLANNED ACTIVITIES INCLUDE:**  
Hospitality Room - July 17 & 19  
Lunar Landing Party - July 18  
Splashdown Party - beer, soda, light food - July 20  
Hosted by Mission Operations Directorate

for information contact:

- Bob Legler 483-8467
- Rod Lee 483-8403
- Ed Pavella 483-8411
- Mel Richmond 483-2977
- Jim Henningsen 483-3523
- David Ballard 483-8015
- Jim Skolofau 483-0859
- Jack Knight 280-1599 Ext. 3117
- Charlie Dumis 483-3375



The image shows a certificate template. It features a decorative border with a repeating zigzag pattern. Inside the border is a large, empty rectangular area for text. In the center of this area, the text "Apollo 11 Mission Operations Team Certificate" is printed in a bold, black, sans-serif font, arranged in three lines.

**Apollo 11 Mission  
Operations Team  
Certificate**



The National Aeronautics and Space Administration  
Presents the

**GROUP** **ACHIEVEMENT** **WARD**

to

# Apollo 11 Mission Operations Team

For exceptional service in planning and exemplary execution of mission operational responsibilities for Apollo 11—the first manned lunar landing mission. The distinguished performance of this team was decisive in the success of this first extraterrestrial exploration mission, a major milestone in the advancement of mankind.



ORIGINAL PAGE  
COLOR PHOTOGRAPH

Signed and sealed at Washington, D.C.  
this eleventh day of August 1969  
Nineteen Hundred and Sixty-Nine

*Johanne*

ADMINISTRATOR, NASA





**Apollo 11  
Mission Summary  
(Timeline)**



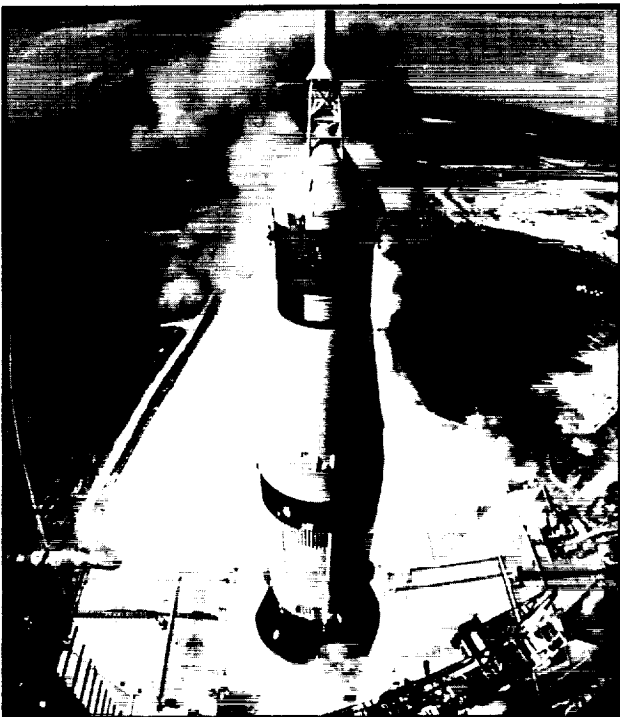


## APOLLO 11 MISSION (G MISSION)

The Apollo 11 space vehicle was launched from Kennedy Space Center Launch Complex 39A at 8:32:00 AM CDT (13:32:00 GMT) on July 16, 1969, with the objective to land two men on the Moon and return them safely to Earth. The crewmembers for this historic flight were Neil A. Armstrong, CDR; Michael Collins, CMP; and Edwin E. (Buzz) Aldrin, LMP. The booster was Saturn V SA-506, CSM-107, and LM-5. The spacecraft weights at launch were CSM 63,508 lbs, LM 33,297 lbs, SLA 3,951 lbs, and LES 8,910 lbs for a total of 109,665 lbs.

The spacecraft and S-IVB stage were inserted into a 100.7 by 99.2 nm Earth parking orbit at a velocity of 25,568 fps at 00:11:49.3 GET.

After a 2.5 hour checkout period, the spacecraft/S-IVB stage combination was injected into translunar coast on a free-return, circumlunar trajectory. The burn lasted 347.3 seconds and imparted a delta V of 10,441 fps.



Apollo 11 Launch



CSM Docking With LM During TD&E

The CSM was separated from the S-IVB/LM at approximately 3:17 GET, transposition occurred, and the CSM docked with the LM at 3:29 GET. The LM was extracted from the S-IVB/SLA at 4:17 GET. A 19.7 fps SPS evasive maneuver was executed for 3.4 seconds at 4:40 GET. At 21:28 GET, the CSM/LM weight was 96,361 lbs, the velocity was 5,667 fps and the vehicle was 93,236 nm from Earth. The MCC-1 maneuver was canceled as unnecessary. MCC-2 maneuver was performed at 26:44:58 GET, the SPS burn time was 3.1 seconds, and the delta V was 20.9 fps. On the second day of the flight, the PTC mode worked nominally. At 45:28 GET, on July 18, the CSM/LM weight was 96,068 lbs, the velocity was 3653 fps and the vehicle was 155,600 nm from Earth.

On the third day of the flight, MCC-3 and MCC-4 maneuver were canceled as unnecessary. At approximately 55:37 GET, the CDR and LMP started the LM familiarization. The CSM LMP ECS hoses were placed in the LM upper hatch to circulate O<sub>2</sub> into the LM cabin. The CSM color television camera was brought into the LM and excellent TV coverage

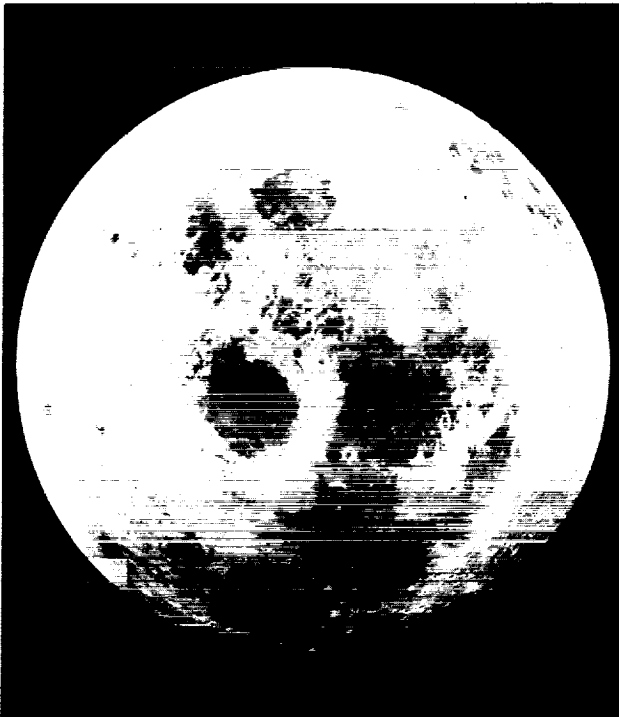
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of the LM crew compartment was obtained. The LM familiarization was completed at 57:44 GET.

The spacecraft passed into the Moon's sphere of influence at 61:39:55 GET. The Earth-referenced position and velocity were 186,436 nm and 2,990 fps, respectively. The corresponding Moon reference values were 33,823 nm and 3,772 fps. At 69:28 GET, the CSM/LM weighed 96,012 lbs, moved with a velocity of 3,973 fps (Moon-referenced) and was 16,250 nm from the Moon.

The LOI-1 (Lunar-Orbit Insertion) burn was performed using the SPS at 75:49:50.5 GET. This was a 2,918 fps retrograde maneuver lasting 362 seconds and placed the spacecraft in a 169.7 nm apolune and a 60.0 nm perilune.

The second retrograde or circularization maneuver LOI-2 was made at 80:11:36 GET. It lasted 17 seconds and changed the velocity by 159 fps, resulting in 65.7 nm apolune and 53.8 nm perilune. At 93:28 GET, the CSM/LM weighed 70,321 lbs and was in lunar



Apollo 11 View of Moon

orbit with a 64 nm apolune and a 55.5 nm perilune.

The CDR and LMP entered the LM at 81:25 GET for housekeeping and communications testing. The transfer to LM power was at 82:59:56 GET with total current 10 - 14 amps. Low B.T Rate (LBR) telemetry was enabled at 83:10 GET was received solid from the Goldstone (GDS) 210-foot dish, while the LM was on the aft Omni antenna without the power amp. Telemetry was switched to High Bit Rate (HBR) and continued to be solid when using the 210-foot dish; however, HBR data lock was approximately 50 percent when using the 85-foot dish. LBR data was solid on the 85-foot dish. Voice quality was good in normal voice configuration. The housekeeping was successful and transfer back to CSM power was made at 82:37:46 GET.

LM pressurization was started at 95:20 GET in preparation for LM activation. The LM was powered up and the systems checks were successful. Communications during activation were very good except during landmark tracking when the attitudes were not compatible with steerable antenna coverage. Shortly before Loss-of-Signal (LOS) at 99:25 GET, the CAPCOM advised Eagle, "We're go for undocking."

Undocking was accomplished on schedule during LOS at approximately 100:13 GET. After Acquisition-of-Signal (AOS) at 100:18:14 GET, the CDR signaled, "The Eagle has wings." The LM was inspected by the CMP who reported, "I think you've got a fine looking machine there, Eagle, despite the fact you're upside down."

At 100:40 GET, the Service Module (SM) Reaction Control System (RCS) was used to perform a separation maneuver of 8.2 seconds directed radially toward the center of the Moon.

The Descent Orbit Insertion (DOI) maneuver was performed during LOS at 101:36 GET using the LM Descent Propulsion System (DPS). Burn time was

This is 30 seconds above the abort redline of approximately 20 seconds of burn time which would be required to avoid lunar contact. LM PROP was spring loaded to call Bingo - meaning the crew would abort if the DPS remaining time counted down to zero.

The CDR guided the LM downrange approximately 1,100 feet from the initial aim point to avoid a large crater and 5 to 10 foot boulders.

At 40 feet, the crew reported dust being kicked up. At PDI + 12:26, the altitude was 12 feet and the DPS thrust was at 25 percent. At 102:45:40 (3:17 PM CDT), the LMP reported CONTACT indicating one or more of the three 5-foot probes extending below three of the LM foot pads had made contact with the lunar surface. Landing had occurred with negligible forward velocity, approximately 2.1 fps to crew's left and 1.7 fps vertically. The LMP reported the Descent Engine was stopped 3 seconds after the CONTACT.

CAPCOM Charlie Duke signaled, "We copy you down, Eagle. "Neil Armstrong responded, "Houston, Tranquility Base here. The Eagle has landed. "The CAPCOM replied, "Roger, Tranquility. We copy you on the ground. You got a bunch of guys about to turn blue. We're breathing again. Thanks a lot."

The LM attitude was tilted 4.5 degrees from the vertical and yawed left about 13 degrees. Based on analysis, landing was at 23.4° East and 0.7° North, about 20,800 feet West and 4,000 to 5,000 feet South of the center of the planned landing ellipse in the Sea of Tranquility. At landing, the LM ascent stage was 10,914 lbs and the descent stage was 5,239 lbs for a total LM weight of 16,153 lbs.

The crew indicated they could immediately adapt to the 1/6 (Earth) gravity in the LM and they moved easily in this environment. The crew reported the landing site contained numerous boulders, of varying sizes and

shapes, up to 2 feet in diameter. The lunar surface color varied from very light to dark gray.

Immediately after landing, the crew began a simulated launch countdown in preparation for a possibility of a contingency liftoff. Two problems occurred during this countdown. The LM Mission Timer failed and the descent stage fuel-helium heat exchanger froze. The IMU was aligned by the crew using three different lunar surface alignment options. The simulated CD terminated at 104:30 GET and partial LM power down was initiated.

The crew requested that the EVA be accomplished prior to the sleep period, or about 4-1/2 hours earlier than scheduled. This request had been anticipated and the EVA flight control team was in the MCC prepared to start the EVA preparations at 106:13 GET.

The Portable Life Support System (PLSS) communications and instrumentation checks were complete. The LM voice and TLM, PLSS voice and data, and the television transmissions were very good from the GDS 210-foot antenna.

The LM pressure was dumped to 3.5 psia and held there while an LM suit integrity check was performed.

The cabin depressurization was initiated and it took 9 minutes to depressurize to 0.12 psia. The LM hatch was opened at 109:07:35 GET. As the CDR exited the LM, he deployed the Mission Equipment Storage Assembly (MESA), the TV Circuit Breaker was closed in the LM, and the TV camera mounted on the MESA recorded the CDR climb down the ladder to the LM foot pad. The CDR's first step on the Moon occurred at 109:24:25 GET (9:56 CDT) with his comment, "That's one small step for a man, one giant leap for mankind." The CDR reported that the footpad penetration was 3 to 4 inches and the collapse of the strut was minimal. The CDR's boots sank approximately 1/8 inch in the fine



**The Eagle Has Wings**

29.8 seconds with a velocity change of 76.4 fps resulting in a lunar orbit of 57.2 by 8.5 nm.

At AOS lunar rev 14 (102:16:12), Eagle was acquired in the Powered Descent Initiate (PDI) attitude transmitting normal voice and LBR telemetry using the GDS 210-foot antenna. The steerable was locked on and HBR TLM was selected. The Eagle crew reported the DOI burn was on time. Communications with the Eagle were lost and reacquired several times over the next 15 minutes.

At 102:28:34, CMP Michael Collins relayed CAPCOM Charlie Duke's "go" for powered descent. PDI maneuver began with a 26-second maneuver at minimum throttle (10 percent thrust) at 102:33:05 GET at a height (PGNS) of 49,971 feet. Throttle up to full thrust began at 102:33:31 GET.

The braking phase of PDI (P63 braking phase) began on time; however, it was later determined that the position at

which PDI occurred was about 4 nm downrange resulting in the landing point being shifted downrange 4 nm. The crew started powered descent in the face-down attitude to permit the crew to make time marks on selected landmarks. The landing-point-designator (on CDR's window) sighting on the crater Maskelyne W was approximately 3 seconds early, confirming the suspected error. A yaw maneuver to face-up was completed at PDI + 3:52 and an altitude of 42,426 feet. Landing radar lockon occurred before the end of the yaw maneuver. The first of five computer alarms (1202, executive overflow, no core sets) occurred at PDI + 5:16. Eagle was advised they were "go" on the 1202 alarm. Arrival at high gate (end of braking phase) and the automatic switch to the final approach or visibility phase P64 occurred at 7,129 feet at a descent rate of 125 fps.

After pitchover at high gate, the landing-point-designator indicated the approach path was leading into a large crater. The CDR switched from automatic to attitude-hold control and manually increased the flight path angle by pitching to a nearly vertical attitude for range extension. Throttle down occurred at PDI + 6:24 at an altitude of 23,393. The final landing phase with automatic transfer to P65 (auto descent) was preempted when the CDR selected manual control (P66) at PDI + 10:18 at an altitude of 410 feet. In P66, the LGC controlled the descent engine throttle while the crew used rate-of-descent control switch to control the descent rate. Additional program alarms (1202 and 1201, executive overflow, no vacant area) were observed, with the last alarm at PDI + 9:14. GUIDO gave a "go" to continue powered descent based on guidance altitude convergence.

CAPCOM Duke radioed 30 seconds of DPS propellant remaining PDI + 12:25.

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powdery surface material, which adhered to the lunar boots in a thin layer.

There were no crater effects from the descent engine. The CDR reported it was quite dark in the shadows of the LM which made it difficult to see his footing. During the EVA, a small microdot disk containing messages from numerous world leaders was left on the Moon.

The CDR collected a contingency sample of lunar material soil from the vicinity of the LM ladder. He reported that although loose material created a soft surface, as he dug down 6 or 8 inches, he encountered very hard cohesive material.

The CDR photographed the LMP's egress and descent to the lunar surface. The CDR and LMP then unveiled the plaque mounted on the strut behind the ladder and read the inscription to the worldwide television audience, "We came in peace for all mankind...."

The CDR removed the camera from the MESA and placed the camera on a tripod



Astronaut Footprint On Moon



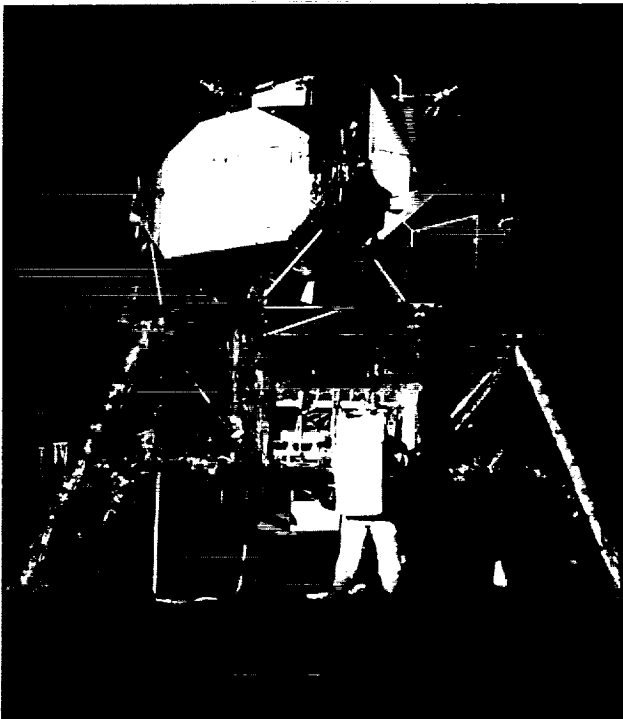
Apollo 11 Moon Plaque

in position to view subsequent surface EVA operations.

The LMP deployed the Solar Wind Composition experiment in direct sunlight to the north of the LM. Subsequently, the crew erected a 3 x 5-foot American flag on an 8-foot aluminum staff.

The LMP indicated that he had to be careful of his center of mass in maintaining balance; however, the agility was better than expected. The CDR and LMP quickly adapted to a kangaroo-type hop to effectively move around the surface.

A conversation was held between President Nixon in the White House Oval Office and Armstrong and Aldrin on the Moon. The President congratulated the Apollo 11 crew. He said, "For one priceless moment in the whole history of man, all the people on the Earth are truly one, one in their pride in what you have done, and one in our prayers that you will return safely to Earth."



**Aldrin Removing Experiments From MESA**

The CDR collected a bulk sample of assorted surface material and placed them in a Sample Return Container. The crew inspected the LM and reported seeing no discrepancies.

The Passive Seismic Experiment Package (PSEP) and the Laser Ranging Retro Reflector (LRRR) were deployed south of the LM. The crew selected more lunar samples and about 20 lbs of discretely selected material. The LMP had to exert considerable force to drive the core tubes an estimated 8 or 9 inches deep. The TV provided continuous observation of the crew EVA activities. Lunar surface photographs consisted of both still and sequence coverage using the Hasselblad camera, Maurer Data Acquisition camera, and the Apollo Lunar Surface Closeup camera.

The film, cameras, 21 kgs of lunar sample material, and the Solar Wind Composition experiment were transferred to the LM.

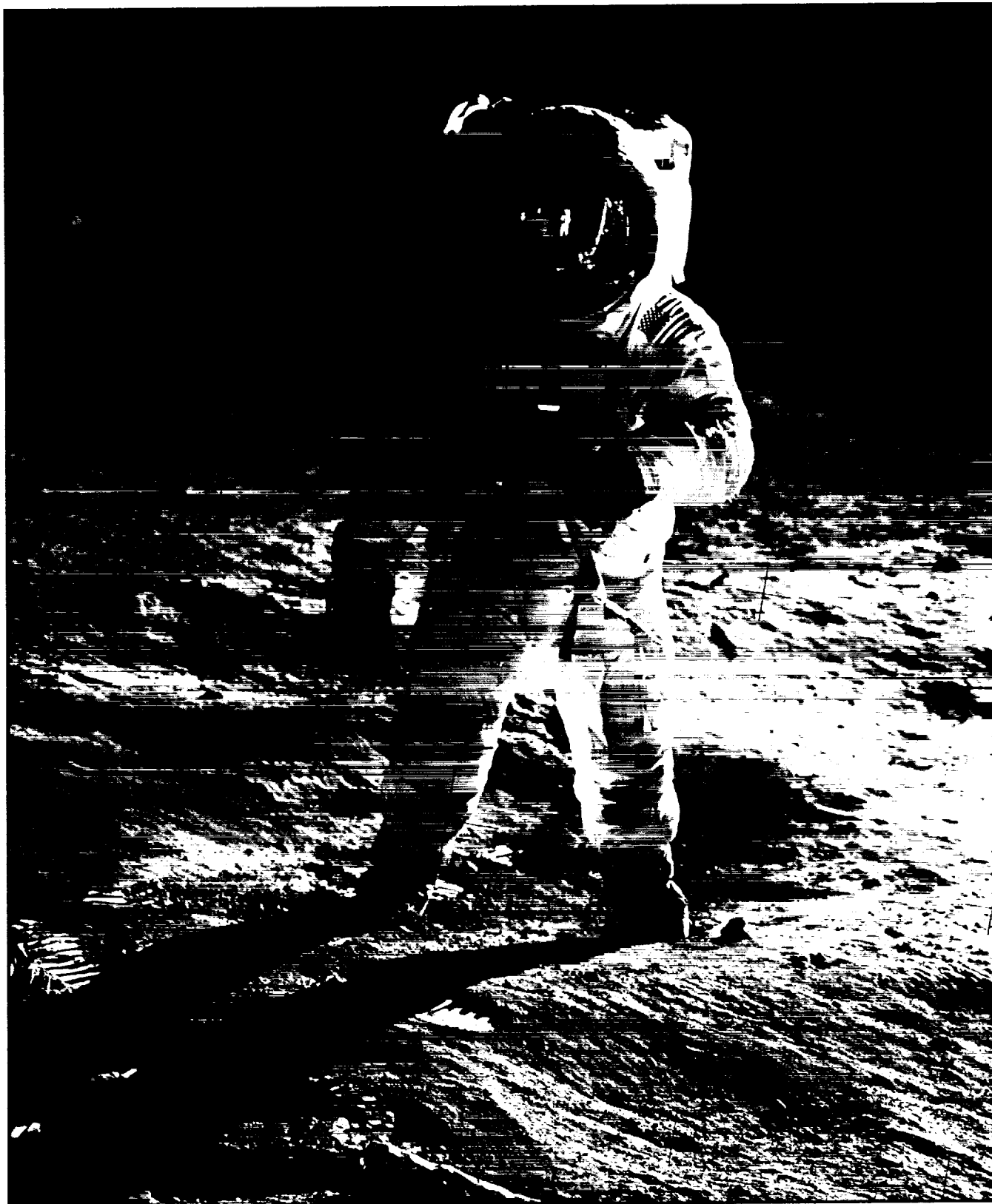
The EVA was terminated at 112:39:12 GET when Armstrong entered the LM and closed the hatch. The EVA time for Armstrong was 2:31:40 based on the hatch opening and closing. The cabin was repressurized automatically via the CABIN REPRESS valve. The post-EVA current was 2 amps higher than predicted. Upon call, the crew found the Attitude Throttle Control Assembly (ATCA) CB was closed and the ENG ARM CB was broken which was attributed to being accidentally hit by a PLSS.

The LioH cartridge was changed at 113:15 GET. At 114:08 GET, the crew dumped the cabin to 2 psia via the forward hatch valve and then to 0.0 psia via the upper hatch valve. The total depressurization took 4.0 minutes. The crew open the forward hatch and two PLSS units, two stowage bags, one spent LioH cartridge and container were jettisoned to the lunar surface. The cabin was repressurized automatically. The crew switched from FM to PM communications mode and began the crew sleep period.



