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INFO ANRC/SR NASA REP
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BIOGRAPHICAL DATA

NAME: NEIL A. ARMSTRONG (MR.)

NASA ASTRONAUT, COMMANDER APOLLO 11

BIRTHPLACE AND DATE: BORN IN WAPAKONETA, OHIO, ON AUGUST 5, 1930; HE IS THE SON OF MR. AND MRS. STEPHEN ARMSTRONG OF WAPAKONETA.

PHYSICAL DESCRIPTION: BLOND HAIR; BLUE EYES; HEIGHT: 5 FEET 11 INCHES; WEIGHT: 165 POUNDS.

EDUCATION: ATTENDED SECONDARY SCHOOL IN WAPAKONETA, OHIO; RECEIVED A BACHELOR OF SCIENCE DEGREE IN AERONAUTICAL ENGINEERING FROM PURDUE UNIVERSITY IN 1955. GRADUATE SCHOOL - UNIVERSITY OF SOUTHERN CALIFORNIA.

MARITAL STATUS: MARRIED TO THE FORMER JANET SHEARON OF EVANSTON, ILLINOIS, WHO IS THE DAUGHTER OF MRS. LOUISE SHEARON OF PASADENA, CALIFORNIA.

CHILDREN: ERIC, JUNE 30, 1957; MARK, APRIL 8, 1963.

OTHER ACTIVITIES: HIS HOBBIES INCLUDE SOARING (FOR WHICH HE IS A FEDERATION AERONAUTIQUE INTERNATIONALE GOLD BADGE HOLDER).

ORGANIZATIONS: ASSOCIATE FELLOW OF THE SOCIETY OF EXPERIMENTAL TEST PILOTS; ASSOCIATE FELLOW OF THE AMERICAN INSTITUTE

OF AERONAUTICS AND ASTRONAUTICS; AND MEMBER OF THE SOARING SOCIETY OF AMERICA.

SPECIAL HONORS: RECIPIENT OF THE 1962 INSTITUTE OF AEROSPACE SCIENCES OCTAVE CHANUTE AWARD; THE 1966 AIAA ASTRONAUTICS AWARD; AND NASA EXCEPTIONAL SERVICE MEDAL; AND THE 1962 JOHN J. MONTGOMERY AWARD.

EXPERIENCE: ARMSTRONG WAS A NAVAL AVIATOR FROM 1949 TO 1952 AND FLEW 78 COMBAT MISSIONS DURING THE KOREAN ACTION.

HE JOINED NASA'S LEWIS RESEARCH CENTER IN 1955 (THEN NACA LEWIS FLIGHT PROPULSION LABORATORY) AND LATER TRANSFERRED TO THE NASA HIGH SPEED FLIGHT STATION (NOW FLIGHT RESEARCH CENTER AT EDWARDS AIR FORCE BASE, CALIFORNIA, AS AN AERONAUTICAL RESEARCH PILOT FOR NACA AND NASA, IN THIS CAPACITY, HE PERFORMED AS AN X-15 PROJECT PILOT, FLYING THAT AIRCRAFT TO OVER 200,000 FEET AND APPROXIMATELY 4,000 MILES PER HOUR.

LUNAR SURFACE BRIEFINGS AND L-G WALK-THROUGHS OF LUNAR SURFACE EVA OPERATIONS COVERING LUNAR GEOLOGY AND MICROBIOLOGY AND DEPLOYMENT OF EXPERIMENTS IN THE EARLY APOLLO SURFACE EXPERIMENT PACKAGE (EASEP). TRAINING IN LUNAR SURFACE EVA INCLUDED PROACTICE SESSIONS WITH LUNAR SURFACE SAMPLE GATHERING TOOLS AND RETURN CONTAINERS, CAMERAS, THE ERECTABLE S-BAND ANTENNA AND THE MODULAR EQUIPMENT STOWAGE ASSEMBLY (MESA) HOUSED IN THE LM DESCENT STAGE.

PROFICIENCY FLIGHTS IN THE LUNAR LANDING TRAINING VEHICLE (LLTV) FOR THE COMMANDER.

ZERO-G AIRCRAFT FLIGHTS USING COMMAND MODULE AND LUNAR MODULE MOCKUPS FOR EVA AND PRESSURE SUIT DOFFING/DONNING PRACTICE AND TRAINING)

UNDERWATER ZEO-G TRAINING IN THE MSC WATER IMMERSION FACILITY USING SPACECRAFT MOCKUPS TO FURTHER FAMILIARIZE CREW WITH ALL ASPECTS OF CSM-LM DOCKING TUNNEL INTRAVEHICULAR TRANSFER AND EVA IN PRESSURIZED SUITS.

WATER EGRESS TRAINING CONDUCTED IN INDOOR TANKS AS WELL AS IN THE GULF OF MEXICO, INCLUDED UPRIGHTING FROM THE STABLE II POSITION (APEX DOWN) TO THE STABLE I POSITION (APEX UP), EGRESS ONTO RAFTS AND HELICOPTER PICKUP. LAUNCH PAD EGRESS TRAINING FROM MOCKUPS AND FROM THE ACTUAL SPACECRAFT ON THE LAUNCH PAD FOR POSSIBLE EMERGENCIES SUCH AS FIRE, CONTAMINANTS AND POWER FAILURES.

THE TRAINING COVERED USE OF APOLLO SPACECRAFT FIRE SUPPRESSION EQUIPMENT IN THE COCKPIT. PLANETARIUM REVIEWS AT MOREHEAD PLANETARIUM, CHAPEL HILL, N. C., AND AT GRIFFITH PLANETARIUM, LOS ANGELES, CALIF., OF THE CELESTIAL SPHERE WITH THE SPECIAL EMPHASIS ON THE 37 NAVIGATIONAL STARS USED BY THE APOLLO GUIDANCE COMPUTER. OTHER FLIGHT TEST WORK INCLUDED PILOTING THE X-1 ROCKET AIRPLANE, THE F-100, F-101, F-102, F-104, F5D, B-47, THE PARAGLIDER, AND OTHERS.

AS PILOT OF THE B-29 "DROP" AIRCRAFT, HE PARTICIPATED IN THE LAUNCHES OF OVER 100 ROCKET AIRPLANE FLIGHTS. HE HAS LOGGED MORE THAN 4,000 HOURS FLYING TIME. CURRENT ASSIGNMENT: MR. ARMSTRONG WAS SELECTED AS AN ASTRONAUT BY NASA IN SEPTEMBER 1962. HE SERVED AS BACKUP COMMAND PILOT FOR THE GEMINI 5 FLIGHT.

AS COMMAND PILOT FOR THE GEMINI 8 MISSION, WHICH WAS LAUNCHED ON MARCH 16, 1966, HE PERFORMED THE FIRST SUCCESSFUL DOCKING OF TWO VEHICLES IN SPACE. THE FLIGHT, ORIGINALLY SCHEDULED TO LAST THREE DAYS, WAS TERMINATED EARLY DUE TO A MALFUNCTIONING OAMS THRUSTER; BUT THE CREW DEMONSTRATED EXCEPTIONAL PILOTING SKILL IN OVERCOMING THIS PROBLEM AND BRINGING THE SPACECRAFT TO A SAFE LANDING.

HE SUBSEQUENTLY SERVED AS BACKUP COMMAND PILOT FOR THE GEMINI 11 MISSION AND IS CURRENTLY ASSIGNED AS THE COMMANDER FOR THE APOLLO 11 MISSION AND WILL PROBABLY BE THE FIRST HUMAN TO SET FOOT ON THE MOON.

AS A CIVIL SERVANT, ARMSTRONG, A GS-16 STEP 7, EARNS \$30,054 PER ANNUM

NAME: MICHAEL COLLINS (LIEUTENANT COLONEL, USAF)

NASA ASTRONAUT, COMMAND MODULE PILOT, APOLLO 11

BIRTHPLACE AND DATE: BORN IN ROME, ITALY, ON OCTOBER 31, 1930. HIS MOTHER, MRS. JAMES L. COLLINS, RESIDES IN WASHINGTON, D. C.