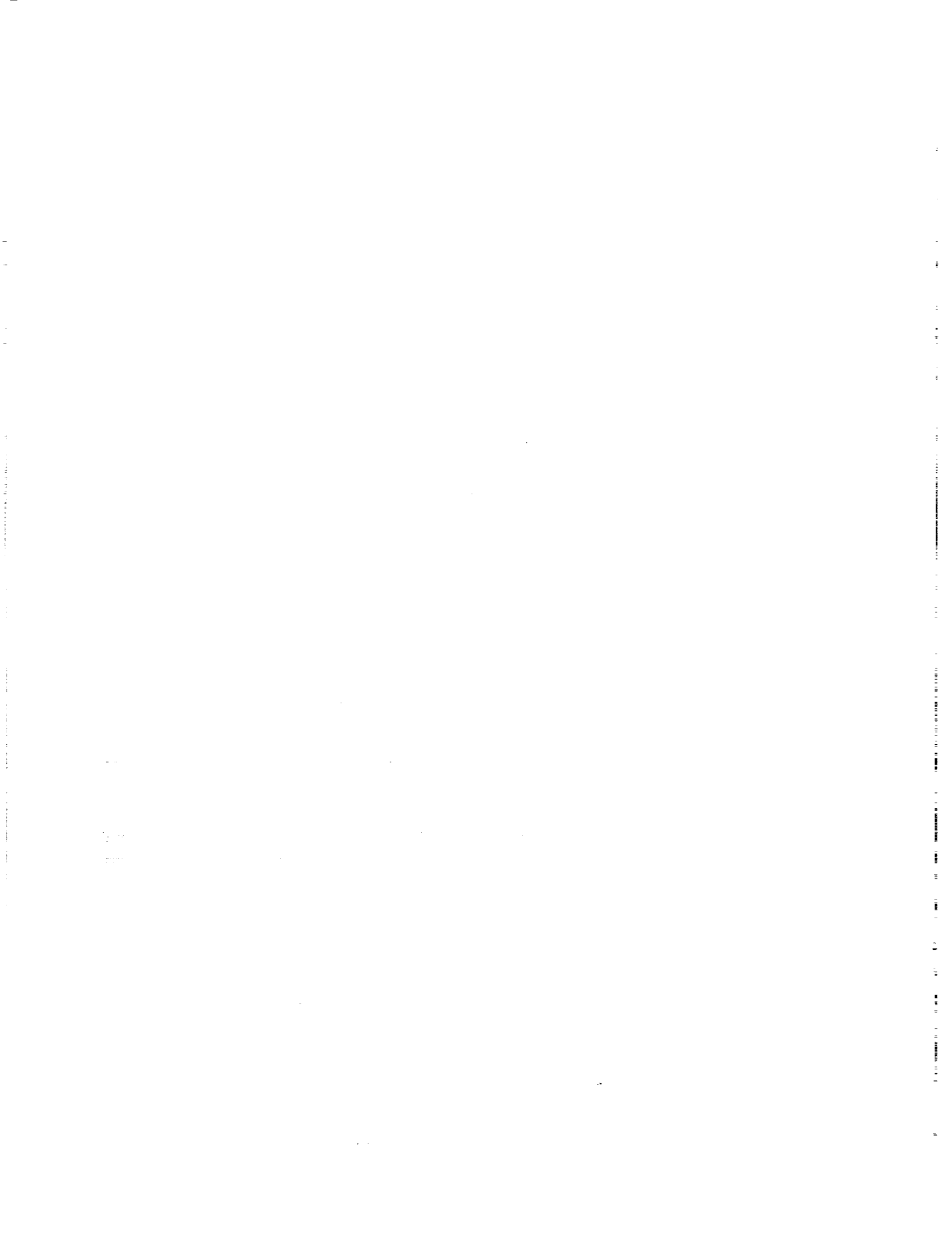
**Aldrin And Lunar Experiments**

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Armstrong's Image In Aldrin's Vision

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The crew was called at 121:45 GET. The damaged ENG ARM CB was successfully closed at 121:55 GET. The two ascent batteries were placed on line earlier and descent batteries 1 and 3 were taken off line at Tig -20 minutes to accelerate the ascent battery conditioning.

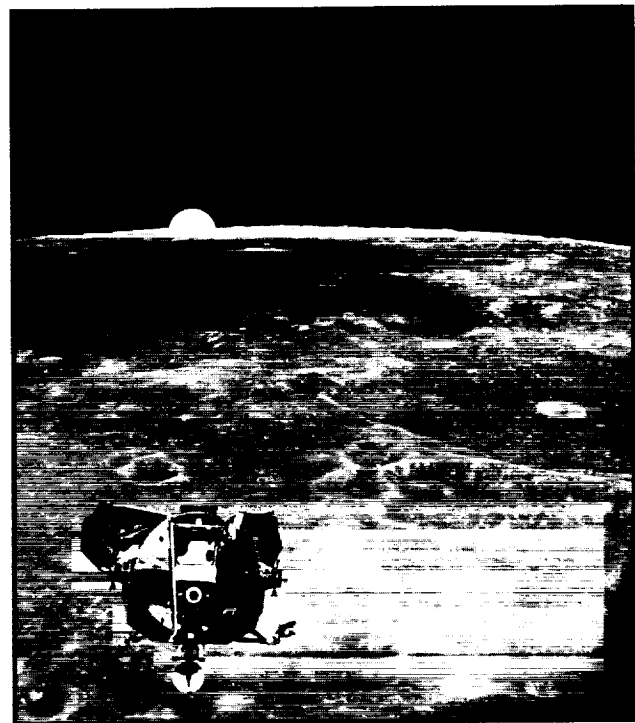
The pyro systems were armed and APS pressurization executed at Tig -16 minutes. The crew reported the Ascent batteries were on line and were "go" at Tig -8:50 minutes. Descent batteries 2 and 4 were taken off line at Tig -5:30 minutes.

Liftoff occurred with ascent staging and Ascent Propulsion System (APS) ignition at 124:22:00 GET (12:34 PM CDT). There was a momentary loss of data immediately after liftoff but the steerable antenna retained lock and the TLM remained solid. The ascent engine burn time was 439.9 seconds with a velocity change of 6,060.2 fps resulting in an LM orbit of 45.2 by 9.0 nm. The lunar stay time was 21:36:21. At ascent, the LM ascent stage weighed 10,777 lbs.

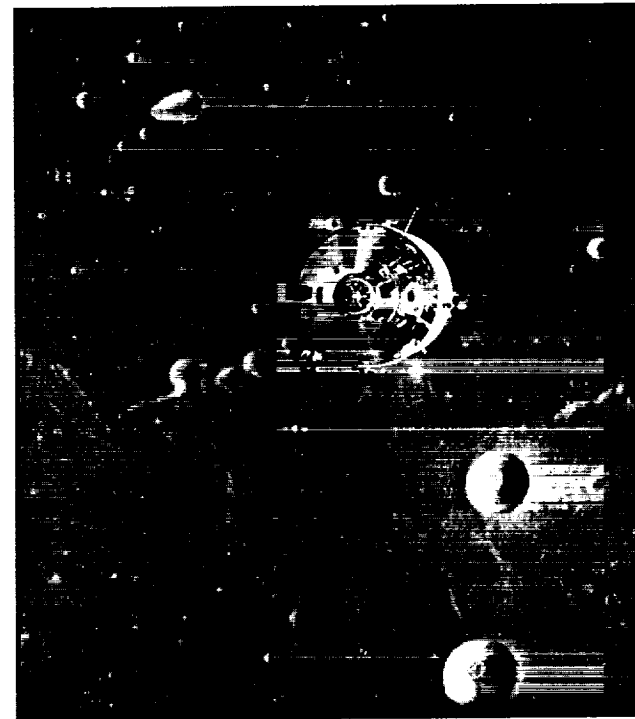
The following rendezvous maneuvers were performed:

<u>MANEUVER</u>	<u>TIME</u>	<u>BURN TIME</u>	<u>VELOCITY</u>	<u>ORBIT (NM)</u>
Coelliptic Sequence Initiate (CSI)	125 19 34.7	47.0 secs	51.5 fps	48.6 by 45.1
LM Plane Change	Not performed			
Constant Delta Height (CDH)	126 17 46	18.1 secs	19.9 fps	47.0 by 40.9
Terminal Phase Initiate (TPI)	126 03 30.8	22.8 secs	25.3 fps	61.2 by 43.9
Terminal Phase Final (TPF)	127 45 54	28.4 secs	31.4 fps	62.2 by 56.6

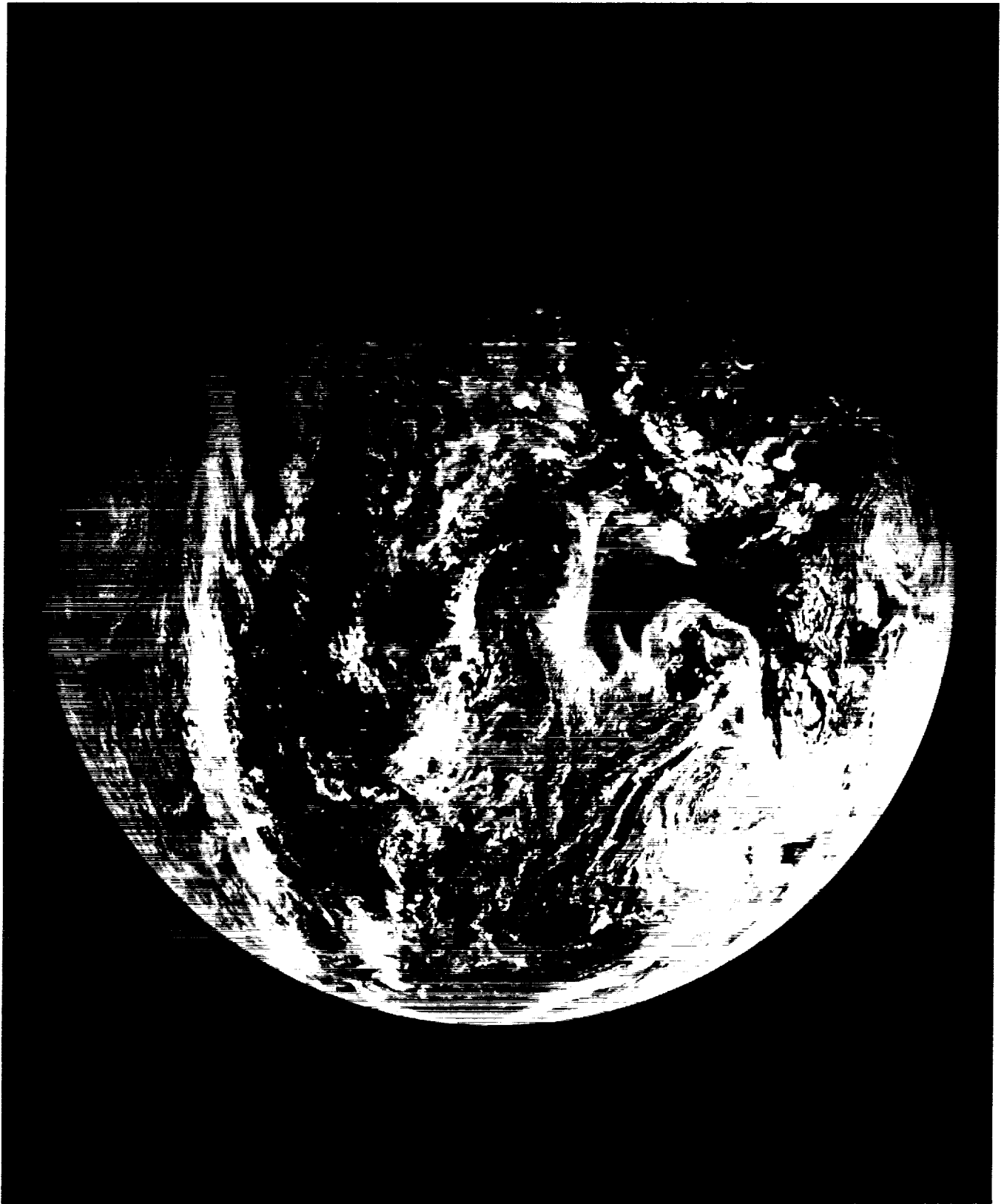
The CSM docked with the LM at 128:03:40 GET. The crew transferred the film, lunar samples, and Solar Wind Composition Experiment to the CSM, closed out the LM and entered the CSM. The LM ascent stage was jettisoned 2 hours early at 130:09:31 GET. The CSM performed an SM RCS separation of 2 fps at 130:30 resulting in an CSM orbit of 62.6 by 54.7 nm. The LM was left in HBR operating on the steerable antenna



Earth Rise And LM Approaching CSM During Rendezvous



CSM Ready For Docking



Earth

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and continued transmitting data until attitude was lost due to PGNS failure, causing the LM to stray off the steerable antenna boresight at 137:54:44 GET.

At 135:23:42 GET, the SPS was used to perform the TEI maneuver injecting the CSM into transEarth trajectory after a total time of 59:28 (30 revolutions) in lunar orbit. The maneuver lasted 151.4 seconds, resulting in a velocity change of 3279 fps. At 165:28 GET, the CSM weighed 26,000 lbs, was traveling 4900 fps, and was 130,300 nm from Earth.

At 148:07:22 GET, Apollo 11 was 33,800 nm from the Moon and passed into the Earth's sphere of influence. The distance from the Earth was 174,000 nm and the velocity was 3,994 fps with respect to the Earth.

The MCC-5 was initiated at 150:30 GET. The 11.2 second SM RCS burn produced a velocity change of 4.8 fps. At 165:28 GET, the spacecraft was traveling 4,900 fps and was 130,000 nm from the Earth. MCC-6 and MCC-7 maneuvers were not required.

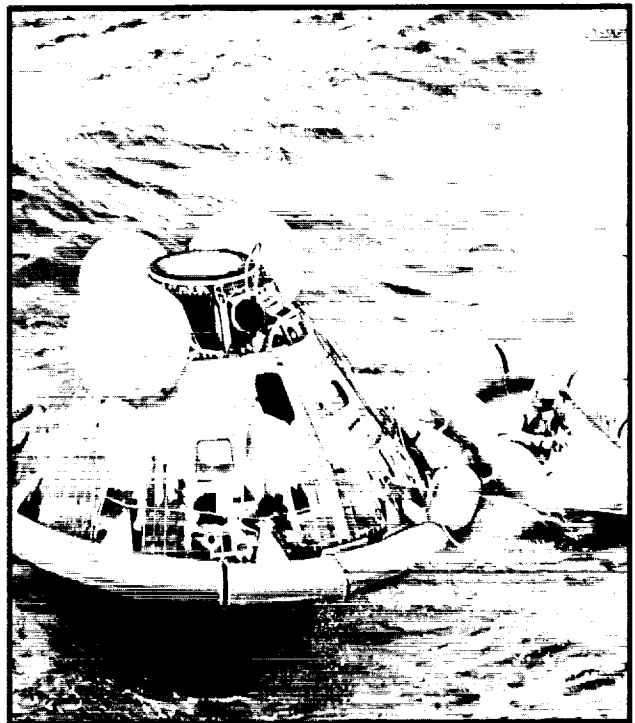
An 18-minute TV transmission was initiated at 155:36 GET, featuring the crew demonstrations of the effect of weightlessness on food and water plus brief scenes of the Moon and Earth.

At 189:28 GET, the spacecraft was 40,500 nm from Earth and was traveling at 9,735 fps.

CM/SM separation was initiated at 194:49:19 GET. Entry Interface (400K) was at 195:03:06 GET, the predicted flight path angle was -6.48 degrees, and the entry velocity was 36,194 fps.

The weather in the prime landing area was excellent, visibility was 12 miles, wave height 3 feet and wind was 16 knots.

Visual contact of the spacecraft was reported at 195:06 GET. Drogue and main chutes deployed normally.



#### Welcome Home

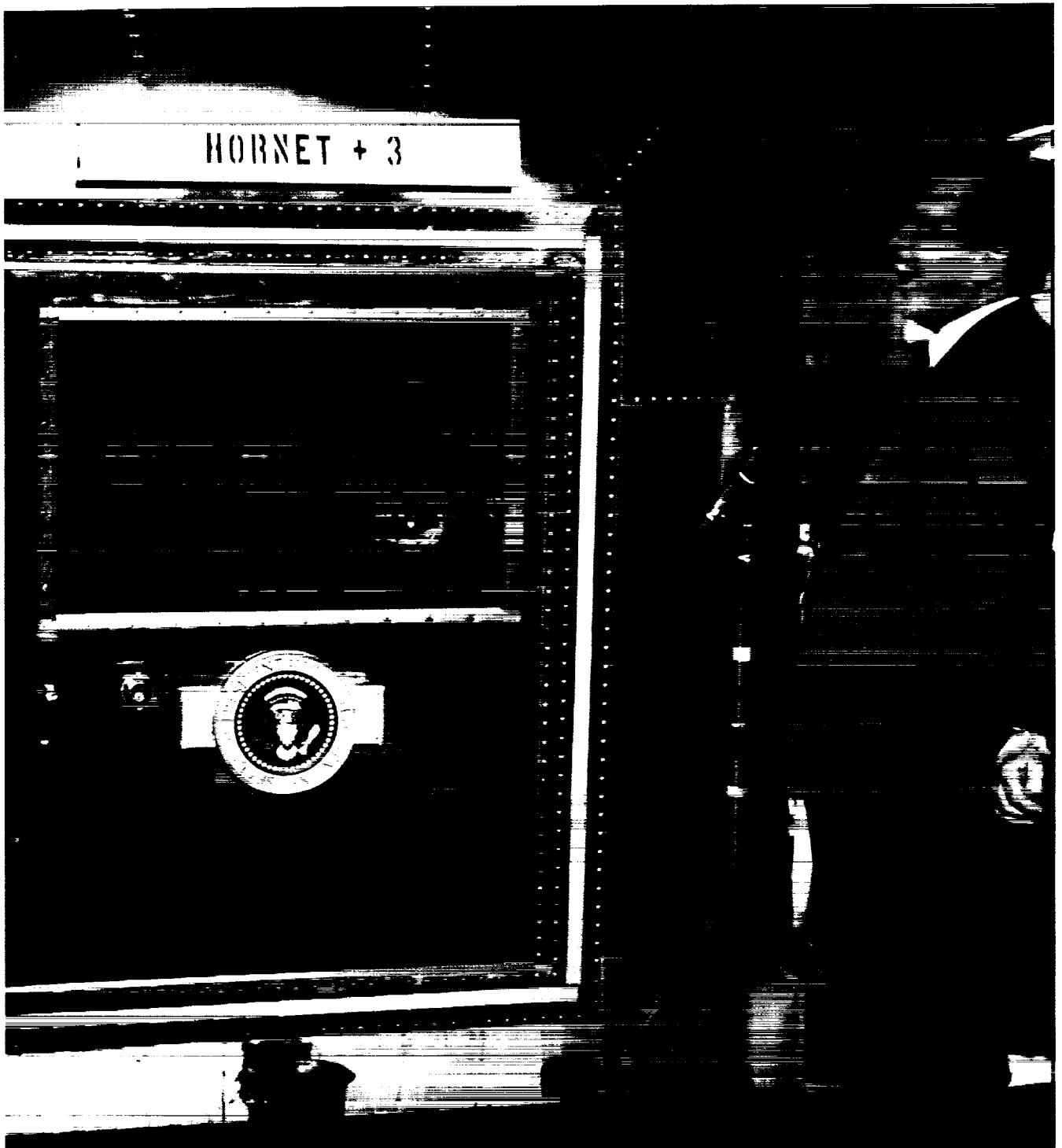
Splashdown occurred about 14 minutes after Entry Interface (EI) at 195:18:35 GET (11:50 CDT). The landing point was in mid-Pacific, approximately 169:09W and 12:18N, about 13 miles from the prime recovery ship USS Hornet. The CM landed in stable 2 (nose down) position. Flotation bags were deployed to right the CM into stable 1 position at 195:25:10 GET. The crew reported that they were in good condition.

The recovery helicopter dropped swimmers who installed the flotation collar to the CM. A 7-man raft was deployed and attached to the flotation collar. Biological Isolation Garments (BIG's) were lowered to the raft and one swimmer donned a BIG while the astronauts donned BIG's in the CM. The astronauts egressed and assisted the swimmer in closing the CM hatch. The swimmer then decontaminated all garments, the hatch area, the collar and the area around the post landing vent valves.

The helicopter recovered the astronauts. After landing on the recovery carrier, the astronauts and a

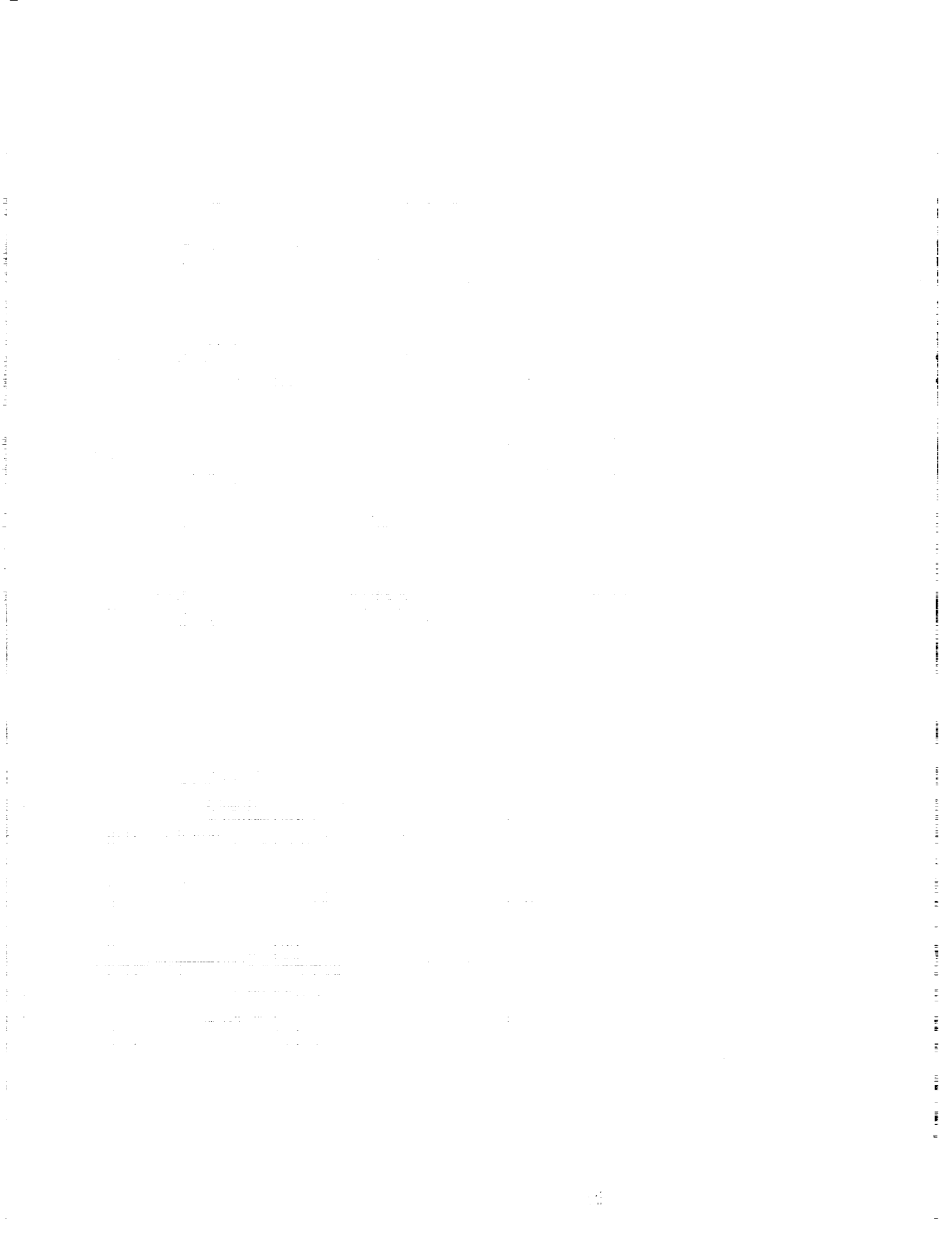
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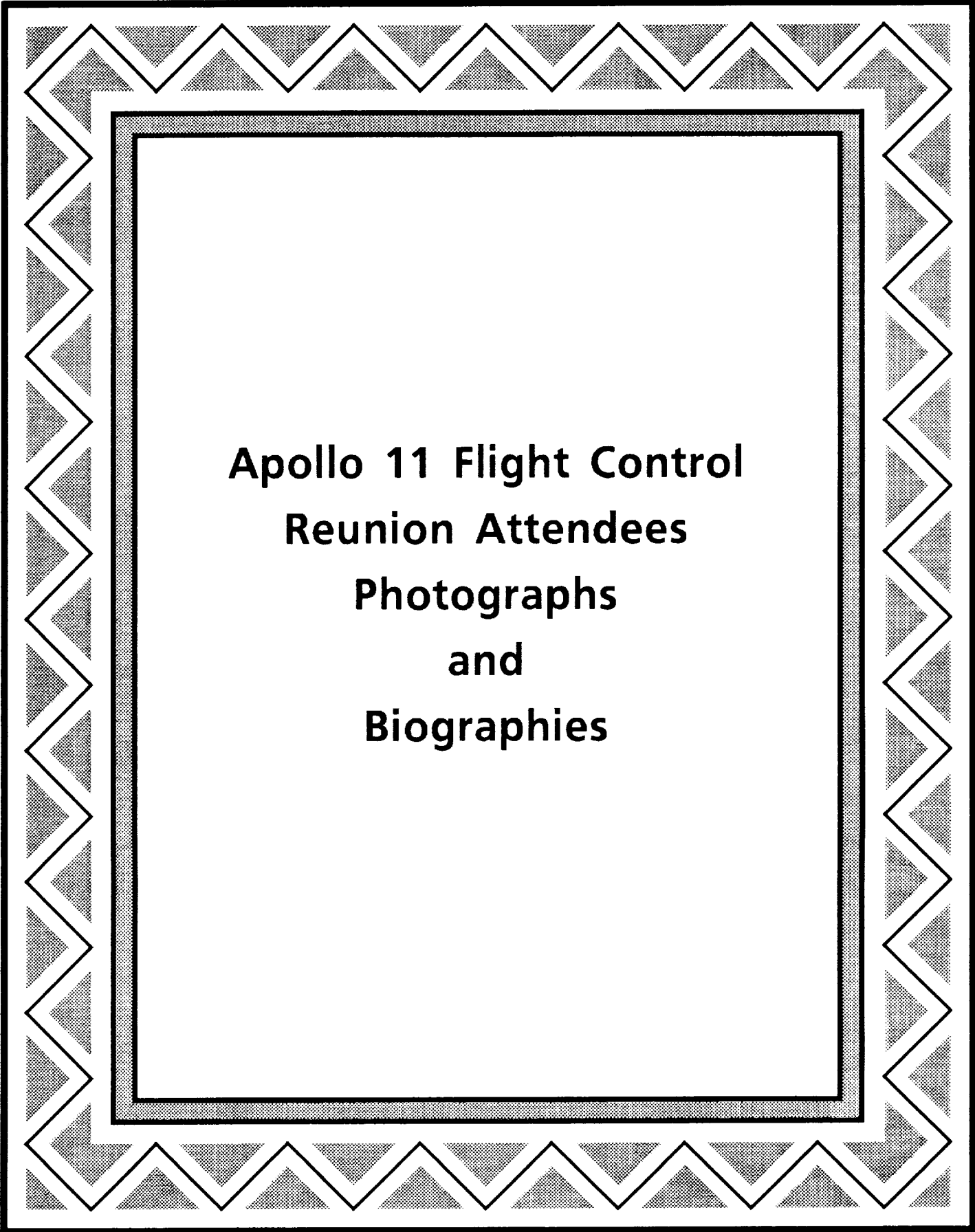




President Nixon Congratulates The Apollo 11 Success

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**Apollo 11 Flight Control  
Reunion Attendees  
Photographs  
and  
Biographies**

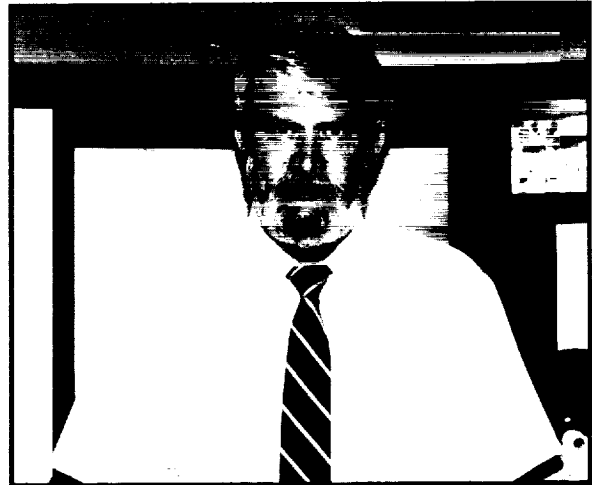






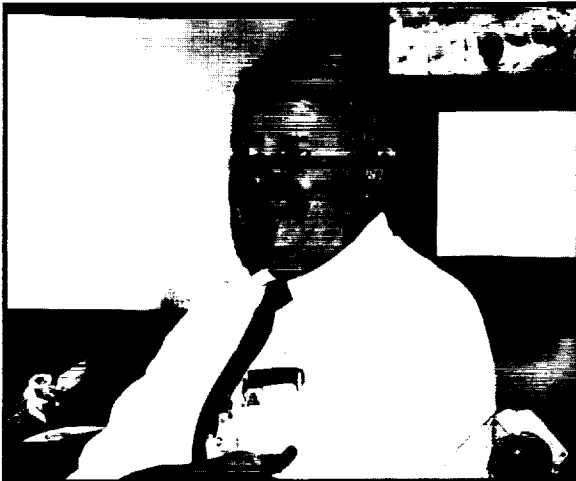
Carl E. Amos and Karen J.  
N17694 Barnes Lake Road  
Dunbar, WI 54119 (715) 324-5336

*I really thought landing on the moon would be impossible. For Apollo-11, I supported the MSFC Flight Control Office. I'm presently retired.*



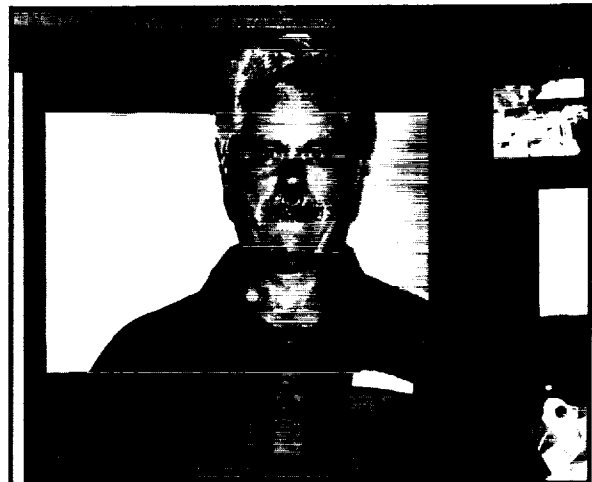
Lawrence L. D. Armstrong  
Route 5 Box 548  
Alvin, TX 77511 (713) 331-0909

*I had a real feeling of pride and of being a small part of history, when I supported Apollo 11 in the MOCR as an Operations and Procedures Officer. Now I'm an engineering consultant still in the space business working for Scitor Corp.*



David A. Ballard  
2006 Willow Wisp Dr.  
Seabrook TX 77586 (713) 474-3401  
(713) 483-3523

*I remember the Apollo-11 landing the most, of course! I was part of LM Crew Integration and now I'm a payloads project engineer with Aerospace Corporation.*



George M. Barbehenn  
1626 Angus Court  
Crofton, MD 21114 (301) 721-2893

*During Apollo-11, I was an USB supervisor in Madrid, Spain. Today I support Hubble Space Telescope as a systems engineer.*

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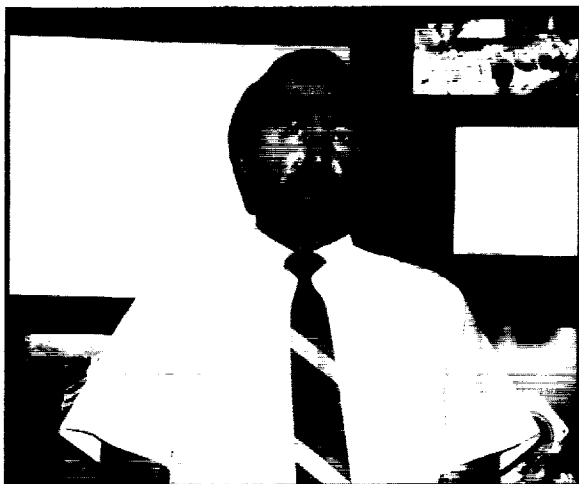
James R. Bates  
 10610 Sageburrow  
 Houston, TX 77089 (713) 944-4687

*After the landing, when I was leaving the night shift in MCC, I remember looking up at the moon and realized that there were two people on the moon. I was on a console that monitored the space radiation environment. Now I'm a Flight Integration Manager in the NSTS (Shuttle) Program Office.*



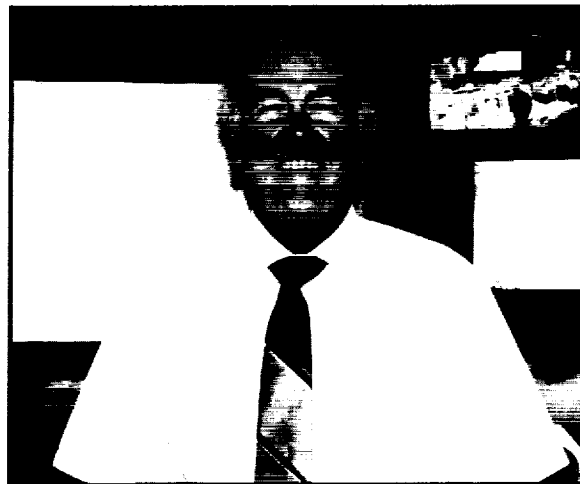
William V. Bates, Jr.  
 11331 Sageburrow Dr.  
 Houston, TX 77089 (713) 481-0707

*I remember being locked out of the MCC during landing! I remember tension during first EVA. I supported TELCOM as PLSS-1 (Portable Life Support System-1) during the EVA. Now I'm the Avionics Systems Safety Branch Chief.*



Robert (Bob) W. Becker  
 10318 Ney  
 Houston, TX 77034 (713) 944-5118

*I remember lots of hard work, long hours and a "Big Success". Also, I was glad that we never had to utilize my particular skills in LM abort and CSM rescue other than nominal operations. I provided real time support from the Flight Dynamics SSR.*



Floyd V. Bennett  
 1207 Woodland Dr.  
 Seabrook, TX 77586 (713)326-4100

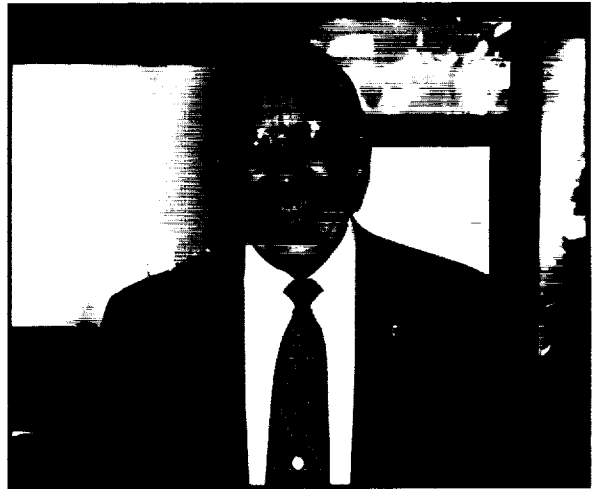
*Apollo was the dream come true for me. I supported Mission Planning for Lunar Module Descent and Ascent. I've retired from NASA and work for Rockwell in JSC Shuttle Engineering Integration Support.*

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Richard B. Benson Jr.  
11402 Sagetown Dr.  
Houston, TX 77089 (713) 481-0126

*I remember Armstrong's first step on the moon and the footprint. I supported CSM G&C in the SSR. Now I am doing crew training.*



Charles A. "Chuck" Berry M.D.  
10777 Westheimer Rd., Suite 935  
Houston, TX 77042 (713) 978-7755

*I had to qualify the crew and then had to conduct the quarantine, when I was JSC Director Medical Operations, and "Surgeon" in MCC. Now I consult in Practice of Preventive and Aerospace Medicine.*



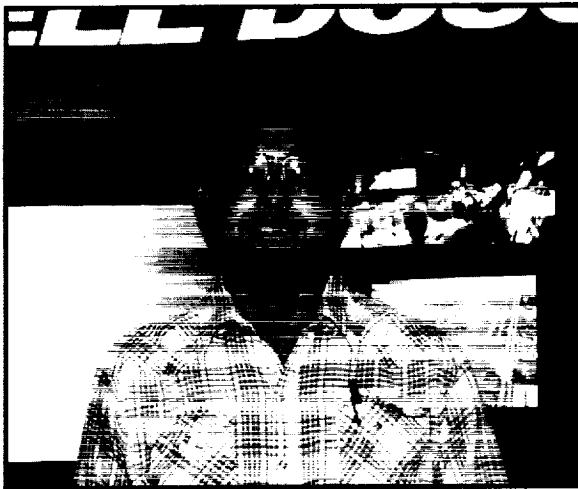
Charles A. Biggs  
5802 Lucy Lane  
Pasadena, TX 77505 (713) 487-2978  
(713)483-5111

*I remember that we actually did it! I worked on the Public Affairs console. Now I'm Chief of Public Services Branch, JSC.*



James W. Bilodeau  
308 North Shadowbend  
Friendswood, TX 77546 (713) 482-7990

*The LM landing and the moon walk are what I remember when I worked on the Flight Plan and the Launch Abort Procedures. Now I'm a consulting engineer for Eagle Engineering.*



John D. Blalock  
 4506 N. Heron  
 Seabrook, TX 77586 (713) 474-4704

*The execution of the Flight was perfect. Following splashdown, I paused to realize that I had participated and was a part of the most incredible, significant event in modern times. I was a simulation coordinator for Apollo 11. I was in the Mission Simulation Branch, Flight Control Division. I am on the Directorate Staff of SR&QA, Manager, Space Station Projects.*



James E. Bodmer  
 2018 Fairfield CT. N.  
 League City, TX (713) 554-2782

*I remember the landing on the moon. I was a Mission Requirements Controller. Now I am working on the Instrument Pointing System.*



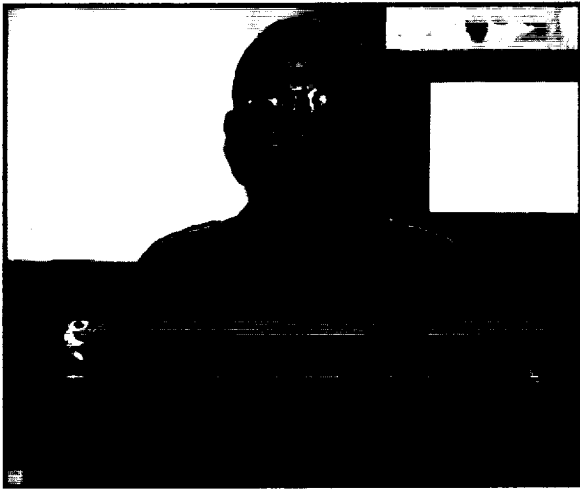
Al Bond  
 2920 Creckbend Dr.  
 Texas 75075 (214) 596-9624

*I remember the landing the most. I supported PAO in building #30. Currently I am a manager of Business Television for Texas Instruments.*



Bill Boone  
 1418 Chandler Rd, SE  
 Huntsville, AL 35801 (205) 882-9354 (H)  
 (205) 830-9200 (W)

*There was tenseness, anticipation, exhaustion and exhilaration . . . how can it be any better? I was a Flight Dynamics Officer. Currently I represent Martin Marietta Corp. in Huntsville, AL to (MSFC) - responsible for NASA programs.*



Arthur R. Booth  
Route 2, Box 183  
Smithville, TX 78957 (512) 237-4150

*I remember the landing on the moon. I was production controller who had the M.E.T.S. manufactured and many other items of space hardware on Apollo 11 vehicles and completed many phases of hardware testing. Now I'm retired and ranching.*



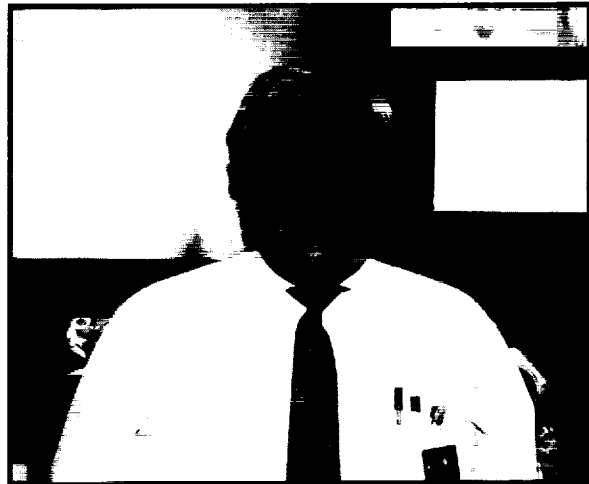
D. Lucille Booth  
Route 2, Box 183  
Smithville, TX 78957 (512) 237-4150

*I remember the landing; those heart rendering moments we awaited the guys communicating with CapCom and we knew they were ok. We did it! I was secretarial support. Now I am retired to a ranch and we love it!*



Jerry C. Bostick  
4335 Long Grove  
Seabrook, TX 77586 (713) 532-3380

*I remember the last 30 seconds prior to lunar landing. I was a Flight Dynamics Officer. Now I am Vice President of Grumman Space Systems.*



Donald J. Bourque  
10454 Quiet Hill  
LaPorte TX 77571 (713) 471-1466

*I felt joy and awe during Apollo-11. I supported Landing and Recovery during the mission. Currently I am NSTS Support Office Chief for FCOD.*



Robert L. Carlton  
2 Bay Harbor  
LaPorte, TX 77571 (713) 471-4539

*I remember the landing and the MCC Team times together. I supported as LM "Control" flight controller during powered descent. Currently I am retired.*



William R. Carpentier  
2621 Brooklawn  
Temple, TX 76502 (817) 773-1057

*During Apollo 11, I was a Crew Flight Surgeon. Now I am Director for the Division of Nuclear Medicine at the Scott and White Clinic at Temple, Texas.*



Earl V. Carr  
2316 Gemini Ave.  
Houston, TX 77058 (713) 488-2190

*I remember the culmination of Apollo-11 most. I was a Network Controller for the flight. I am currently working on the PSC Space Station Contract.*



Fred Cerkan  
16003 Stonehaven  
Houston, TX 77059 (713) 488-7351

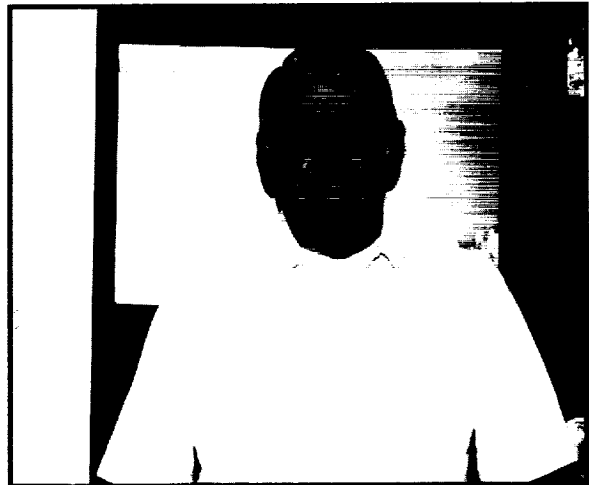
*I remember each event occurred on schedule, and there was jubilation of the successes. I worked on post flight analyses of vehicle dynamics. Now I work on GN&C Software Verification.*

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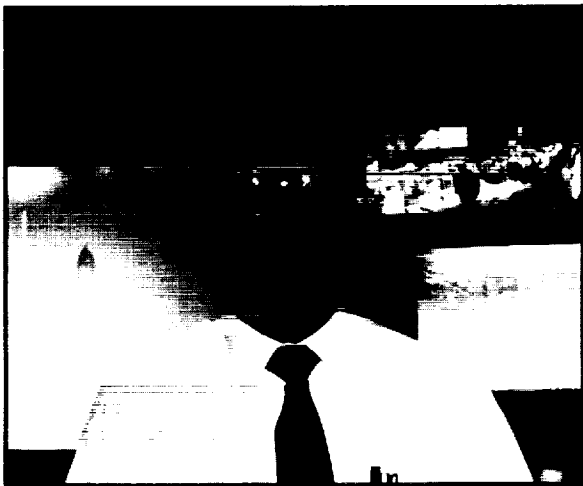
J. T. Chapman  
15503 Baybrook Dr.  
Houston, TX 77062 (713) 488-3452

*I remember the "first step" on the moon. I supported in the Recovery Operations Control Room. Now I am working in Project Management for Space Station.*



C. E. Charlesworth  
904 Riverside Ct.  
Friendswood, TX 77546 (713) 482-7107

*I remember the drama of the landing phase and the worldwide attention and interest. I was a Flight Director at the time. Now I am retired.*



W. R. Chase  
418 Bayou View  
Seabrook, TX 77586 (713) 326-1286

*I was at the end of mission point (Pacific Ocean) and the team leader to the 76th Air Rescue Service at Hickam Field, Hawaii. I was flying overhead of the Navy carrier in a C-130 Aircraft if rescue was required. Now I'm Assistant to Director of Mission Support Directorate for STS Project.*



Eugene Chmielewski  
15602 Thunderbay  
Houston, TX 77062 (713) 488-1786

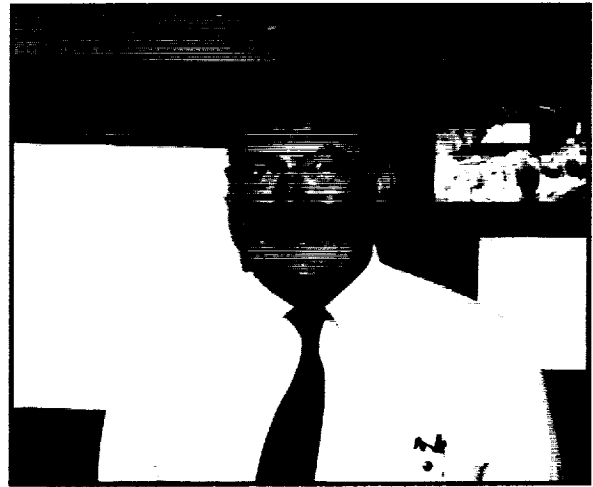
*I remember the lunar landing. On the mission I supported Simulations. Now I am a Simulations Equipment Engineering Manager at Bendix.*