PHYSICAL DESCRIPTION: BROWN HAIR; BROWN EYES; HEIGHT: 5 FEET 11. INCHES; WEIGHT: 165 POUNDS.

EDUCATION: GRADUATED FROM SAINT ALBANS SCHOOL IN WASHINGTON D. C.; RECEIVED A BACHELOR OF SCIENCE DEGREE FROM THE UNITED STATES MILITARY ACADEMY AT WEST POINT, NEW YORK, IN 1952.

MARITAL STATUS: MARRIED TO THE FORMER PATRICIA M. FINNEGAN OF

CUSTOMER'S NAME: MICHAEL COLLINS

CHILDREN: 1. LEE, BORN 1958; 2. ANN, BORN 1961; 3. OCTOBER 31, 1967

RESIDENCE: WASHINGTON, D. C.

OTHER ACTIVITIES: HPS HOBBIES INCLUDE FISHING AND HANDBALL.

ORGANIZATIONS: MEMBER OF THE SOCIETY OF EXPERIMENTAL TEST PILOTS.

SPECIAL HONORS: AWARDED THE NASA EXCEPTIONAL SERVICE MEDAL, THE AIR FORCE COMMAND PILOT ASTRONAUT WINGS, AND THE AIR FORCE DISTINGUISHED FLYING CROSS.

EXPERIENCE: COLLINS, AN AIR FORCE LT. COLONEL, CHOSE AN AIR FORCE CAREER FOLLOWING GRADUATION FROM WEST POINT.

HE SERVED AS AN EXPERIMENTAL FLIGHT TEST OFFICER AT THE AIR FORCE FLIGHT TEST CENTER, EDWARDS AIR FORCE BASE, CALIFORNIA,

AND, IN THAT CAPACITY, TESTED PERFORMANCE AND STABILITY AND CONTROL CHARACTERISTICS OF AIR FORCE AIRCRAFT--PRIMARILY JET FIGHTERS.

HE HAS LOGGED MORE THAN 4,000 HOURS FLYING TIME, INCLUDING MORE THAN 3,200 HOURS IN JET AIRCRAFT.
CURRENT ASSIGNMENT: LT. COLONEL COLLINS WAS ONE OF THE THIRD GROUP OF ASTRONAUTS NAMED BY NASA IN OCTOBER 1963. HE HAS SINCE SERVED AS BACKUP PILOT FOR THE GEMINI 7 MISSION.

AS PILOT ON THE 3-DAY 44-REVOLUTION GEMINI MISSION, LAUNCHED JULY 15, 1966, COLLINS SHARES WITH COMMAND PILOT JOHN YOUNG IN THE ACCOMPLISHMENTS OF THAT RECORD-SETTING FLIGHT. THESE ACCOMPLISHMENTS INCLUDE A SUCCESSFUL RENDEZVOUS AND DOCKING WITH A SEPARATELY LAUNCHED AGENA TARGET VEHICLE AND, USING THE POWER OF THE AGENA, MANEUVERING THE GEMINI SPACECRAFT INTO ANOTHER ORBIT FOR A RENDEZVOUS WITH A SECOND, PASSIVE AGENA. COLLINS' SKILLFUL PERFORMANCE IN COMPLETING TWO PERIODS OF EXTRAVEHICULAR ACTIVITY, INCLUDING HIS RECOVERY OF A MICROMETEORITE DETECTION EXPERIMENT FROM THE PASSIVE AGENA, ADDED GREATLY TO OUR KNOWLEDGE OF MANNEED SPACE FLIGHT. GEMINI 7 ATTAINED AN APOGEE OF APPROXIMATELY 475 STATUTE MILES AND TRAVELED A DISTANCE OF 1,275,091 STATUTE MILES-- AFTER WHICH SPLASH-DOWN OCCURRED IN THE WEST ATLANTIC 529 STATUTE MILES EAST OF CAPE KENNEDY. THE SPACECRAFT LANDED 2.6 MILES FROM THE USS GUADALCANAL AND BECAME THE SECOND IN THE GEMINI PROGRAM TO LAND WITHIN EYE AND CAMERA RANGE OF A PRIME RECOVERY VESSEL. HE IS CURRENTLY ASSIGNED AS COMMAND MODULE PILOT ON THE APOLLO 11 MISSION. THE ANNUAL PAY AND ALLOWANCES OF AIR FORCE LIEUTENANT COLONEL WITH COLLINS' TIME IN SERVICE TOTALS \$DOLLARS/ 17,147.36.

NAME: EDWIN E. ALDRIN, JR. (COLONEL, USAF)
NASA ASTRONAUT, LUNAR MODULE PILOT, APOLLO 11
BIRTHPLACE AND DATE: BORN IN MONTCLAIR, NEW JERSEY, ON JANUARY 20, 1930, AND IS THE SON OF THE LATE MARION MOON ALDRIN AND COLONEL (USAF RETIRED) EDWIN E. ALDRIN, WHO RESIDES IN BRIELLE, NEW JERSEY.

PHYSICAL DESCRIPTION: BLOND HAIR; BLUE EYES; HEIGHT: 5 FEET 10 INCHES; WEIGHT 165 POUNDS.
EDUCATION: GRADUATED FROM MONTCLAIR HIGH SCHOOL, MONTCLAIR, NEW JERSEY; RECEIVED A BACHELOR OF SCIENCE DEGREE FROM THE UNITED STATES MILITARY ACADEMY AT WEST POINT, NEW YORK, IN 1951 AND A DOCTOR OF SCIENCE DEGREE IN ASTRONAUTICS FROM THE MASSACHUSETTS INSTITUTE OF TECHNOLOGY IN 1964.

RECIPIENT OF AN HONORARY DOCTORATE OF SCIENCE DEGREE FROM OUSTAVE ADOLPHE COLLEGE IN 1967; HONORARY DEGREE FROM CLARK UNIVERSITY, WORCESTER, MASS.

MARITAL STATUS: MARRIED TO THE FORMER JOAN A. ARCHER OF AG-HO-HUS, NEW JERSEY, WHOSE PARENTS, MR. AND MRS. MICHAEL ARCHER, ARE RESIDENTS OF THAT CITY.

CHILDREN: J. MICHAEL, SEPTEMBER 2, 1952; JANICE R., AUGUST 16, 1957; ANDREW J., JUNE 17, 1958.

OTHER ACTIVITIES: HE IS A SCOUT BERTH BADGE COUNSELLOR AND AN ELDER AND TRUSTEE OF THE WEBSTER PRESBYTERIAN CHURCH. HIS HOBBIES INCLUDE RUNNING, SCUBA DIVING, AND HIGH BARN EXPERIENCES.

ORGANIZATIONS: ASSOCIATE FELLOW OF THE AMERICAN INSTITUTE OF AERONAUTICS AND ASTRONAUTICS; MEMBER OF THE SOCIETY OF EXPERIMENTAL TEST PILOTS, SIGMA GAMMA TAU (AERONAUTICAL ENGINEERING SOCIETY) TAU DELTA PI (NATIONAL ENGINEERING SOCIETY), SIGMA XI (NATIONAL SCIENCE RESEARCH SOCIETY); AND A 32ND DEGREE MASON ADVANCED THROUGH THE LODGE 7 AND SHRINE.

SPECIAL HONORARY AWARDS THE DISTINGUISHED FLYING GROUP WITH ONE OAK LEAF CLUSTER, THE AIR MEDAL WITH TWO OAK LEAF CLUSTERS, THE AIR FORCE COMMENDATION MEDAL, THE NASA-EXCEPTIONAL SERVICE MEDAL AND AIR FORCE COMMAND PILOT ASTRONAUT PIN, THE 1966 GROUP ACHIEVEMENT AWARD FOR RENDEZVOUS OPERATIONS PLANNING TEAM, AND HONORARY-LIFE MEMBERSHIP IN THE INTERNATIONAL ASSOCIATION OF ROCKETEERS AND AEROSPACE WORKERS, AND AN HONORARY MEMBERSHIP IN THE AEROSPACE MEDICAL ASSOCIATION.