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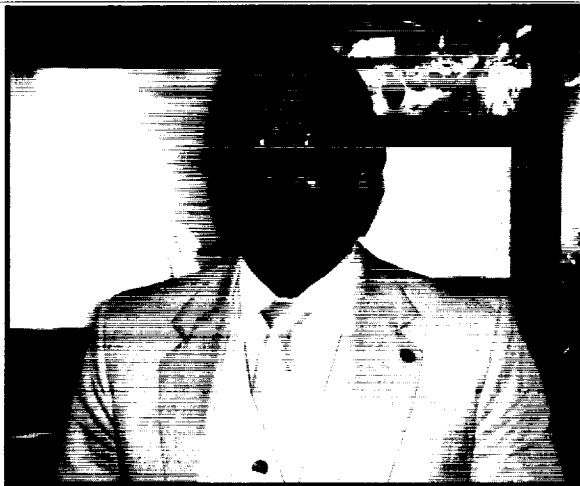
Gary Coen  
 1503 Blairmont  
 Houston, TX 77062 (713) 488-8286

*I remember working the console during Apollo-11. I supported as GNC. Currently I am a Shuttle Flight Director.*



Julius Conditt  
 Box 57566  
 Webster, TX (713) 481-4867

*I remember the EVA during Apollo 11. I supported as Real Time Command (RTC). Now I am a Ground Controller (GC).*



B. C. Conner  
 15703 El Camino  
 Houston, TX 77062 (713) 486-4789

*I remember handing over Goldstone to Madrid S-Band Carrier during landing, the GDS antenna failed! And I held my breath during final landing phase of LM which landed with 8-10 seconds of descent fuel. I was a Real Time Controller (RTC) in command for lunar landing. Now I'm a manager for Ground Control and Requirements.*



George Contois  
 6712 McDonough Terr  
 Bowie, MD 20715 (301) 464-1420

*The people were dedicated, top notch. It was the most spectacular space event of all time. I supported the LM/ALSEP. Now I'm a manager for Business Development NASA Programs at General Electric Aerospace.*

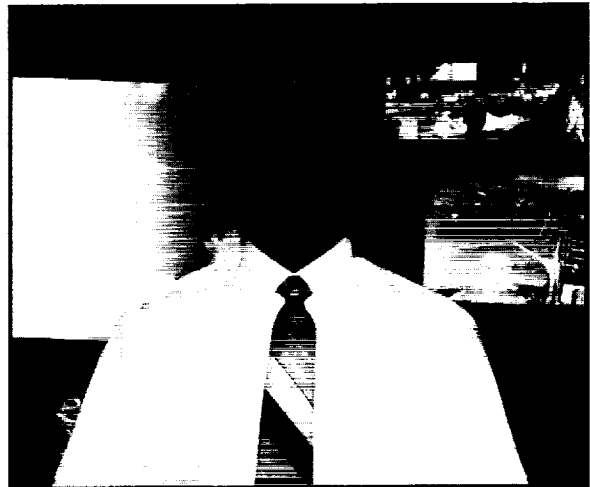
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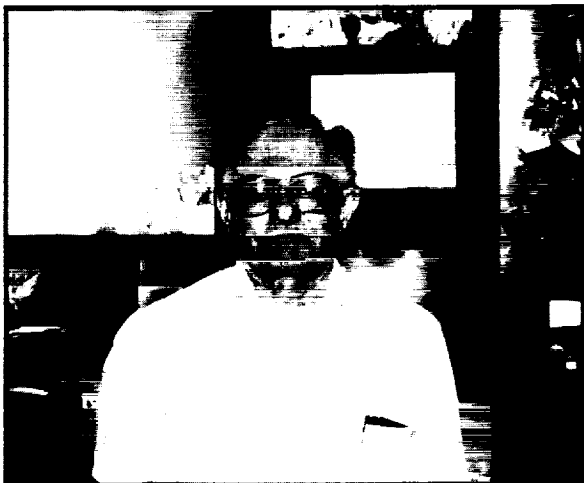
George W. Conway  
1214 Valerie  
Pasadena, TX 77052 (718) 473-2154

*I remember the words Armstrong spoke as he stepped down on the moon when I supported the Command Module as an ECS engineer. Currently I'm working on Space Shuttle Operations for RSOC.*



James O. "Spud" Covington  
1218 Portola Ave, #B  
Torrance, CA 90501 (213) 328-6267

*I remember looking up at the moon when I left the MCC after EVA in the middle of the night. I was a Lead Operations and Procedures Officer. Now I am in Mission Operations with Aerospace Corp. at Space Systems Division in El Segundo, CA.*



Philip R. Dasch  
S. 8900 Mullen Hill Road, #629  
Spokane, WA 99204 (509) 448-2973

*I remember the lunar liftoff and ascent and I was involved with LM Systems Simulations and Training. Currently I am retired and taking it easy in Spokane.*



Bill (W. L.) Davidson  
18647 Martinique  
Houston, TX 77058 (713) 333-5611

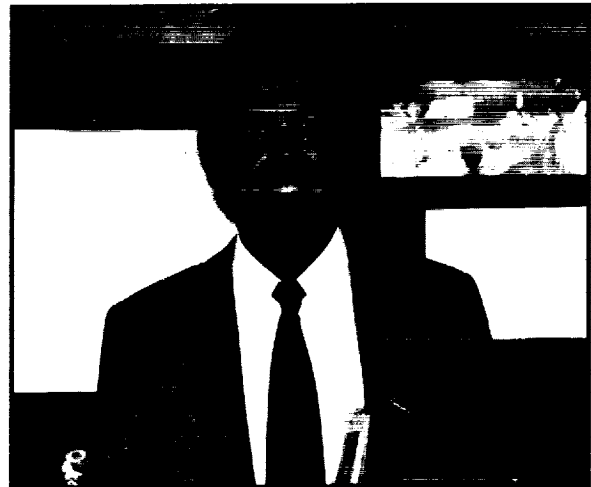
*I remember the lunar touchdown. I supported Initial Concept Planning. Now I am working for Eagle Engineering, Inc. as a consulting associate for current and future programs.*

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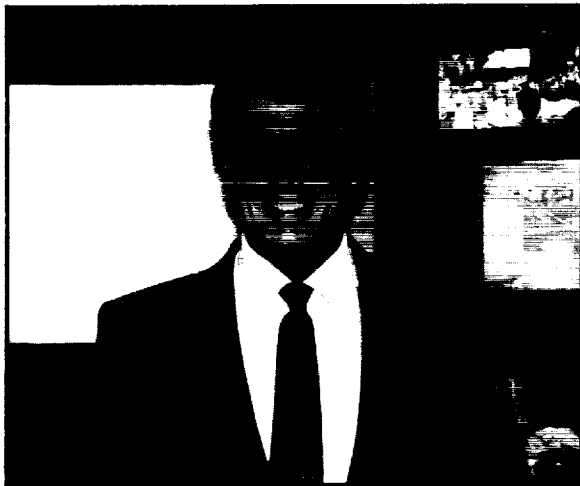
William R. Davidson  
4306 Lucian Lane  
Friendswood, TX 77456 (713) 482-5464

*I remember the Dash-1 Simulations of Apollo-11. I was a backup "Booster" on the Attitude Control console. Now I am working for McDonnell Douglas in support to JSC.*



Larry D. Davis  
11463 Sagestanley  
Houston, TX 77089 (713) 481-3161

*In Apollo-11, I remember being part of a highly successful team, being a part of history, and having lots fun - it wasn't "a job". I was Trajectory Support Chief. Now I head the Flight Design Manager Office for JSC in Houston.*



Ron D. Davis  
33 Windsong  
Friendswood, TX 77546 (713) 482-5952

*I remember the Apollo-11 mission being extremely suspenseful, gratifying and I felt proud. I was an Assistant Trajectory Support Chief. Now I'm in the Shuttle Project Office.*



Joe DeAtkine  
2023 Bonanza (713) 488-3866 (H)  
Houston, TX 77062 (713) 483-1057 (W)

*I thought with all those alarms we weren't going to make it. I was supporting as CSM-INCO for the mission. Currently I'm in the MOD/Schedules and Flow Office.*

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Charles F. Deiterich  
301 Winding Road  
Friendswood TX 77546(713) 482-1859

*I remember that the descent comm was poor and we closed out LM early and had to jettison it early prior to TEI. I was lead RETRO on console in MCC for Descent and Trans Earth Injection. Now I'm Deputy Division Chief for Flight Design and Dynamics Division.*



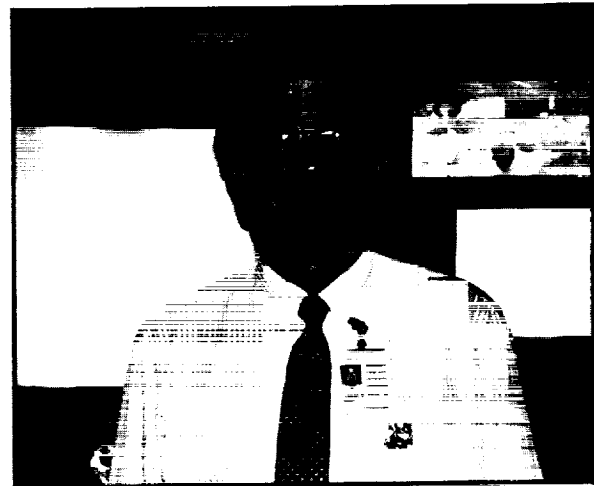
Frank Digenova  
2011 Reseda Dr.  
Houston, TX 77062 (713) 483-1550

*I remember all the major milestones and then finally the splashdown. I supported the CSM G&C in the SSR. Now I'm a Rockwell supervisor Shuttle G&C.*



Connie Dunaway  
1504 Sheridan  
Pasadena, TX 77052 (713) 472-5618

*I was secretary during the Apollo-11 mission. Currently I am a senior secretary in MOD.*



George M. Egan, Jr.  
695 Pineloch Dr., #1304  
Houston, TX 77598 (713) 486-3968

*I remember the the MCC countdown for Apollo-11 because I wrote it. During the mission I was a Network Controller. Now I am supporting as a MCC GDSM (Ground Data Systems Manager).*

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Harold F. Epps  
1201 East Arapho Road  
Richardson, TX 75081 (214) 301-7933

*During the Apollo-11 mission I was a comm manager for Maintenance and Operations. Currently I am Program Manager for Northern TeleCom Communications System for the Federal Government worldwide.*



Stanley Faber  
508 N. Shadowbend  
Friendswood, TX 77546 (713) 482-7877

*No one thing stands out from the Apollo-11 mission. It was too large an event to have one item stand out. I supported Chief Simulation Branch in Configuration, Operations and Training. Now I'm a Project Engineer with Aerospace Corp doing Payload Integration.*



Ed Fendel  
2110 Augusta Drive  
League City, Tx 77573 (713) 538-1147

*During Apollo 11, I supported as INCO. Currently I'm doing consulting work.*



William E. Fenner  
609 Fairdale  
Friendswood, TX 77546 (713) 482-7170

*The thing I remember most about Apollo-11 was the ascent from moon. I was a Guidance Officer during the mission. Currently I am working on Astro I (IPS).*

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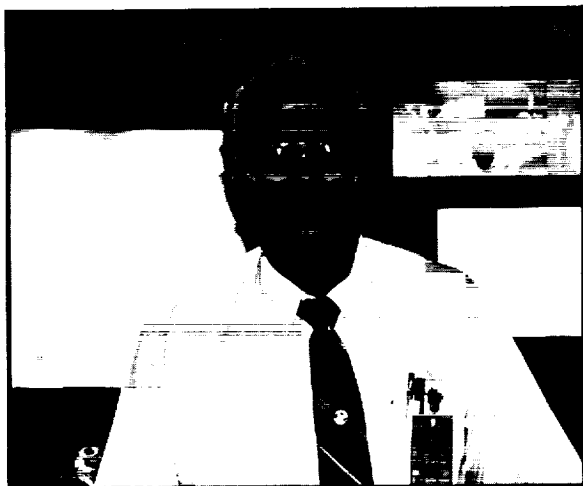
Gordon M. Ferguson  
2002 Redway Lane  
Houston, TX 77062 (713) 488-2329

*I supported Simulations and Training for the Apollo-11 mission. Now I am working in aerospace operations.*



Craig L. Fischer, M.D.  
45-800 Cholame  
Indian Wells, CA 92210 (619) 347-2082

*I remember the lunar landing. I was a surgeon in the Crew Reception Area. Currently I practice pathology at JFK Memorial Hospital, Indio, California.*



Vincent A. Fleming  
610 Rancho Los Nogales  
Covina, CA 91724 (818) 331-6531 (H)  
(213) 922-4519 (W)

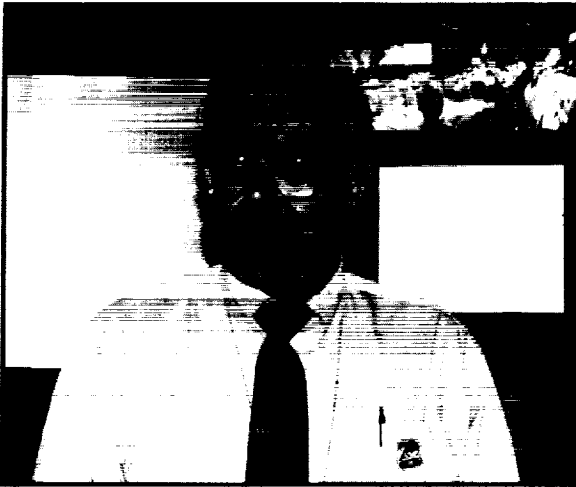
*During Apollo-11 I supported as LM Prop Consumables. Now I support MOD at Rockwell in Downey.*



Fred A. Frere  
16663 Kentwood Dr.  
Houston, TX 77058 (713) 486-9192

*I remember LM docking with the CM on return from the moon. I supported as LM ECS during EVA. Currently I am in the Crew Integration Office, FCOD.*

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Verlin Fox  
11510 Sagedowne  
Houston, TX 77089 (713) 481-9523

*I remember the excitement and anticipation of being a part of this great achievement. I supported Air/Ground Voice Communications. Now I work with A/G Comm Tech Voice Communication.*



Jim Fucci  
40 Desert Inn Way  
Colorado Springs, CO 80921 (719) 488-0623

*I remember Apollo-11 as the first Lunar Landing, the "first small step for man" and the first "big drink for mankind". I supported the mission as an INCO. Now I am working in the Program Office of the Colorado Springs Division - Ford.*



Hector Garcia Jr.  
18311 Kings Row  
Houston, TX 77058 (713) 333-4465

*I remember Neil Armstrong's first step on the moon the most. I was manning the Trajectory Support Console in the FD MPSR. Now I am working with RSOC in Flight Design - Descent. I am the supervisor of the Mission Support Unit.*



Spencer H. Gardner  
333 Clay Street, Suite 3800  
Houston, TX 77002 (713) 751-0222 (W)  
(713) 669-0900 (H)

*I remember the numerous trips on the "red-eye special" between Houston for MOCR sims and the Cape for work on the FDF, and the absolute intensity of everyone - the concentration and dedication of the entire team. I was a Flight Activities Officer. Now I'm attorney in private practice.*



John R. Garman  
 16330 Laurelfeld Dr.  
 Houston, TX 77059 (713) 488-1411

*I remember the landing and the LGC program alarms. I was on the AGC Support Console in the Flight Dynamics SSR. Now I am on the MSD directorate staff (Assoc. Director I/S Planning) at NASA/JSC.*



Sutton L. Graham  
 P. O. Box 58621  
 Houston, TX 77258 (713) 334-3320 (H)  
 (713) 282-2810 (W)

*I remember the lunar landing and walk. I was a Booster Flight Controller/Consumables. Currently I am supporting the Space Shuttle Program, Director Operations Requirements, STSOC.*



Carl C. Granstrom  
 1915 Silver Bank Ct.  
 Nassau Bay, TX (713) 333-2842

*I remember waiting for successful liftoff. I supported LM Descent Guidance and Retargeting. Currently I am supporting AASC System Engineering and Integration for McDonnell Douglas - Engineering Services Division.*



P. A. Green  
 1355 Butter Churn Dr.  
 Herndon, VA 22070 (713) 444-6697

*I remember the final "go" for Trans Lunar Injection. I was Booster Consumables in the SSR. Currently I am Manager for Space Station Program Support Contract for Barrios Technology.*

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Jay H. Greene  
16502 Craighurst  
Houston, TX 77054 (713) 488-2231

*I supported as Descent FDO during Apollo-11. Now I am a Deputy Manager in the NSTS Program.*



Marion F. Griffin  
938 Oak Grove St.  
LaPorte, TX 77571 (713) 471-4439

*I remember the Apollo-11 Lunar Landing. For the mission I calculated attitudes to point cameras for lunar landing strip photography along with image motion compensation settings. Now I calculate attitudes for Space Shuttle and payloads - specifically IBSS.*



Charles R. (Chuck) Gruby  
3010 Bayou Dr.  
LaPorte, TX 77571 (713) 470-2074

*I remember the feeling of awe when looking at the moon after shift change and realizing that we had just landed two men at the terminator. I was a LM Primary G&C Systems Engineer, supporting CONTROL. Now I'm in Flight Director Office Support.*



Ted A Guillory  
2023 Spring Field Road  
Houston, TX 77062 (713) 480-2367

*During Apollo-11 I was lead Flight Planner and Flight Activity Officer. Now I'm Deputy Office Chief in the MOD Space Station Operations Office.*

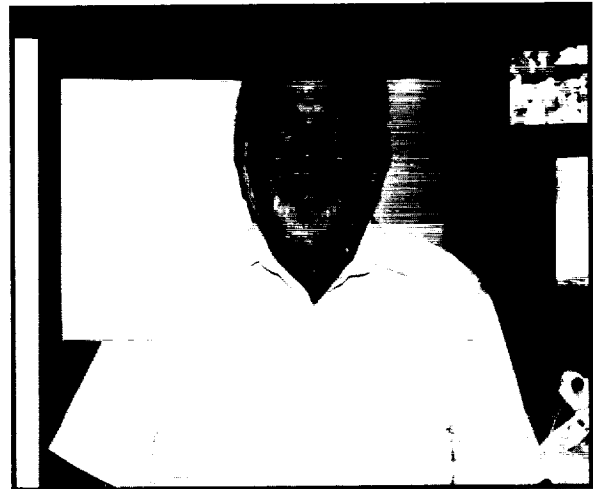
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John R. Gurley  
 1324 Plantation Drive  
 Dickinson, TX 77539 (713) 282-7421

*I remember in being in the MCC for the landing. I was an SSR/MPAD Rep. Now I am working for IBM.*



Robert (Bob) Hahn  
 910 Morningside Ct.  
 Friendswood, TX 77546 (713) 482-1827 (H)  
 (713) 483-8995 (W)

*I remember EVA. I was a Biomedical Engineer in the Aeromed SSR. Now I am a Reliability Engineer in Life Sciences Payloads for Boeing/JSC.*



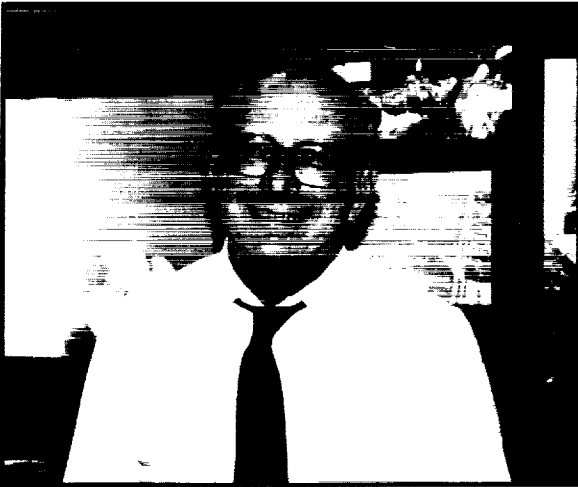
K. E. Haithecoat  
 5105 Captains Dr.  
 Dickinson, TX 77539 (713) 337-3023

*During Apollo-11 I supported CSM EECOM as ECLSS. Now I am working in Space Station Design.*



Jerry Hammack  
 126 Pine Shadows Dr.  
 Seabrook, TX 77586 (713) 326-2986

*I remember when we recovered the crew onboard the Hornet. I was in Recovery - in the Recovery Ops Room and on ship. Currently I'm an engineering manager with Hernandez Engineering, Inc.*



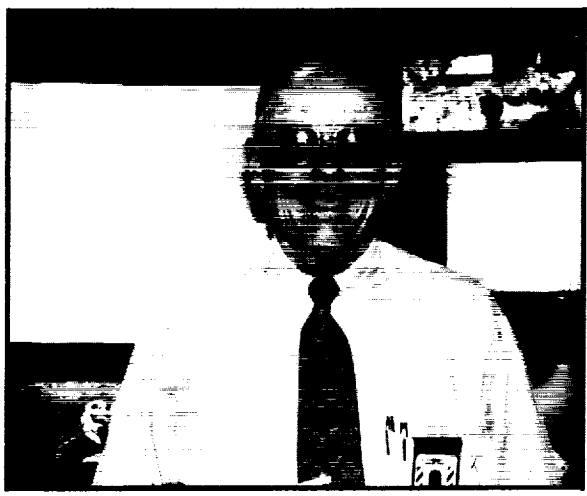
Vernon C. Hammersley  
P. O. Box 1428  
Friendswood, TX 77546 (713) 482-2231  
(713) 483-5970

*I remember watching the ascent from the Lunar surface. I provided support to the LM mockup in bldg. 5. Currently I am a Chief for Facilities Operations Branch/Man-Systems Division.*



Thomas L. Hanchett  
15406 Tadworth Drive  
Houston, TX 77062 (713) 480-0526

*I remember being part of the Flight Control Team. I was CSM Comm Officer in MOCR (INCO). Now I work on Shuttle Payload Integration.*



James E. Hannigan  
1100 Shady Oak Drive  
Dickinson, Tx 77539 (713) 337-7082

*I remember the outstanding performance of my LM and EMU flight controllers. I was Chief, LM Systems Branch (FCD), and was on console in SPAN. I am retired from NASA and with Eagle Technical Services, Inc., supporting Space Station Freedom operations.*



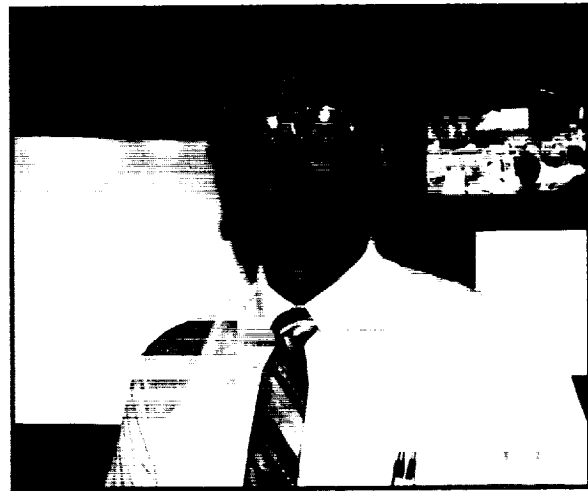
Mike Harrington  
8007 Smokerise Road  
Huntsville, AL 35802 (205) 883-7125

*I remember that we were actually going to do it after all. I was a Booster flight controller for the SIC/SII stages. Currently I am an Operations Office Manager for Space Telescope and AXAF Payloads at MSFC.*



David W. Heath  
 15814 Buccaneer Lane  
 Houston, TX 77062 (713) 488-5496  
 (713) 483-8120

*I remember the splashdown! I was on the Reentry Support Team. Currently I am on SSF Systems Analysis/Resource Utilization Management.*



Don Hill  
 15731 Buccaneer  
 Houston, TX 77062 (713) 488-0333

*I remember thinking what a great feat we had accomplished. I was a Sim Booster. Now I am a supervisor with Rockwell Space Operations Co.*



E. Ray Hischke  
 3809 Savell Drive  
 Baytown, TX (713) 422-0502

*I remember the landing. I was a Trajectory Support Chief. Currently I am an Assistant Manager for Operations in the Flight Data and Evaluation Office.*