EXPERIENCED ALDRIN, AN AIR FORCE COLONEL, WAS GRADUATED THIRD IN CLASS OF 479 FROM THE UNITED STATES MILITARY ACADEMY AT WEST POINT IN 1951 AND SUBSEQUENTLY RECEIVED HIS WINGS AT BRYAN, TEXAS, IN 1952.

HE FLEW 65 COMBAT MISSIONS IN F-86 AIRCRAFT WHILE ON DUTY IN KOREA WITH THE 21ST FIGHTER INTERCEPTOR WING AND WAS CREDITED WITH DESTROYING TWO MIG-15 AIRCRAFT. AT NELLIS AIR FORCE BASE, NEVADA, HE SERVED AS AN AERIAL GUNNERY INSTRUCTOR AND THEN ATTENDED THE SQUADRON OFFICERS' SCHOOL AT THE AIR UNIVERSITY, MAXWELL AIR FORCE BASE, ALABAMA. FOLLOWING HIS ASSIGNMENT AS AIDE TO THE DEAN OF FACULTY AT THE UNITED STATES AIR FORCE ACADEMY, ALDRIN FLEW F-100 AIRCRAFT AS A FLIGHT COMMANDER WITH THE 36TH TACTICAL FIGHTER WING AT BITTUNG, GERMANY. HE ATTENDED MIT, RECEIVING A DOCTORATE AFTER COMPLETING HIS THESIS CONCERN-

ING GUIDANCE FOR MANNEQ ORBITAL RENDEZVOUS, AND WAS THEN ASSIGNED TO THE GEMINI TARGET OFFICE OF THE AIR FORCE SPACE SYSTEMS DIVISION, LOS ANGELES, CALIFORNIA. HE WAS LATER TRANSFERRED TO THE USAF FIELD OFFICE AT THE MANNED SPACECRAFT CENTER WHICH AS RESPONSIBLE FOR INTEGRATING DOO EXPERIMENTS INTO THE NASA GEMINI FLIGHTS.

HE HAS LOGGED APPROXIMATELY 3,500 HOURS FLYING TIME, INCLUDING 2,353 HOURS IN JET AIRCRAFT AND 139 HOURS IN HELICOPTERS. HE HAS MADE SEVERAL FLIGHTS IN THE LUNAR LANDING RESEARCH VEHICLE.

CURRENT ASSIGNMENT: COLONEL ALDRIN WAS ONE OF THE THIRD GROUP OF ASTRONAUTS NAMED BY NASA IN OCTOBER 1963. HE HAS SINCE SERVED AS BACKUP PILOT FOR THE GEMINI 9 MISSION AND PRIME PILOT FOR THE GEMINI 12 MISSION.

ON NOVEMBER 11, 1966, HE AND COMMAND PILOT JAMES LOVELL WERE LAUNCHED INTO SPACE IN THE GEMINI 12 SPACECRAFT ON A 4-DAY 35-REVOLUTION FLIGHT WHICH BROUGHT THE GEMINI PROGRAM TO A SUCCESSFUL CLOSE. ALDRIN ESTABLISHED A NEW RECORD FOR EXTRAVENICULAR ACTIVITY (EVA) BY ACCRUING 5 SLIGHTLY MORE AND 3 1/2 HOURS OUTSIDE THE SPACECRAFT, DURING

THE SECOND EVA. HE ATTACHED A TETHER TO THE AGENA; RETRIEVED A MICRO METEORITE EXPERIMENT PACKAGE FROM THE SPACECRAFT; AND EVALUATED THE USE OF BODY RESTRAINTS SPECIALLY DESIGNED FOR COMPETING WORK TASKS OUTSIDE THE SPACECRAFT. HE COMPLETED NUMEROUS PHOTOGRAPHIC EXPERIMENTS AND OBTAINED THE FIRST PICTURES TAKEN FROM SPACE OF AN ECLIPSE OF THE SUN.