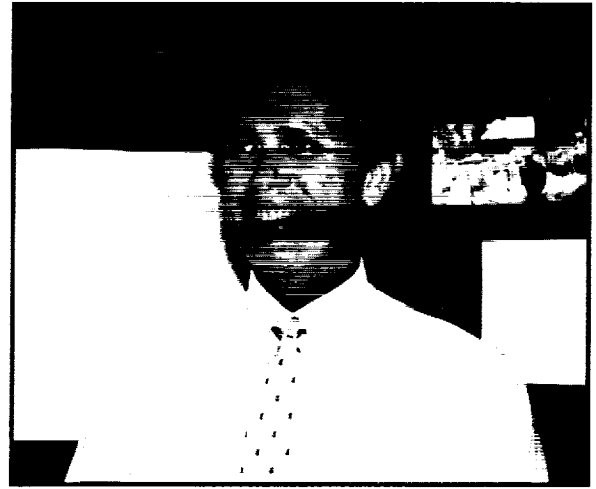
Doyle C. Hodges  
 11010 Sagecanyon  
 Houston, TX 77089 (713) 481-4256

*I remember relief that it was finally happening. I was in the Public Affairs Office/Media Support. Currently I am Theatrical Sound Designer, Engineer.*



David L. Holly  
 1305 Osborne  
 Friendswood, TX 77546 (713) 282-3913

*I remember the landing. I was Rockets Flight Controller on the LLTV. Currently I am a Ground Data Systems Manager (MCC).*



Denny Holt  
 1010 Quaker Bend  
 Friendswood, TX 77546 (713) 482-3149  
 (713) 483-5822 (W)

*I remember the the matter fact approach, there was no question that we were going to make it happen. When you are 24, that's impressive. I was on the Radiation Console - "Space Environment". Currently I'm a Manager in the Operations Integration Office in the Space Station Projects Office - JSC.*



Marshall Horton  
 2022 Park Grand Road  
 Houston, TX 77062 (713) 486-1837

*I remember the lunar landing. I was a Crew System Division Mission Manager. Currently I work for McDonnell Douglas on the Space Station Contract.*



Walter R. Hrab  
 P. O. Box 5388  
 Pasadena, TX 77505 (713) 487-5265

*I remember the descent of Armstrong. I was a Telemetry Instrumentation Controller (TIC). Now I am working for Bendix in Operations.*



Frank E. Hughes  
730 Beachcomber  
Houston, TX 77062 (713) 488-5249

*I remember the sense of unreality then unbelievable pride. I supported the Apollo Crew Training - CSM GNC. Currently I work on Space Station Training Development for MOD.*



Carl R. Huss  
16522 Clearcrest  
Houston, TX 77059 (713) 488-6310

*I remember all the hours spent in Mission Techniques and Flight Operations Panel meetings, and then seeing it all come together in real time and real life. I was in the Flight Dynamics Staff Support Room. Now I am a Senior Staff Manager at McDonnell Douglas.*



James Joki, M.D.  
19401 Richmond Beach N.W.  
Seattle, WA 98177 (207) 362-5654

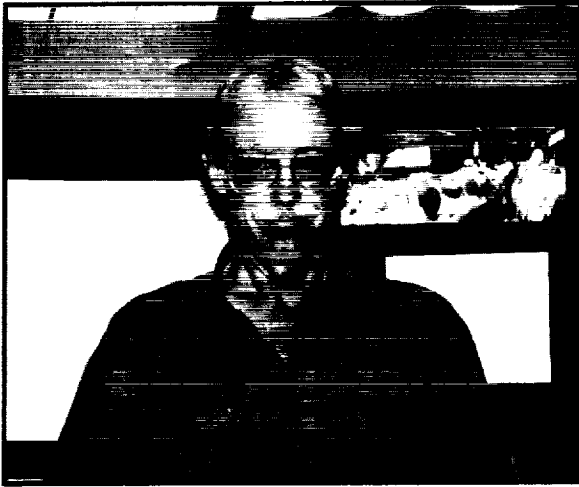
*I remember the excitement, energy, enthusiasm and fun. I was a EMU Flight Controller. Currently I am OB/GYN delivering babies and still working with life support systems.*



Joseph L. James  
1110 Camino Vlg. Dr., #1003  
Houston, TX 77058 (713) 480-8115

*I remember the active participation in the first lunar operations. I was a ALSEP Flight Controller. Presently I am retired and traveling.*

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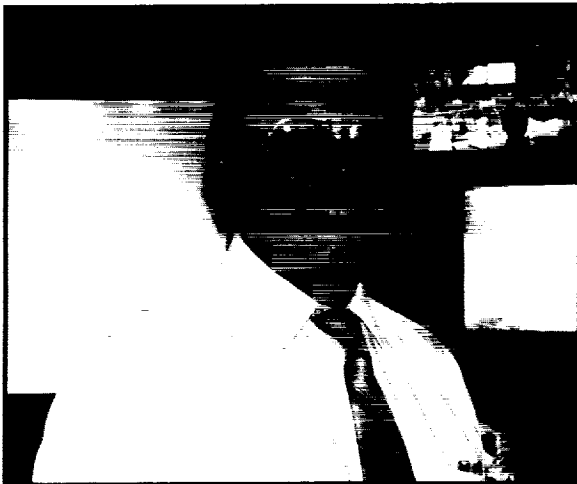
G. W. (Bill) Johnson  
 Flat Rock Crossing  
 Grafard, TX 76045 (817) 664-2167 or  
 (817) 664-5314

*I remember touchdown. I supported PAO-AD. Currently I am ranching.*



Keith L. Jordan  
 15807 Diana Lane  
 Houston, TX 77062 (713) 488-6940

*I remember the crew members and the view of the lunar operations. I supported Crew Procedures/LMPS Development and Operations. Now I am working in simulation development.*



Paul M. Joyce  
 3801 Ram Dr.  
 Dickinson, TX 77539 (713) 534-3397

*I remember the long hours of providing unique training for the Lunar Missions. I supported Lunar Surface Simulation/ALSEP Simulation. Currently I am EECOM/Electrical Systems Section Head for Shuttle.*



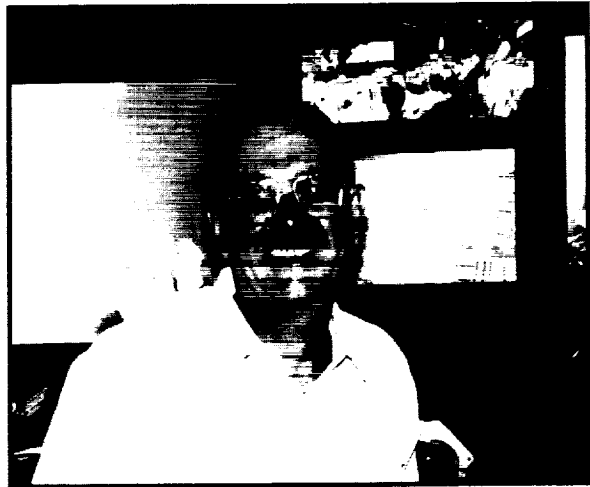
Tom Kaiser  
 15219 Cobre Valley Dr.  
 Houston, TX (713) 488-1192

*I remember walking up to the MCC and looking up at the moon and realizing two men where there "now"! I was GN&C Surface Procedure Checklist manager. Currently I am on Space Station Freedom Training Definition in MOD.*



John (Jack) A. Kamman  
1910 Wavecrest  
Houston, TX 77062 (713) 488-4112

*I remember the great guys I was associated with in the MCC that put together the most memorable week in U.S.A. history. I supported as CSM GNC. Presently I am a GNC Branch Chief.*



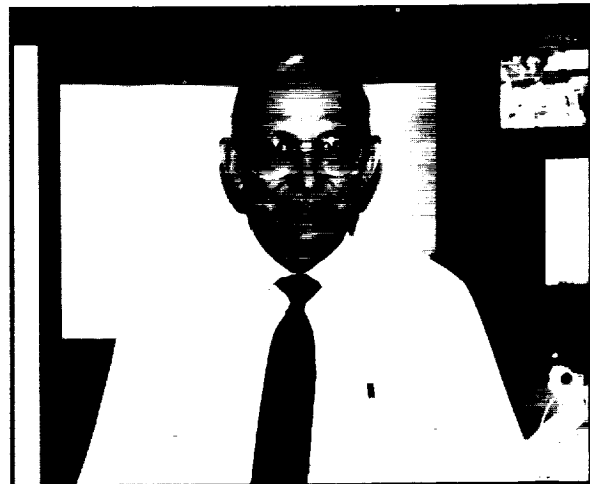
Jim Kelly  
25223 Fox Briar  
Spring, TX 77373 (713) 353-4567

*I remember all of Apollo-11 the most. I supported Flight Operations.*



Maurice G. Kennedy  
15423 Torrey Pines  
Houston, TX 77062 (713) 488-5332

*I remember the challenge of mission and total support to achieve the goal. I was in Flight Dynamics Support. Now I am Chief, Payload Operations Branch for JSC.*



Larry Keyser  
2112 Bay Hill  
League City, TX 77573 (713) 334-3386

*I remember Kranz's composure at touchdown to keep order and not let a celebration begin. I was Assistant Flight Director (Shotgun). Presently I am working at McDonnell Douglas.*



Ramesh Khatri  
16415 Brookford Dr.  
Houston, TX 77059 (713) 483-4460

*I remember everything the most about Apollo-11. I worked at Goddard. Currently I am working in Attitude and Pointing.*



James L. Kitchen  
P. O. Box 890368  
Houston, TX 77289-0368 (409) 935-1225

*I remember the landing. I was in Command Support. Now I am working on Space Station.*



Jack Knight  
15422 Pleasant Valley Road  
Houston, TX 77062 (713) 488-3235

*I remember the landing and EVA. I supported as the Telcom on the first Lunar EVA. Presently I am Chief, Systems Division, MOD.*



Dick Koos  
510 Fairdale  
Friendswood, TX 77546 (713) 482-1769

*I remember the descent and the landing. I was a Simulation Supervisor. Currently I am working with Grumman space Station Program Support.*

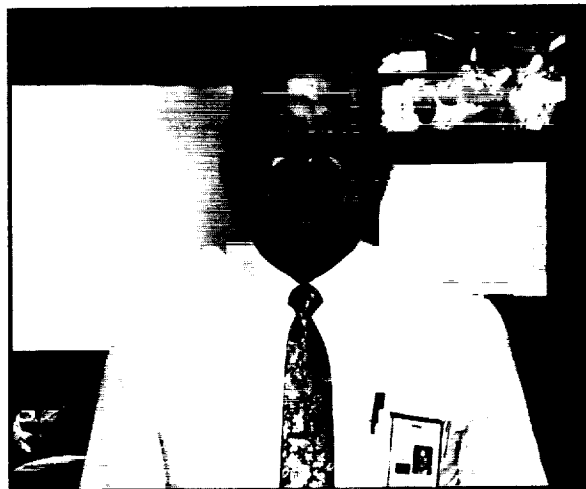
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Eugene F. Kranz  
1108 Shady Oak Drive  
Dickinson, TX 77539 (713) 534-6662

*I remember the people, the dedication of the Simulation Team in getting us ready to fly, Charlie Duke, the best CapCom ever, and the Viewing Room at landing and the few seconds when it became very real. I was Descent Flight Director. Now I am Director of Mission Operations.*



R. W. Kubicki  
11554 Hemingway Dr.  
Reston, VA 22094 (703) 438-5401

*I remember the lunar landing. I was a SPAN Shift #2 Manager. Currently I am with Space Station as a System Engineer Director with Grumman in Reston.*



George Laski  
4522 Albatross Dr.  
Seabrook, TX 77586 (713) 474-2257

*I remember pointing the LM at a star while it was on the surface of the Moon. I supported Flight Crew Experiments, pointing the LM and CM at various celestial, terrestrial and lunar targets. Presently I am retired and looking for a job.*



Joseph A. Lazzaro  
516 Holly Road  
Ft. Washington, MD 20744 (301) 292-1416

*I remember being present in the MOCR during the lunar landing. I was an Operations and Procedures Officer during the mission. Currently I work for Boeing in Washington D.C. as a Defense Programs Executive.*



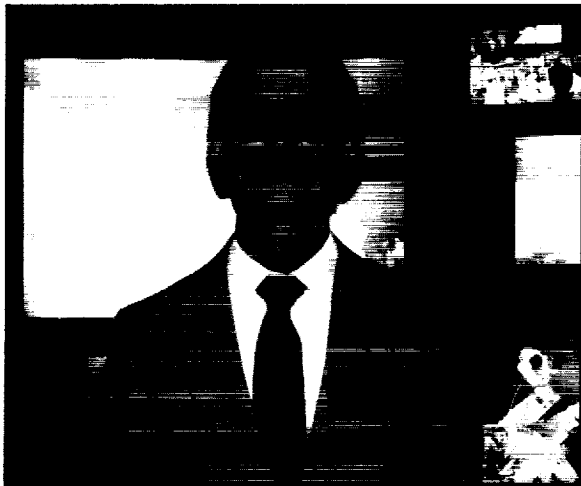
Joe M. Leeper  
 13819 Crested Rise  
 San Antonio, TX 78217 (512) 653-9355

*I remember the thrill of the Lunar Module settling on the moon safely. I supported the Operations and Procedures Officer. Currently I own a truck insurance agency in San Antonio.*



Robert D. Legler  
 15414 Seahorse Drive  
 Houston, TX 77062 (713) 488-2355

*I remember the excitement just before landing on the moon, Armstrong's first step, and most importantly was the safe recovery of the Apollo-11 crew which meant complete mission success. I was LM EPS (Electrical Power System), on console for first EVA. Presently I work for RSOC in the Flight Director Office.*



Charles R. (Chuck) Lewis  
 15207 St. Cloud  
 Houston, TX 77062 (713) 488-5019

*I remember the last minute of LM descent - "Houston, Tranquility Base here, the Eagle has landed"! I was Assistant Flight Director on the Descent Team (Kranz's White Team). Currently I am Manager of the Space Station Mission Operations Office in MOD.*



Sandra K. Lewis  
 1202 Norwood St.  
 Deer Park, TX 77536 (713) 479-1197 (H)  
 (713) 483-5426 (W)

*During Apollo-11 I was a secretary in the Training Branch. Presently I am a secretary for the Flight Director Office.*

ORIGINAL PAGE  
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Sy Liebergot  
 10611 Sandpiper  
 Houston, TX 77096 (713) 776-9754 (H)  
 (713) 483-0504 (W)

*I remember the tenseness and the drama of LM descent. I was CSM EECOM on the Ascent Team. Now I am retired from NASA working for Rockwell supporting the Shuttle Program Office.*



Harold A. Loden  
 1606 Capstan  
 Houston, TX 77062 (713) 488-2273

*I remember the minutes immediately after the landing. I was LM Control in the MOCR for the ascent from the lunar surface. Currently I am in NSTS Operations Integration Office at JSC.*



T. Rod Loe  
 704 Evergreen  
 Friendswood, TX 77546 (713) 482-8941

*I supported CSM SPAN for Apollo-11. Now I am at NASA in the Mission Operations Directorate.*



Chet Lowe  
 112 Colonial Oaks Drive  
 Warner Robins, GA 31088 (912) 923-5797 (H)  
 (912) 922-9987 (W)

*I remember the words "Houston, Tranquility Base here - the Eagle has landed! I was a Simulation Controller. Presently I am Director, Warner Robins Operations Support Systems Associates, Inc.*



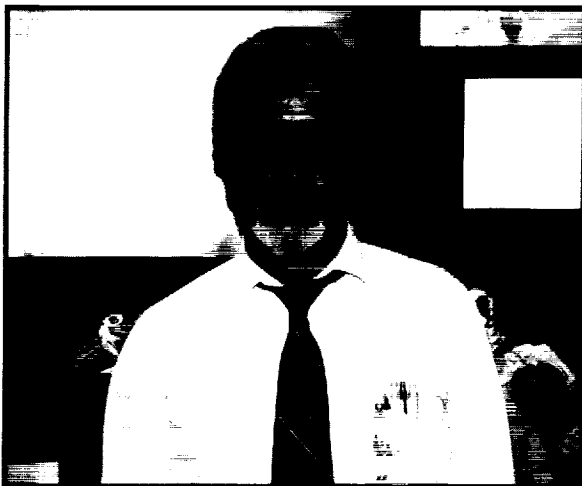
Jim Mager  
1905 Dellore Lane  
League City, TX 77573 (713) 332-6148

*I remember the excitement of what we were trying to achieve. I was a Telemetry Instrumentation Controller. Now I am Director, Engineering Bendix Field Engineering Corp. (STSOC)*



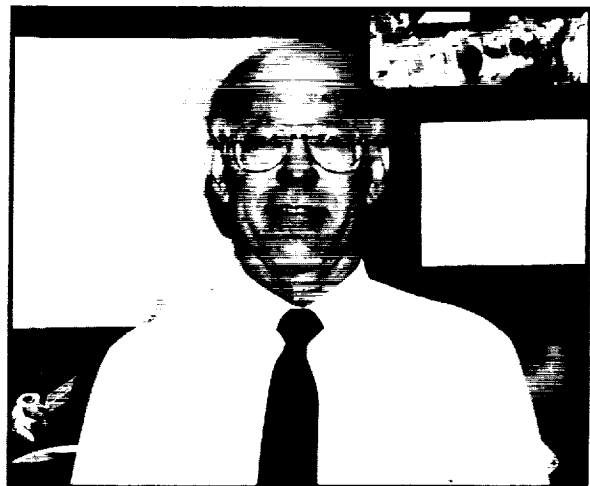
Maurice L. McNeely  
1107 Festival Drive  
Houston, TX 77062 (713) 488-5153

*I remember the TLI Burn and Eagle landing. I was a Booster Systems "Engine" in the SSR. Now I work for McDonnell Douglas as a Systems Analysis Supervisor on the AASC Contract.*



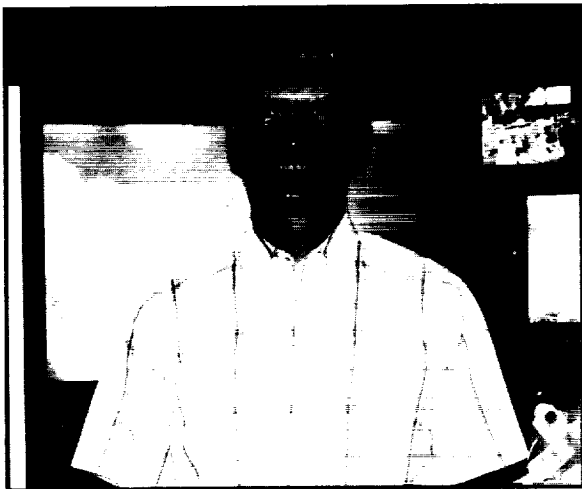
Ronald J. Mier  
1749 Pine Village  
Houston, TX 77080 (713) 465-6926

*I remember playing a supportive role in Air-to-Ground Communications Testing with Lockheed for Apollo-11's success in landing on the Moon. I provided extensive tests to verify Air-to-Ground Communication link. Presently I provide support to the SSCC Facilities Integration of the SSFP with MDSSC.*



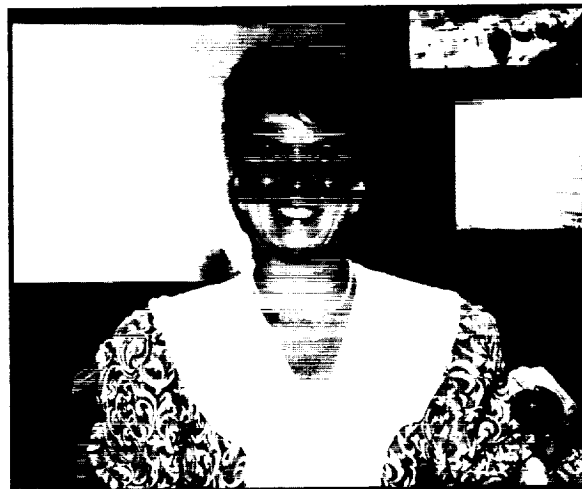
Robert R. Miley  
16402 Locke Haven Drive  
Houston, TX 77059 (713) 488-3010

*During Apollo-11, I was a Bendix Rep at JSC, and we were responsible for Development and Design and Flight Ops of EASEP and ALSEP. Currently I am Lockheed Missiles and Space Company Rep at JSC for Payload Integration on STS.*



Jerry W. Mill  
7544 S. Cove Circle  
Denver, Colorado 80122 (303) 771-9455

*I remember the console duty and especially the landing itself, viewed from the third floor MCC (the unused one, that was made available for off-duty controllers). I was a Guidance Officer during the mission. Now I am Financial Analyst and Mutual fund Portfolio Manager for Financial Programs Inc. in Denver.*



Suzanne Miller  
409 W. Tom Green  
Brenham, TX 77833

*I remember pride and enthusiasm. I was in Flight Control Division, providing clerical support. Currently I am a Service Rep for the Social Security Administration.*



Bill Molnar  
18814 Heatherdale  
Houston, TX 77059 (713) 480-6325

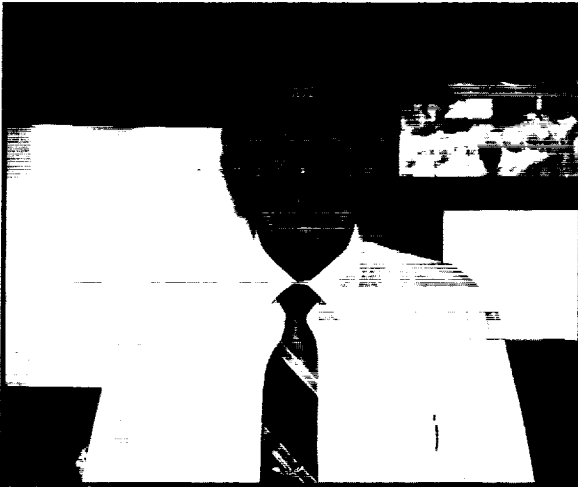
*I remember the relief after the LM landed and the pride in watching the lunar excursion activities. I was a MOCR Operations and Procedures Officer. Now I am in Business Development for McDonnell Douglas Space Systems Company in Houston.*



Moises N. Montez  
11639 Kirkmeadow  
Houston, TX 77089 (713) 481-3776

*I remember the lunar landing. I supported in the MPAD SSR during the mission. Now I am supporting NSTS - Onboard Navigation Software Principal Function Manager.*

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Owen G. Morris  
130 Driftwood  
Seabrook, TX 77586 (713) 326-1407

*I remember the LM rendezvous with the CM. I was a Chief Engineer for the LM, and served in the MER during the mission. Currently I am President of Eagle Aerospace.*



James F. Nelson  
2659 Main Ave.  
Durango, CO 81301 (303) 259-0188

*I remember the lunar liftoff when the Repress Valve was manually closed by Buzz while Neil had his mike keyed. I supported as LM ESC during Descent and Assent. Now I am a restaurateur at A'Roma Restaurant and Tavern in Durango, Colorado.*



M. Jack Neubauer  
25 Foothill Ash  
Wittleton, CO 80127 (303) 933-9751

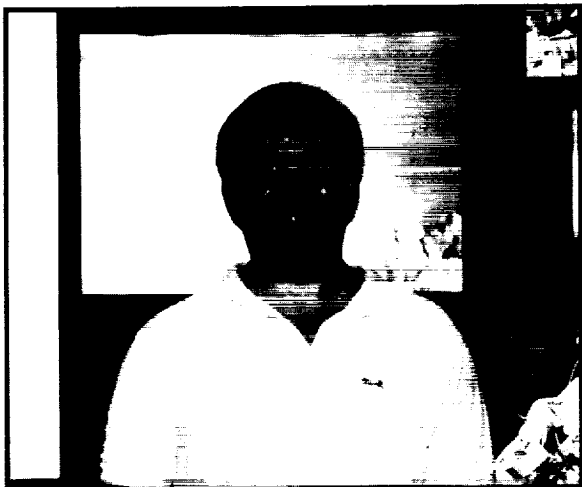
*I remember the view of landing from the Control Room. I supported as Sim-LM. Presently I am retired.*