OTHER MAJOR ACCOMPLISHMENTS OF THE 94-HOUR 35-MINUTE FLIGHT INCLUDED A THIRD-REVOLUTION RENDEZVOUS WITH THE PREVIOUSLY LAUNCHED AGENA, USING FOR THE FIRST TIME BACKUP ONBOARD COMPUTATIONS DUE TO A RADAR FAILURE, AND A FULLY AUTOMATIC CONTROLLED REENTRY OF A SPACECRAFT. GEMINI 12 SPLASHED DOWN IN THE ATLANTIC WITHIN 2 1/2 MILES OF THE PRIME RECOVERY SHIP USS WASP.

ALDRIN IS CURRENTLY ASSIGNED AS LUNAR MODULE PILOT FOR THE APOLLO 14 FLIGHT. THE ANNUAL PAY AND ALLOWANCES OF AN AIR FORCE COLONEL WITH ALDRIN'S TIME IN SERVICE TOTAL DOLLARS/16,622.56.

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APOLLO 11 TIME LINE, CREW, PROFILE
THE PRELIMINARY FLIGHT PLAN FOR THE APOLLO 11 LUNAR LAND-
ING MISSION, SCHEDULED FOR LAUNCH NO EARLIER THAN JULY 16,
CALLS FOR TOUCHDOWN ON THE MOON AT 2:22 P.M. EDT JULY 20.
NINE HOURS AND 50 MINUTES LATER--AT 12/12 A.M. JULY 21--
APOLLO 11 COMMANDER NEIL A. ARMSTRONG, 38, IS TO STEP ONTO THE
MOON'S SURFACE.

SUBJECT TO CHANGE BEFORE LAUNCH, THE TENTATIVE TIME LINE
FOR APOLLO 11 HAS BEEN ANNOUNCED BY THE NATIONAL AERONAUTICS
AND SPACE ADMINISTRATION. WHILE THE COMMAND MODULE PILOT,
USAF LT. COL. MICHAEL COLLINS, 38, ORBITS THE MOON, ARMSTRONG
AND USAF COL. EDWIN E. ALDRIN JR., 39, LUNAR MODULE PILOT, WILL
GATHER UP TO 50 POUNDS OF SAMPLES OF LUNAR SURFACE MATERIALS
FOR RETURN TO EARTH.

THEY ARE ALSO SCHEDULED TO MAKE PHOTOGRAPHS AND LEAVE AN
EXPERIMENTS PACKAGE ON THE MOON WHICH WILL INCLUDE A LASER
REFLECTOR AND INSTRUMENTS FOR MEASURING SEISMIC ACTIVITY.
ARMSTRONG AND ALDRIN ARE TO LEAVE THE MOON AT 12 NOON EDT
JULY 21, REJOIN THE COMMAND MODULE AND COMPLETE THE EIGHT-DAY
MISSION WITH SPLASHDOWN IN THE PACIFIC OCEAN AT 12:52 P.M.

JULY 24, FOR A TOTAL GROUND ELAPSED TIME OF 195 HOURS, 20
MINUTES AND 42.2 SECONDS.

APOLLO 11 WILL BE THE FIFTH MANNED FLIGHT IN THE SERIES.
LAUNCH WILL BE AT KENNEDY SPACE CENTER, FLA.'S LAUNCH COMPLEX
39A ABOARD A THREE-STAGE SATURN V BOOSTER.
ALL OF THE APOLLO 11 CREW MEMBERS ARE VETERANS OF THE TWO-
MAN GEMINI SPACE FLIGHT SERIES FLOWN DURING 1965-66. BACKUP
CREW MEMBERS ARE USN CAPT. JAMES A. LOVELL, USAF LT. COL.
WILLIAM A. ANDERS AND CIVILIAN FRED W. HAISE. LOVELL AND ANDERS,
BOTH GEMINI VETERANS, WERE COMMAND MODULE AND LUNAR MODULE
PILOT, RESPECTIVELY, ON THE MOON-CIRCLING APOLLO 8 MISSION LAST
DECEMBER. HAISE HAS NOT FLOWN IN SPACE.