David F. Nicolson, Jr.  
1427 Bayshore Drive  
Kemah, TX 77565 (713) 334-1907

*I remember the achievement of the first landing. I was a Flight Controller - AFD. Presently I work for NASA Aircraft Operations.*

APR 1978



George D. Ojalehto  
8326 Wagon Wheel Road  
Alexandria, VA 22309 (703) 360-7592

*I remember being part of a hard working team doing something extremely important for the country. I was a Network Controller. Currently I am a Senior Engineer for the Vitro Corp. supporting NASA HQ Office of Safety, Reliability, Maintainability and Quality Control.*



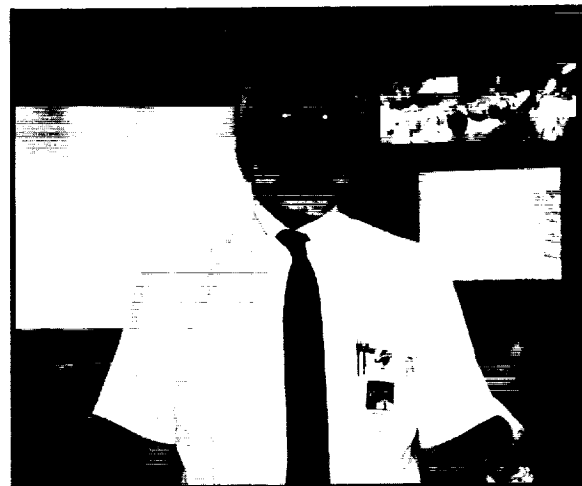
John W. O'Neill  
426 Willow Vista  
Seabrook, TX 77586 (713) 532-1698

*I processed 1100 procedures changes in the last two months before the flight! I was Flight Data File Manager. Presently I am Deputy Director for Mission Operations - JSC.*



Joseph V. Orsi  
14922 Radstock Drive  
Houston, TX 77062 (713) 280-5141

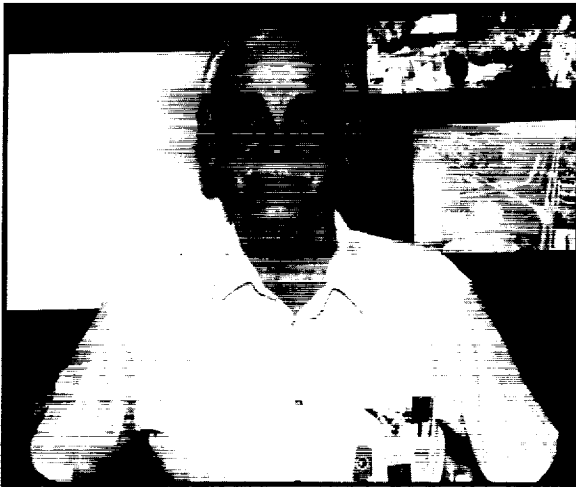
*I had worked on the night shift the day before the mission and remained at KSC after the shift with others to view the launch. I worked in Acceptance Test Engineering as a Systems Engineer for Grumman. Now I am working on Space Station for IBM.*



Charles W. Pace  
15454 Peermont  
Houston, TX 77062 (713) 480-1405

*I remember most the landing on the Moon. I was Mission Design Manager in MPAD. Now I am NSTS Integration and Operations Assistant Manager.*

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Pat Patneski  
4486 W. Cypress Villas Drive  
Spring, TX 77379 (713) 370-3447

*I remember the whole mission and the fine people involved in it. I was a photographer. Currently I am a Staff Photographer for PAO/NASA.*



Gran Paules  
19 Harvard Court  
Rockville, MD 20850 (301) 340-2688

*I remember being on console when Apollo-11 landed on the Moon. I was a MOCR "GUIDO". Now I work in NASA HQ on Space Station Operations.*



Robert H. Plaumann  
623 Shadylawn  
Shoreacres, TX 77571 (713)470-8881

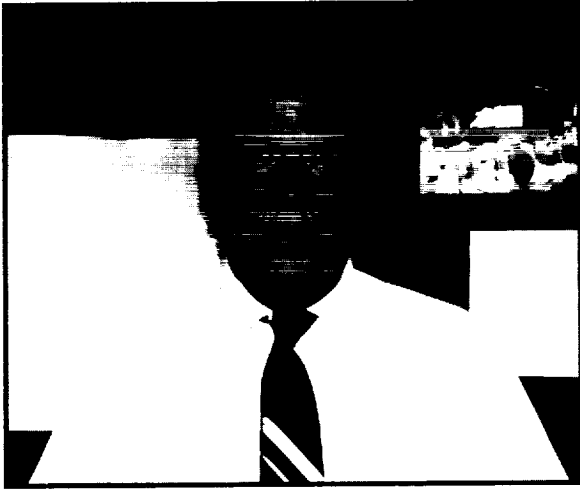
*I remember manning a console at GSFC ensuring that all communications were operative, and like everyone else, sweating. I managed the NASA Communications Network (NASCOM). I have retired from NASA and now work for McDonnell Douglas.*



Ed Pavelka  
408 Melody Lane  
Friendswood, TX 77546 (713) 482-7461

*We were the finest team of controllers in history. I supported as FDO in the MOCR. Currently I am Chief of Operations Division - MOD.*





Hershel R. Perkins  
 16549 Kentwood  
 Houston, TX 77058 (713) 488-2296

*I was supporting in the LM COM/INST SSR during Apollo-11. Now I work for RSOC supporting Flight Crew Operations.*



Ed Pickett  
 10506 Center Street  
 Fairfax, VA 22030 (703) 385-9281

*During Apollo-11 I was on Houston Track Console. Presently I am Consultant for the Office of Space Station at NASA HQ in Washington D.C.*



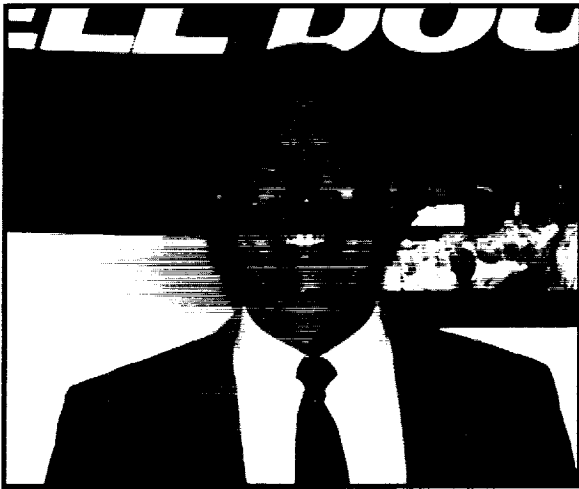
Frank Pitts  
 11002 Sagewind Drive  
 Houston, TX 77089 (713) 481-2577

*I remember the lunar landing, the critical alarms, and Armstrong's first words. I was a Communications Controller. Now I am Communication Integration Manager for Bendix Field Engineering Corp.*



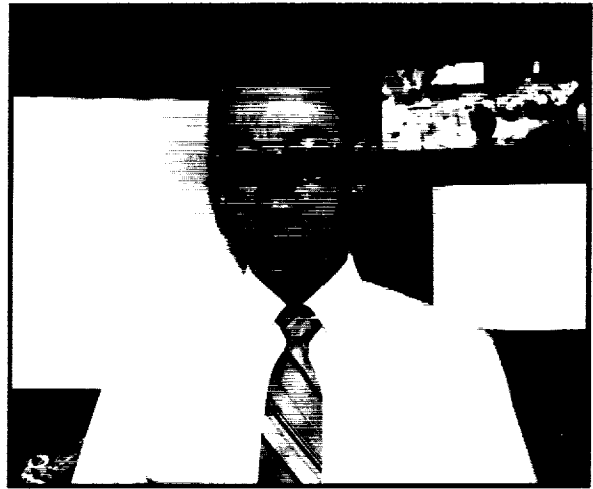
J. Leon Pringle, Jr.  
 101 Greenwood Drive  
 Hattiesburg, MS 39402-2206 (601) 264-5320

*The simulations were harder than the real mission – the teamwork of everyone – the strive for excellence – never have I worked with any one or group that was as dedicated as the team was. I was a CSM EPS Flight Controller. Now I am an Engineer Pine Belt Cable in Hattiesburg, MS.*



Donald R. Puddy  
221 Bayou View  
Seabrook, TX 77586 (713) 326-1817

*I remember the whole mission and the dedication of all people involved. I supported LM TELCOM during Descent/Ascent. Now I am Director for Flight Crew Operations.*



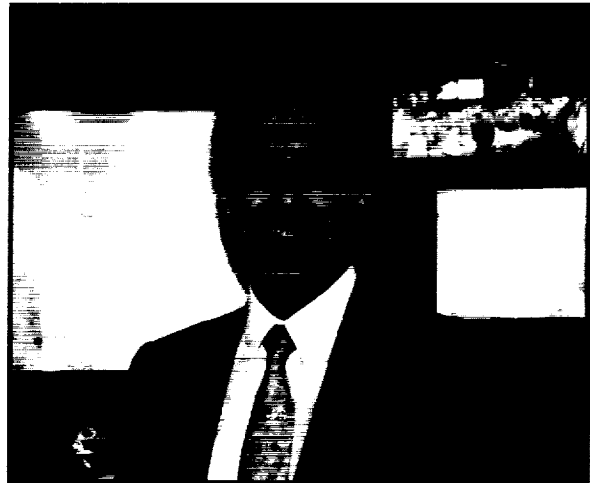
Hal L. Rainey  
15403 Stonehill Drive  
Houston, TX 77062 (713) 488-2797

*I remember the Lunar Module touchdown and Neil Armstrong's call after landing and Charlie Duke's reply. I was a Simulation Flight Controller. Now I am an Advanced Systems Engineer, Specialist for Lockheed Engineering and Sciences Company in Houston.*



Lou Ramon  
15822 Lake Lodge  
Houston, TX 77062 (713) 480-3215

*I remember KSC support of the lunar landing. I was a LM Crew Station Engineer on the Flight Crew Support Team. Now I am EVA Assembly and Maintenance Integration Senior Manager for MDSSC - Space Station Division.*



H. David Reed  
90 Page Brook Road  
Carlisle, MA 01741 (508) 369-8948

*I remember the team work that made it all work. I was a Flight Dynamics Officer for Launch and Re-entry and Lunar Liftoff Targeting. Now I am in charge of Advanced Concepts Development Division of the Transportation Systems Center for U.S. Dept. of Transportation.*



Gary Renick  
4180 N. 26th Street  
Boulder, CO 80304 (303) 440-8189

*I supported as Guidance and Yaw during Apollo-11. Currently I am in System Engineering for IBM/FSD in Boulder.*



Al Richmond  
18435 Point Lookout Drive  
Houston, TX 77058 (713) 333-3665

*Neil Armstrong was my airplane partner. I attended the launch at KSC (VIP). I worked as a landing radar developer with RYAN. Now I am a New Business Manager at Boeing.*



Mel Richmond  
802 Lexington  
Friendswood, TX 77546 (713) 482-6161

*I remember Apollo-11 as the first time a human was on another celestial body. I supported Recovery and was aboard the prime ship. Currently I am a Branch Chief in the Training Division.*



Dean B. Risher  
15702 La Casa  
Houston, TX 77062 (713) 488-1361

*I remember the Eagle landing and lift-off. My organization developed all Flight Control Documentation. It was the Flight Control Technical Support Group. Presently I am with a Manager for M.D. Anderson Cancer Center Software Project with Omniplan.*

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John V. Rivers  
16566 Space Center  
Houston, TX 77058 (713) 488-5883

*I remember the descent and landing. I supported the Flight Activities Officer. Now I work on Space Station Mission Operations.*



Jones W. Roach  
4123 Manorfield Drive  
Seabrook, TX 77586 (713) 474-5047

*I remember people working together for one thing. I was Chief FCD representative in the SPAN Room. Now I am Director of Planning for Computer Sciences Corporation.*



R. F. (Robby) Robertson  
6212 Twin Oaks Drive, #1173  
Colorado Springs, CO 80918 (719) 590-9002

*I remember the first step. I was Tracking Controller. I have been working for Ford Aerospace for the last 30 years.*



W. D. Robinson  
16110 Barcelona  
Friendswood, TX 77546 (713)482-1733

*I was proud to be part of the team. I was a Flight Controller for the Lunar Landing Training Vehicle. Presently I am working on STSOC.*

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Rodney G. Rose  
211 Post Oak Road  
Wimberly, TX 78676 (512) 847-2507

*After the landing, I remember leaving MCC and seeing the Moon and knowing Apollo-11 was there. I was FOP Chairman for Mission Operations Design. Currently I am retired.*



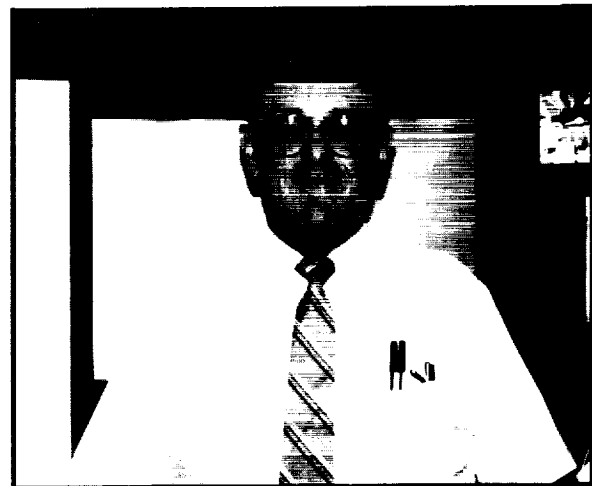
James E. Saultz, Sr.  
7230 Olson Lane  
Pasadena, TX 77505 (713) 479-1025 (H)  
(713) 483-0663 (W)

*I remember Apollo-11 as the first landing on a celestial body. I supported as an Experiments Officer. Now I work in Shuttle Mission Operations.*



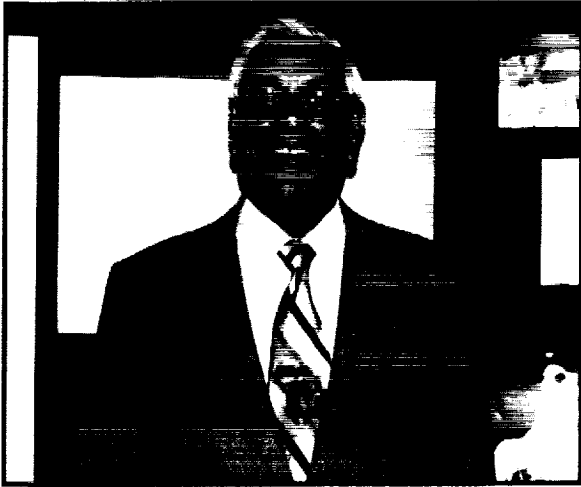
Burton L. Sharpe  
1163 Crested View Drive  
St. Louis, MO 63146 (314) 997-6407

*One thing I remember was greeting Gene Kranz in the Bldg. 45 parking lot on July 20. He said, "good morning", and I said, "there's never been one like it". I was ALSEP Sr. Engineer that commanded EASEP. Now I am consulting to Army Aviation on LHX Helicopter Dev. Sys. Eng. and Software.*



T. W. (Tom) Sheehan  
15822 Diana Lane  
Houston, Tx 77062 (713) 488-3789

*I remember breathing again after Neil reported . . . "The Eagle has landed." I was a Tracking Controller. Now I am Manager of Flight Management Office at RSOC.*



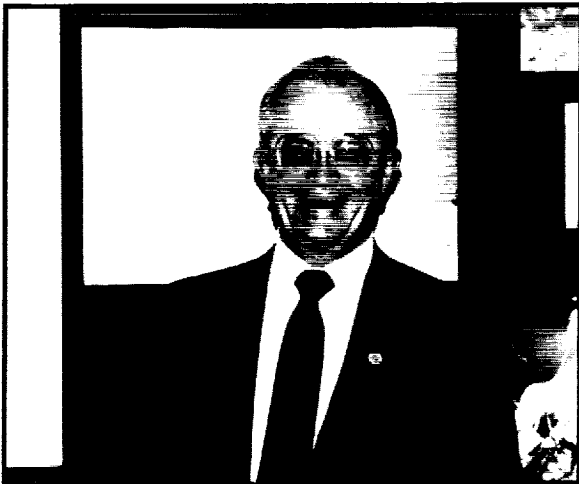
D. J. Skinner  
 3300 Pebble Brook Drive, #63  
 Seabrook, TX 77586 (713)280-1500

*The family and I stayed up all night watching the landing. From 1967 to 1978, I was directly involved in the CSM and LM qualification program and the flight crew training at the Building 32 SETD. Now I am part of the MDSSC WP-2 facility development for Space Station.*



John A. Smith  
 3710 Park Lane  
 Vernon, TX 76384 552-2256

*I remember the space craft fire during testing at the Cape. I was a Booster Command operator. Presently I relaxing and ranching.*



Terry L. Spencer  
 16203 Havenhurst  
 Houston, TX 77059 (713) 486-0304

*I remember holding my breath while the LM was rapidly running out of fuel. I instructed the primary and backup flight crews in sequential systems. Now I am ; Manager, Systems Engineering for Omniplan and Program Manager, Center Ops Directorate (COD) Support Contract.*



Richard J. Stachurski  
 4730 173 Place S. E.  
 Issaquah, Wash. 98027(206) 746-9446

*I remember hanging the Apollo-11 plaque in the MOCR after splashdown. I was a Network Controller. Now I am Deputy Manager , Space Research for Boeing Aerospace and Electronics.*



Larry W. Strimple  
2701 Mockingbird Drive  
Alvin, TX 77511 (713) 331-5790

*I remember the positive attitude of the Flight Control Team. I was a LM Control Trainee. Currently I work for RSOC Houston on Propulsion Flight Design.*



William E. Sturm  
Route 3, Box 193-D  
Dayton, TX 77535 (409) 258-8869

*I remember the honor to be a part of this flight. I supported as LM AGS. Currently I work for RSOC in the PIP Annex 5 area.*



Donald ("Doc") Stullken  
11221 Seaglade Drive  
Pensacola, FL 32507 (909) 492-2317

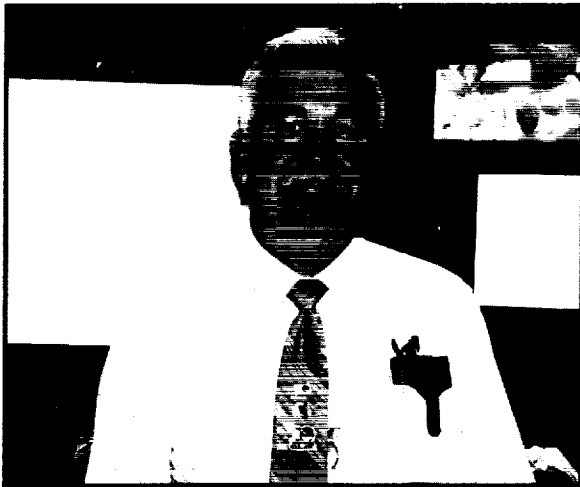
*I remember EOM target shift at about EI minus 12 hours. I supported Recovery Ops as Team Leader on the U.S.S. Hornet (recovery ship). Presently I am retired.*



Ruby J. Summers  
1214 Leskey  
Houston, TX 77034 (713) 944-5944

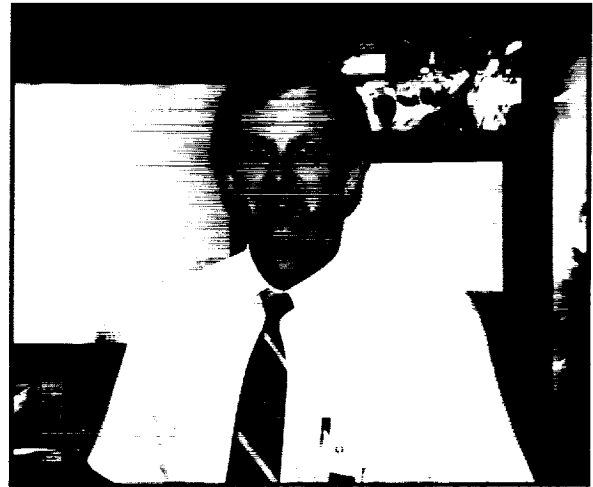
*I was a Secretary in Flight Operations Directorate Office. Currently I am Secretary to TJ/Cargo Engineering Office.*

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Norman Talbott  
 423 Terrace  
 Seabrook, TX 77586 (713) 326-1004

*I was a Telemetry Inst. Controller (TIC).  
 Presently I am a Ground Controller (GC).*



Earl W. Thompson  
 323 Biscayne Blvd.  
 Seabrook, TX 77586 (713) 326-3081  
 (713) 483-5582

*I remember the Apollo-11 descent and  
 lunar communications. I was supported as  
 INCO (Communications Officer). Presently I  
 work in Payload Operations.*



James L. Tomberlin  
 10346 Winding Trail Road  
 LaPorte, TX 77571 (713) 471-2483

*I was a SPAN Manager during Apollo-11.  
 Currently I am retired and doing PC  
 consulting.*



Don H. Townsend  
 2418 Lufkin Lane  
 Deer Park, TX 77536 (713) 479-4323

*I was a Booster Systems Engineer during  
 Apollo-11. Today I am working for  
 LESC/Houston on the Space Shuttle.*

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Rudy Tunello  
1614 Neptune Lane  
Houston, TX 77062 (713) 488-1990

*I remember the descent of the LM on the Moon. I supported as Guidance/navigation/Digital Comp (GND) as a Console Operator. Now I work on Space Shuttle Avionics Hardware.*



Alice C. Van Gilder  
11314 Sagewood  
Houston, TX 77089 (713) 481-3257

*The dedication and enthusiasm shown by the NASA and contractor employees for the entire Apollo program has been unsurpassed. Watching the engineers I supported as lead secretary in the Flight Planning Branch create and produce the flight timelines and lunar maps was extremely interesting. Now I work as lead secretary for the Operations Training Branch.*



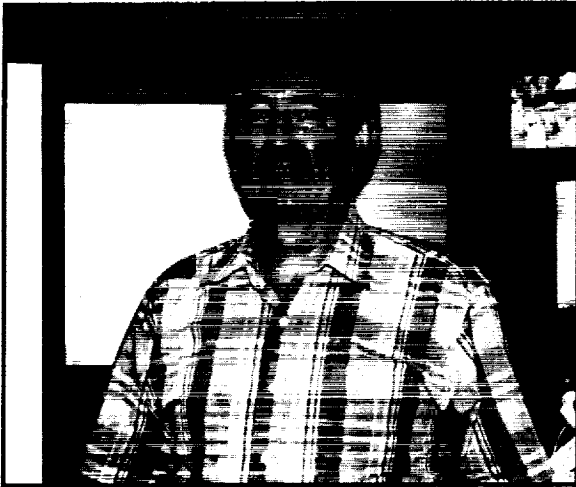
William L. Wafford  
5127 Blue Spruce Lane  
Charlotte, NC 28227 (704) 568-7867

*I remember holding my breath at "contact". I supported as CSM SSR Communications. Now I am Director of Radio Services in Mechlenburg County, NC.*



C. R. (Bob) Walker  
1006 W. 6th Street  
Silver City, NM 88061 (505) 388-3012

*I remember drifting through the South Pacific swells at night while sitting on the bow of the U.S.S. Hornet. I was on the Recovery Team. Now I am a Transportation Planner/Preconstruction Engineer on Gila National Forest.*



Robert J. Ward  
202 Pine Shadows Drive  
Seabrook, TX 77586-4609 (713) 326-1638

*I remember the Moon landing when the LM almost ran out of fuel. I was a Spacecraft Analysis Mission Staff Engineer. Presently I am retired.*



Terry Watson  
15000 Condon Avenue  
Lawndale, CA 90260 (213) 676-0049

*I remember sitting in Mission Control and watching Armstrong take his first steps. I was a Recovery Engineer. Currently I work for TRW at Redondo Beach as a Mission Ops Manager for Gamma Ray Observatory.*



John A. Wegener  
1622 El Dorado  
Houston, TX 77062 (713) 488-4117

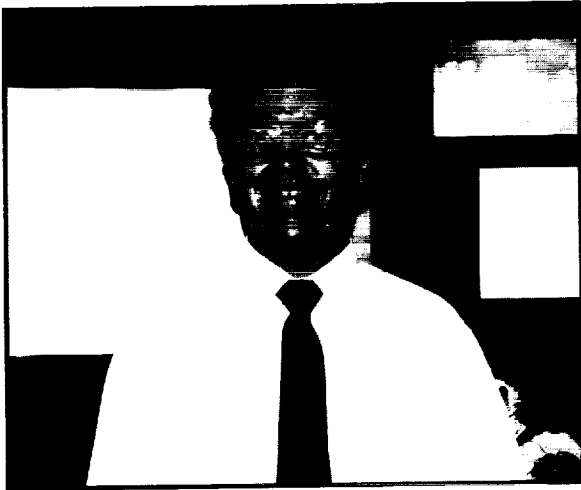
*I remember Charlie Dukes' words, . . . "a bunch of guys about to turn green" . . . I supported as LM Control - 1st Lunar Stay. Now I work for NASA in STS Training.*



Thomas E. Weichel  
Box 78A  
Colony, OK 73021 (405) 929-7379

*I remember the lunar landing. I supported as RETRO MCC. Currently I am farming and ranching.*

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J. Bruce Williamson  
3419 Shadycrest Drive  
Pearland, TX 77581 (713) 485-2843

*As a launch observer, I remember the enormous unexpected emotion as the rocket cleared the launch pad. I was in Navigation Analysis for the Math Physics Branch/MPAD. Now I am supporting STS in the Mission Control Center Upgrade for Rockwell.*



Briggs Willoughby  
1820 Hamilton  
Anchorage, AK 99515 (907) 345-3240

*I remember the launch, TLI, Lunar Orbit Insertion, and the landing. I supported as a CSM GNC. Currently I am working at FAA.*



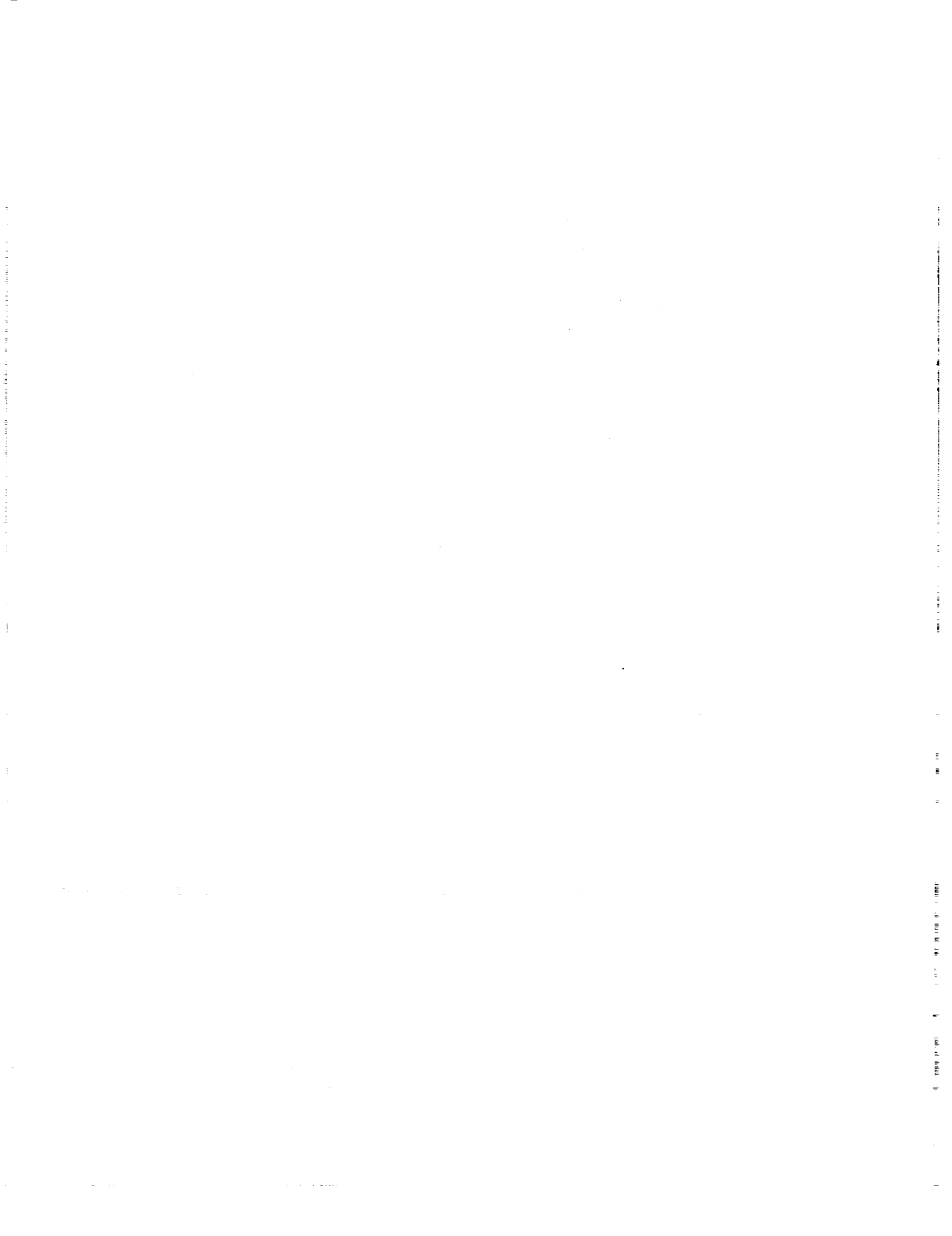
Wilbur R. (Bill) Wollenhaupt  
3118 Lazy Pine  
LaPorte, TX 77571 (713) 471-4527

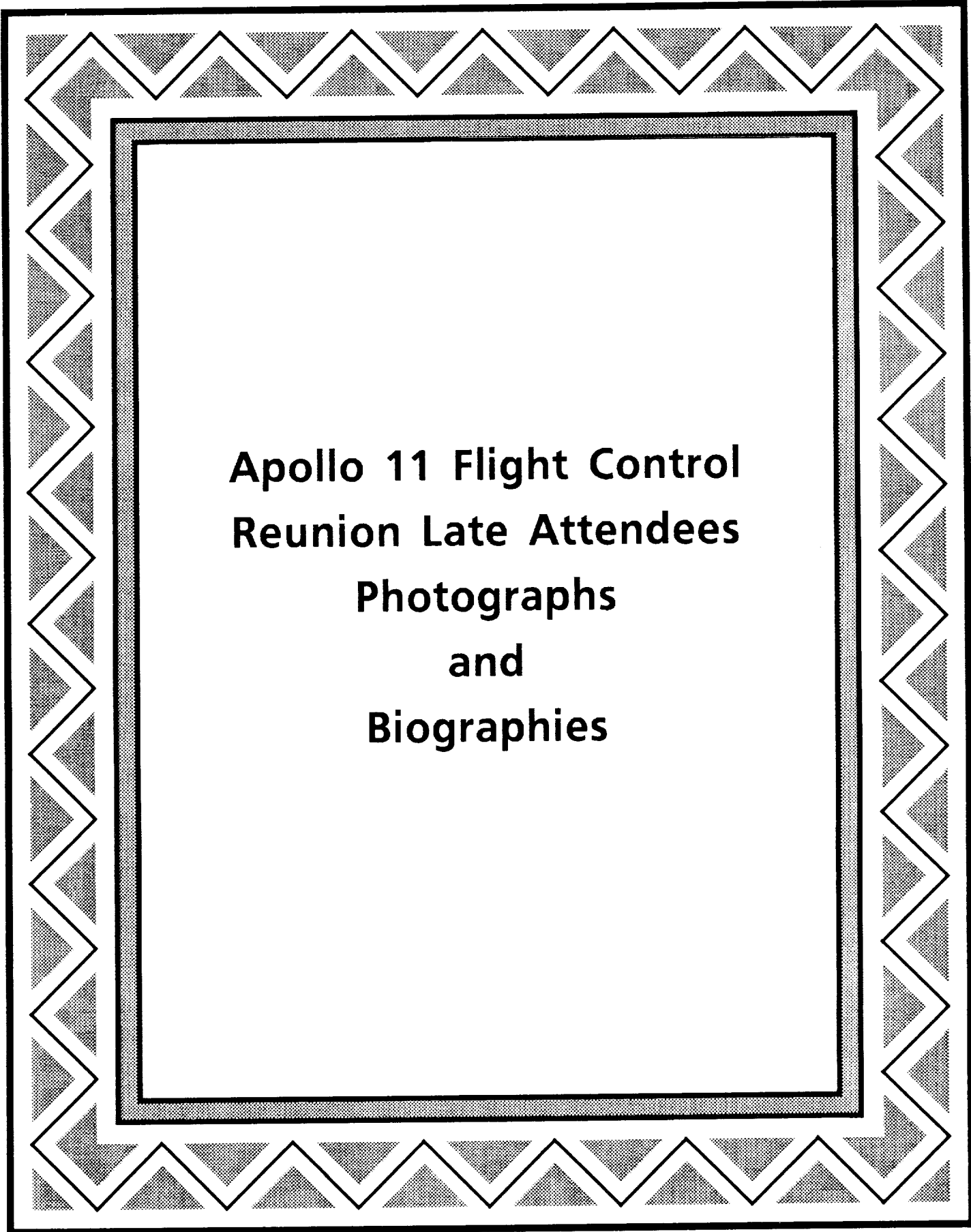
*During Apollo-11 I supported as Select Support (Nav). Currently I am retired.*



E. L. Worrell  
157 Lincoln Avenue  
Dover, NJ 07801 (201) 366-7139

*How it felt is impossible to describe. We had been in another far place - we had been the very best on this - and now - another planet. I was a Public Affairs interface between MOCR and world press. Now I am a long haul truck driver taking hospital supplies cross country.*





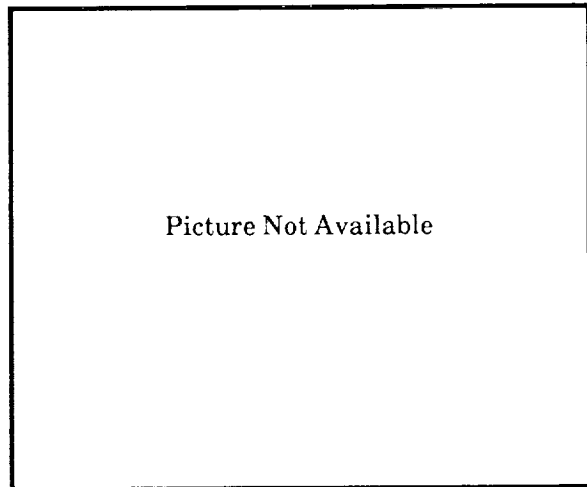
**Apollo 11 Flight Control  
Reunion Late Attendees  
Photographs  
and  
Biographies**





Arnie Aldrich  
2434 Cameron Mills Road  
Alexandria, VA 22302 (202) 453-2693

*I remember Apollo-11 as great! I was on console in SPAN for CSM systems support. I was Chief of the CSM Systems Branch. Now I am the Director of the Space Shuttle Program at NASA Headquarters.*



Stephen G. Bales  
903 Baronridge  
Seabrook, TX 77586

*I remember the lunar descent and touchdown. I supported as a Guidance Officer in Ascent/Descent. Now I am the Assistant Director in Program Support Mission Operations Directorate.*



Harold Draughon  
16722 Sheet Bend Way  
Houston, TX 77546 (713) 996-9058

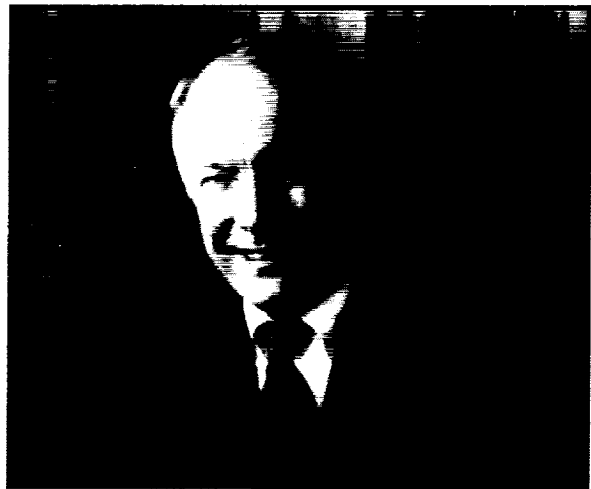
*I remember the Flight Control team and the commitment to the task. I supported as an Assistant Flight Director. Now I am a STSOC Program Manager.*

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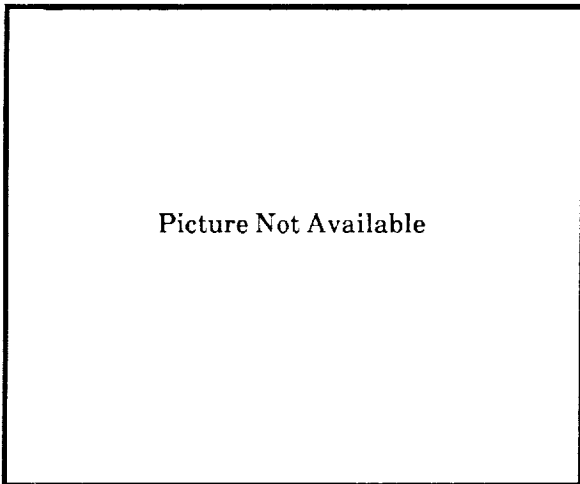
Pete Frank  
4142 Crownwood  
Seabrook, TX 77546 (713) 474-2384

*I remember the tension in the MOCR during the powered descent to touchdown and the strong desire to get back into lunar orbit and rendezvous with the CSM as soon as possible. I supported as a 1st Shift Flight Director. Now I am a Deputy Program Manager on the MSC contract at Ford Aerospace.*



Gerry Griffin  
1107 Nantucket Drive  
Houston, TX 77057

*I remember the 1 hr period before and the 10 minutes after the landing. The scenes & sounds of MCC are etched permanently in my mind. I supported as Backup Flight Director. Now I am Managing Director of the Houston Office of Korn/Ferry International.*



Picture Not Available

Charles S. Harlan  
1002 Woodbank  
Seabrook, TX 77586 (713) 474-4947  
(713)483-3191

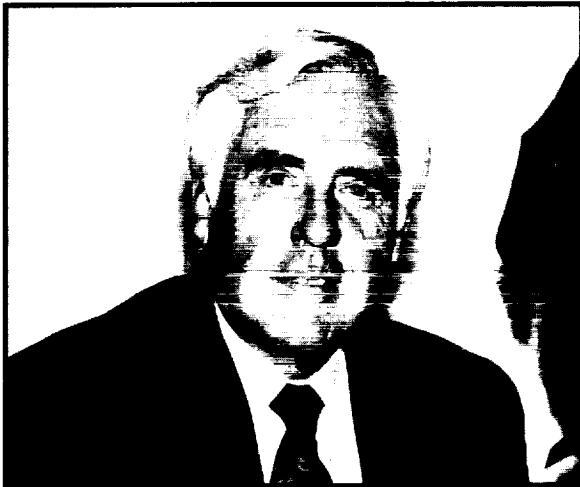
*I remember the Lunar Landing and EVA Operations. I was an Assistant Flight Director. Now I am Director of SR&QA at JSC.*



Robert Heselmeyer  
15514 Seahorse  
Houston, TX 77062 (713) 488-5610

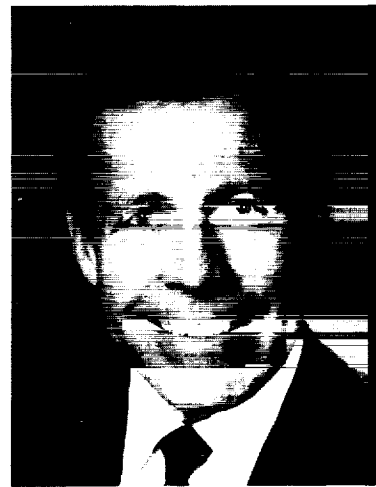
*I remember a sense of accomplishment at touchdown on the Lunar surface, relief at docking in lunar orbit, and awe that people had actually walked on the Moon. I supported LM TELCOM consumables in SSR. Now I am Technical Manager, Management Systems Office in the Space Shuttle Office at JSC.*





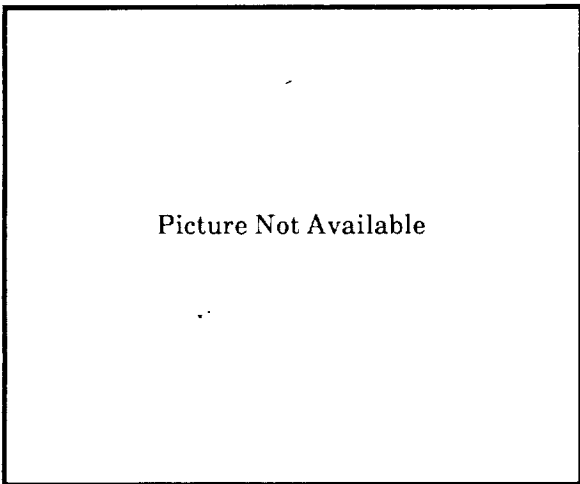
Chuck Jacobson  
2908 Doral Court  
League City, TX 77573 (713)334-1447

*I was a science fiction buff since high school days. I was elated about this first step toward interplanetary and inter galactic travel. I was a Backup Rendezvous Procedures Development Support Manager. Now I am Vice President and General Manager at MDSSC-ESD.*



Stephen G. Paddock  
2008 Airline Dr.  
Friendswood, TX 77546 (713)280-1518

*I remember the understandable lack of information about the CMP (Mike Collins) activities while Armstrong and Aldrin were on the lunar surface. I supported preparation of the CMP SOLO Book. Now I am a director of Space Station Division Operation at MDSSC.*



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Roger R. Ruda  
Rt. 6 Box 624  
Alvin TX 77511 (409)925-3641  
(713)280-1610

*I remember the landing and the landing statement. I supported Development of Limitation Software programs on CMDS. Now I am a Senior Manager in the Operations Support Dept., Space Station at MDSSC.*



Carl B. Shelley  
1607 Bowline Road  
Houston, TX 77062

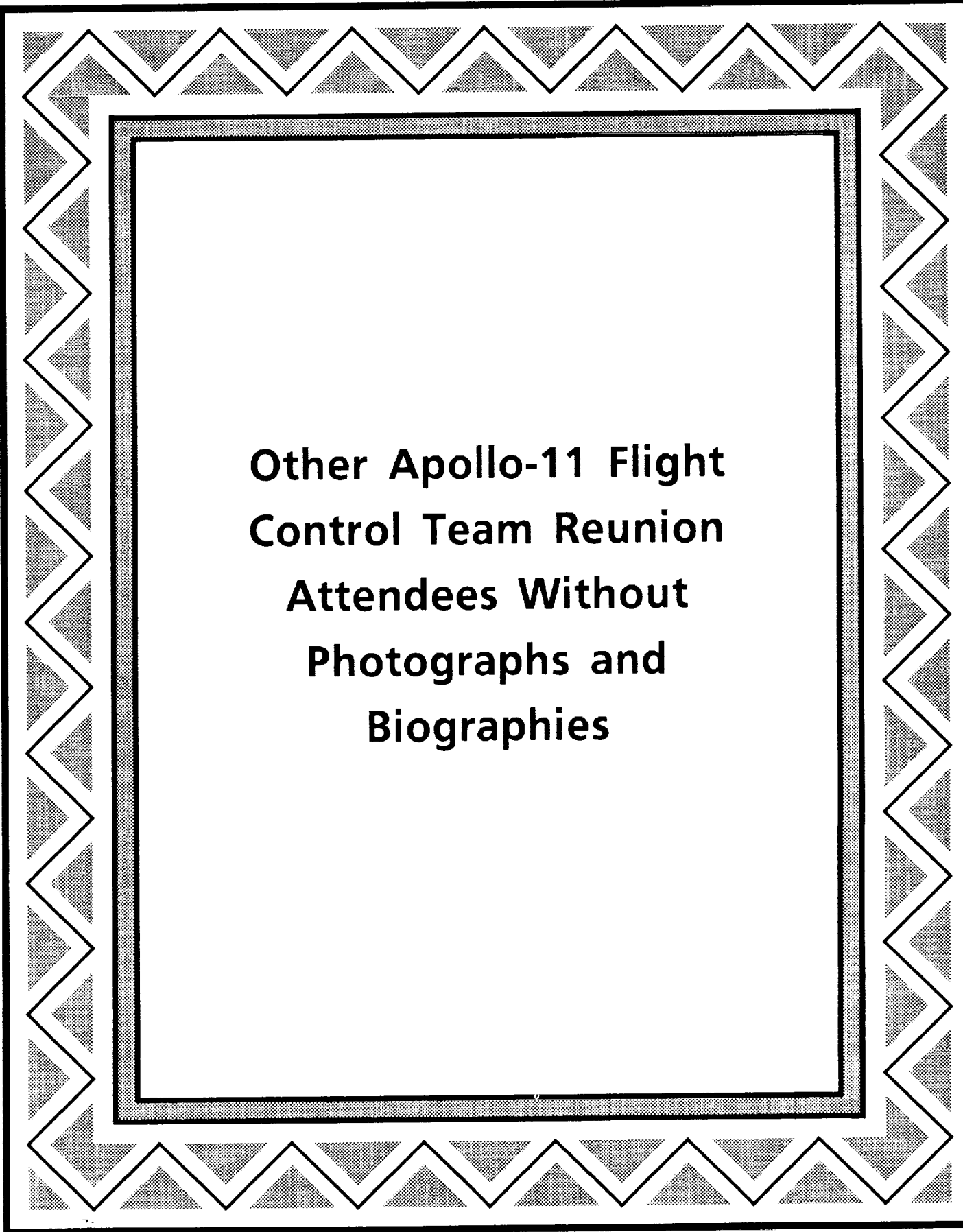
*I remember the overall enthusiasm and dedication of the flight ops team and, of course, the landing, Lunar liftoff, and SDM/LM docking. I supported as a Branch Chief in the Mission Simulation Branch. Now I am the Deputy Manager in the Space Station Project Office at JSC.*

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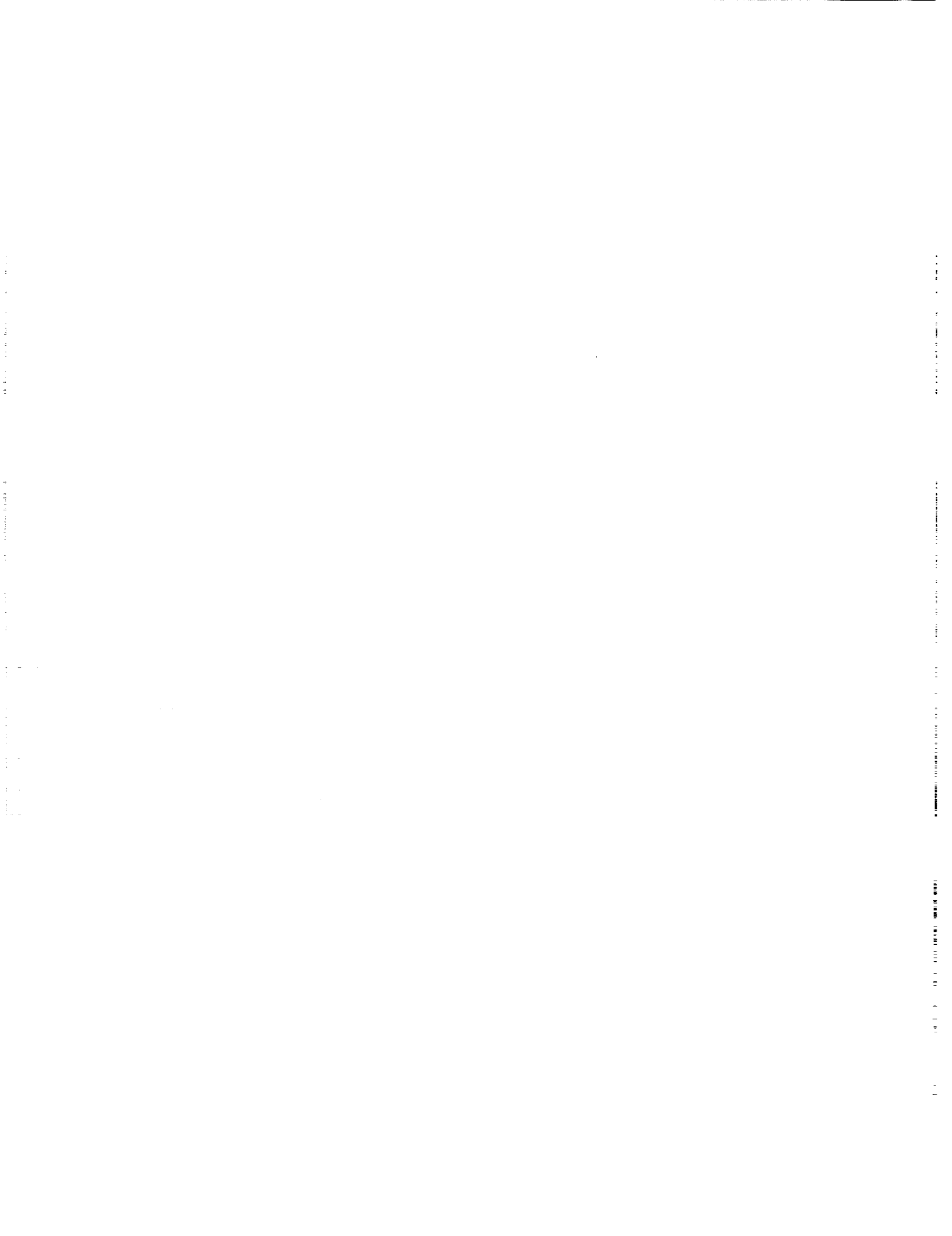
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William H. (Bill) Trahan  
4203 Belgrade  
Houston, TX 77045      (713)729-7984  
   (713)283-4174

*I remember the Keypunch Card autographed  
by N. Armstrong. I implemented the Entry  
Monitor System (EMS) in the CMPS used for  
astronaut training. Now I am in POST-  
MECO Guidance Software Verification and  
Performance Analysis (STS).*



**Other Apollo-11 Flight  
Control Team Reunion  
Attendees Without  
Photographs and  
Biographies**



- A -

Aaron, John

Arabian, Donald D.

Armstrong, Neil

- B -

Bassham, Cecil.  
Beers, Charles A.  
Boatman, Wayne  
Bourgeois, Larry  
Burke, Roger

Bastedo, William G.  
Black, Harry  
  
Bowen, Maureen  
Burton, Mary Shepherd

Baxter, Hiram  
Bland, Dan  
Borches III, Joseph E.  
Brooks, Mel

- C -

Capps, Charles R.  
Corcoran, L.J.

Cole, James  
Craven, Jack

Coplin, Mel  
Critzos, Chris

- D -

Duke, Charlie

Dumis, Charles

- E -

Evans, Gary B.

Evans, Ronald E.

- F -

Ferry, John

Fulbright, Ben E.

Fuller, Joseph

- G -

Garnuch, Karla Beth

Glines, Alan

- H -

Hardee, Nat  
Henderson, Tom  
Hopf, Carolynne  
Hunter, Vicki S.

Harrison, John  
Hernandez, Mike  
Howard, Vern  
Hyle, Tom

Head III, James W.  
Holkan, Bob  
Hrabal, Gordon

- J -

Johnson, Adell

Johnston, Richard A.

- K -

Kirby, Ryborn

Klein, Edward H.

- L -

Lancon, Glenda

Llewellyn, John

- M -

Malley, Robert  
McLeaish, John

Martin, Jim A.  
Mechelay, Joseph E.

Marzano, Ed

- N -

Naples, Robert J.

Nering, Paul

Newton, Wanda

- P -

Patino, Antonio M.  
Pollock, S. T.

Pennington, Granvil A.

Peterson, Donald H.

- R -

Reeves, William  
Roy, A. J.

Ricks, Gene  
Rudd, Charles D.

Riley, John E.

- S -

Schmitt, Harrison H.  
Sevier, John R.  
Stafford, Thomas P.

Schultz, Dave  
Sheaks, Larry E.  
Stonesifer, John

Scruggs, Dave  
Sjoberg, Sig  
Strunk, David J.

- T -

Taylor, Betty M.

Thorson, Dick

- V -

Van Rensselaer, Frank L.

- W -

Wash, Michael  
White, Robert C.

Ward, Douglas K.  
Woodling, C. H. (Pete)

Wheelwright, Charles

- Y -

Young, John W.

Young, Ken



**In Memory of Those Who  
Have Preceded Us**

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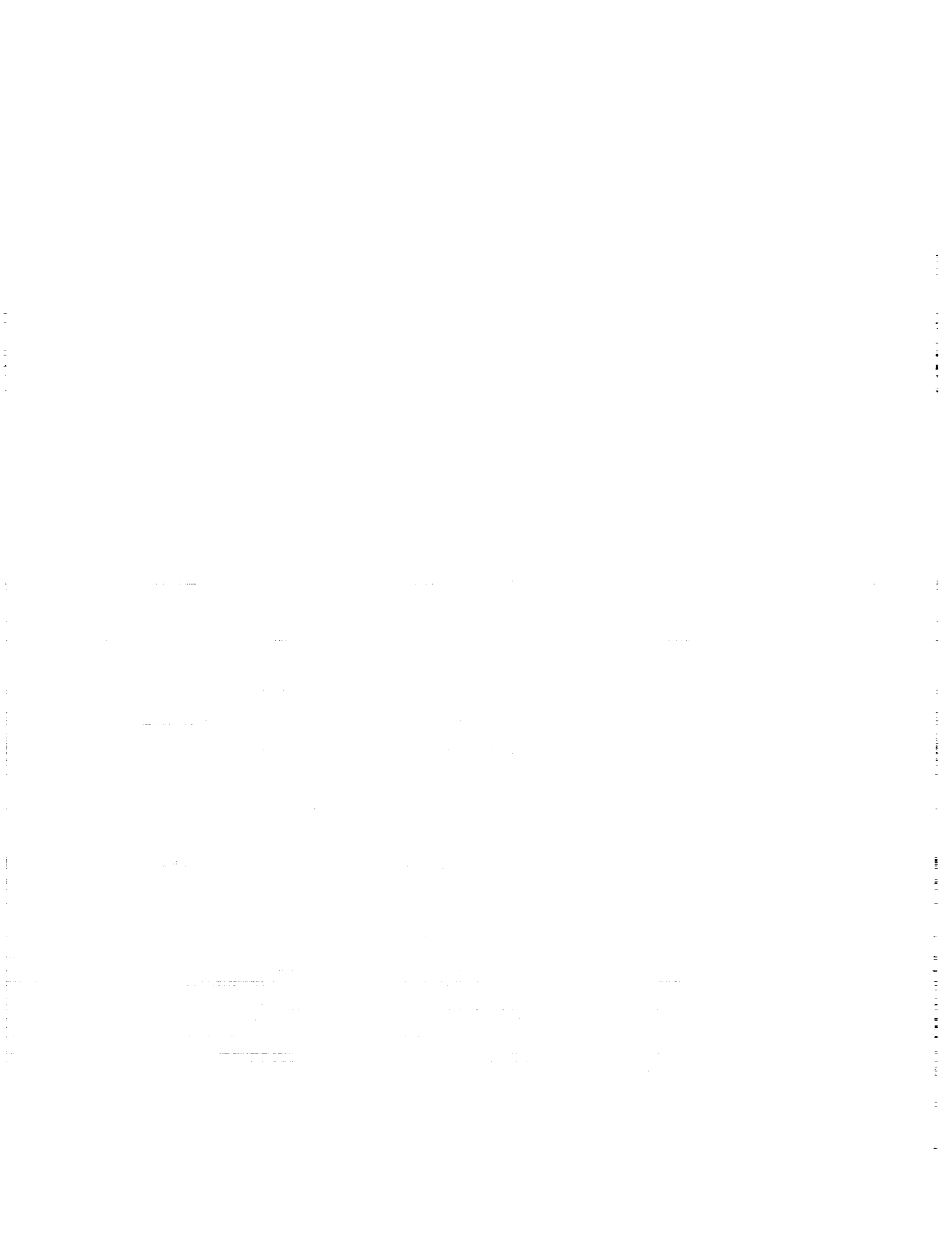
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*In Memory of Those Who Have Preceded Us*

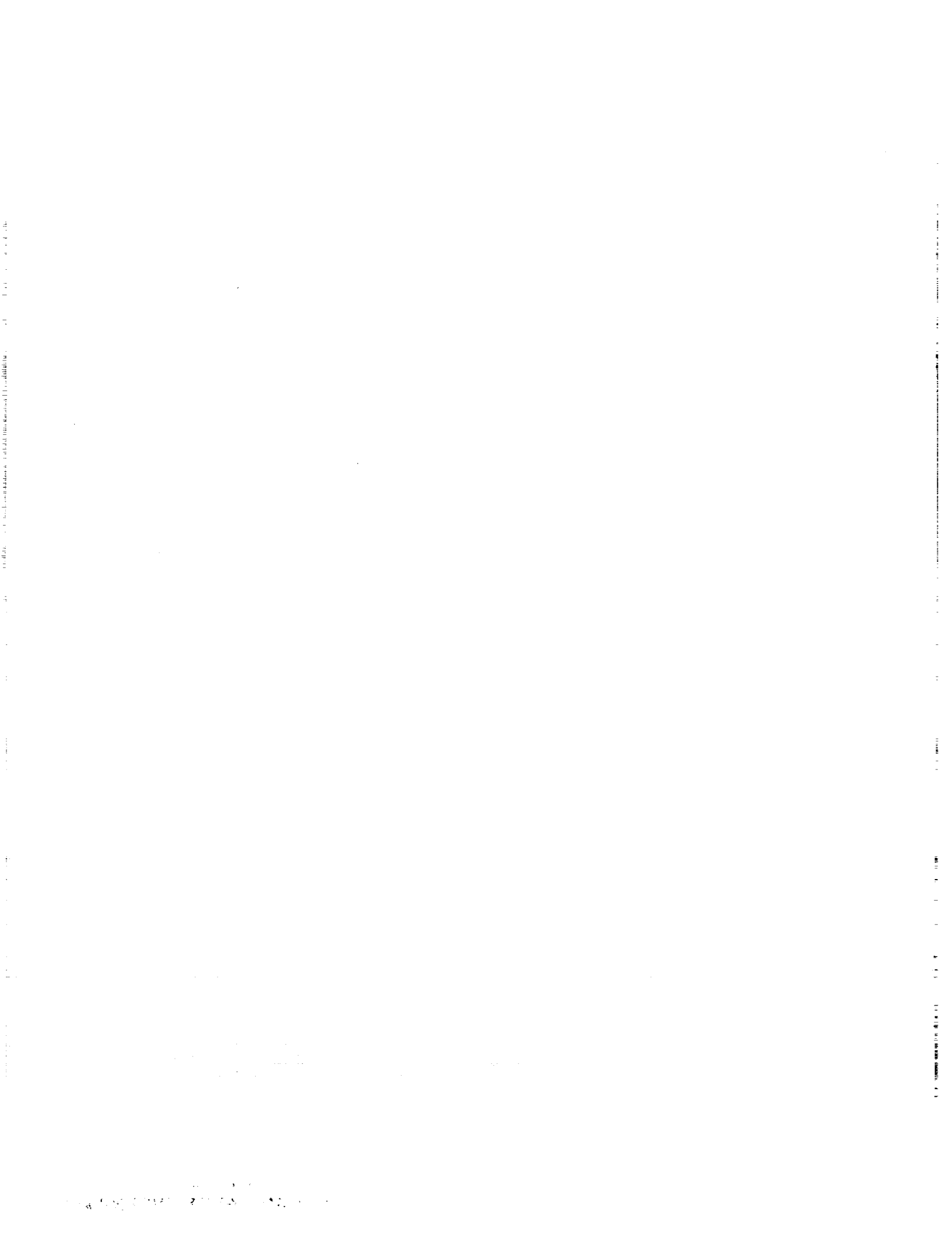
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Allen, Oliver	Howser, Lynn	Ridge, Richard
Anderson, Bob	I'Anson, James E.	Sanderson, Alan. N.
Appling, Jim	Jenkins, Hank	Satterfield, J.M.
Barker, Al	Klapach, Peter	Shook, G.R.
Bliss, George M.	Lacy, William R.	Singer, Joe
Brantley, Chester	Leecraft, Bert	Skopinski, Ted H.
Brink, Jim	Lindsey, Otho	Smith, Ellis
Britton, Bob	Low, George	Smith, Harry
Brook, Dale	Maloney, Scotty	Spears, Glenn H.
Chanbellan, Rita	McGathy, Jim	Spencer, Bobby T.
Colopy, Robert E., Cm.	Mitros, Edward F.	Spencer, Katherine J.
Cooper, John H.	Mosel, Duane K.	Swigert, Jack
Coursen, J.	Moser, Jim	Taylor, William
Dodson, Joe	Newman, Samuel R.	Toups, L. Dean
Evans, Ron E.	Overhouse, Raymond	Vanos, Ted A.
Fato, Frank	Payne, Joe Dave	Warden, Henry E.
Franklin, Miles	Pearson, Lee	Webb, Donald E.
Hammer, Scott	Pettitt, George I.	Whitmore, Charles
Harris, William J.	Phillips, Sam	







**Splash Down Party  
Action**



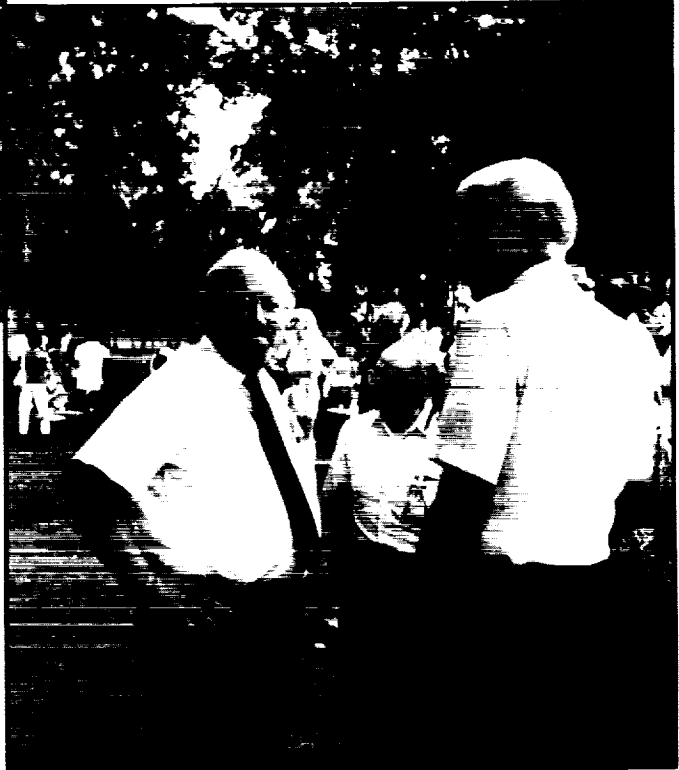
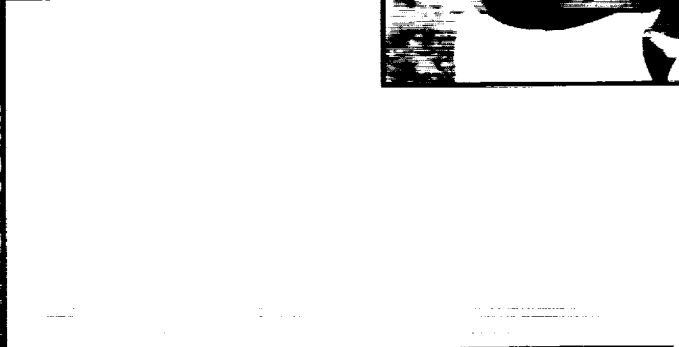




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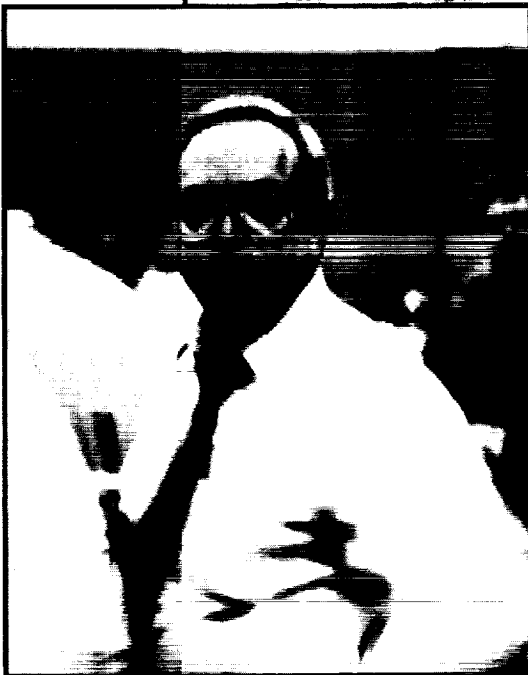
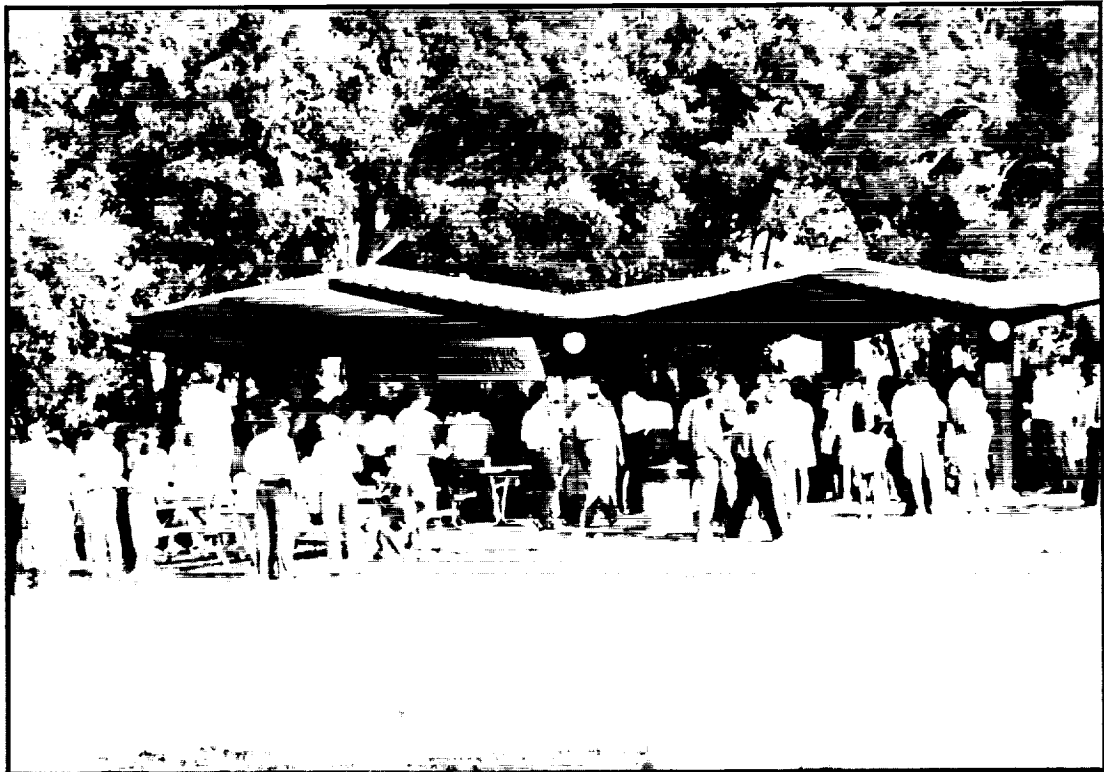
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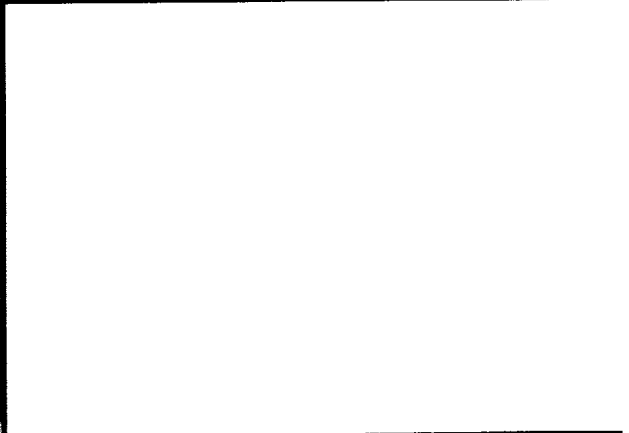


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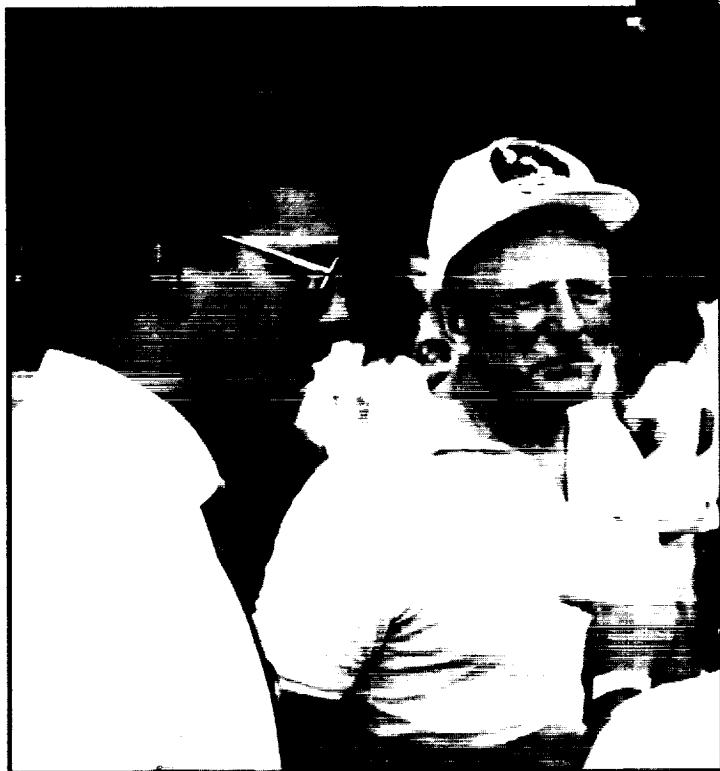












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