PROBABLE TOUCHDOWN POINT FOR THE APOLLO 11 LM IS LANDING
SITE 2, LOCATED IN THE SOUTHWEST CORNER OF THE MOON'S SEA OF
TRANQUILLITY, WHICH WAS PHOTOGRAPHED BY THE APOLLO 10 CREW FROM
AN ALTITUDE OF ABOUT 50,000 FEET.

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FM NASA GSFC GREENBELT MD
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LRID/DR BAUTISTE/NASA REP

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CURRENT CHANGE IN APOLLO FLIGHT PLAN

TWO REVOLUTIONS OF THE MOON HAVE BEEN ADDED TO THE FLIGHT
PLAN FOR THE APOLLO 11 LUNAR LANDING MISSION TO IMPROVE
COMMUNICATIONS DURING CRITICAL MANEUVERS AND TO ALLOW MORE TIME
FOR DECONTAMINATION OF EQUIPMENT EXPOSED TO THE LUNAR ENVIRON-
MENT.

ADDING A REVOLUTION JUST BEFORE THE LUNAR MODULE (LM)
UNDOCKS FROM THE COMMAND/SERVICE MODULE (CSM) WILL BRING THE LM
WITHIN RADIO SIGHT OF THE LARGEST TRACKING ANTENNA, THE 210-INCH
DISH AT GOLDSTONE, CALIF., DURING ITS DESCENT TO THE LUNAR
SURFACE.

A SECOND ADDED REVOLUTION AFTER REDOCKING AND BEFORE THE
LM IS CAST OFF WILL GIVE ASTRONAUTS NEIL A. ARMSTRONG AND EDWIN
E. ALDRIN AN ADDITIONAL TWO HOURS TO BRUSH AND VACUUM MOON DUST
FROM THE LUNAR SAMPLE BOXES AND OTHER ITEMS BEFORE TRANSFERRING
THEM TO THE CSM FOR RETURN TO EARTH.

THIS REVISION OF THE FLIGHT PLAN INCREASES THE PLANNED
REVOLUTIONS OF MOON TO 30 FOR A TOTAL TIME IN LUNAR ORBIT OF
59 HOURS 30 MINUTES. IT IS EXPECTED THAT THE ADDED FOUR HOURS
WILL BE MADE UP BY A FASTER RETURN JOURNEY.

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THE PRESENT FLIGHT PLAN, SUBJECT TO FURTHER REVISIONS BEFORE LAUNCH, SCHEDULES PRINCIPAL EVENTS OF THE MISSION AS FOLLOWS:

EASTERN DAYLIGHT

	TIME	
WEDNESDAY, JULY 16	9:32 A.M.	LIFTOFF
	12:16 P.M.	TRANSLUNAR INJECTION
SATURDAY, JULY 19	1:26 P.M.	LUNAR ORBIT INSERTION
	5:41 P.M.	LUNAR ORBIT CIRCULARIZED
SUNDAY, JULY 20	1:50 P.M.	LM UNDOCKS FROM CSM
	3:14 P.M.	DESCENT ORBIT INSERTION
	4:23 P.M.	TOUCHDOWN ON MOON
MONDAY, JULY 21	2:17 A.M.	ARMSTRONG EMERGES ONTO LUNAR SURFACE
	4:47 A.M.	LUNAR EVA ENDS
	1:50 P.M.	LM LIFTS OFF FROM MOON
	5:32 P.M.	REDOCKING
	9:25 P.M.	LM JETTISONED
TUESDAY, JULY 22	12:56 A.M.	TRANSEARTH INJECTION
THURSDAY, JULY 24	12:49 P.M.	SPLASHDOWN

PREPARATIONS FOR THE APOLLO 11 LAUNCH ON JULY 16 ARE PROGRESSING SATISFACTORILY.

MAJOR EVENTS PLANNED FOR THIS WEEKEND INCLUDE TRAINING FLIGHTS IN THE LUNAR LANDING TEST VEHICLE AT ELLINGTON AIR FORCE BASE, TEXAS, BY SPACECRAFT COMMANDER ARMSTRONG. THESE FLIGHTS WHICH SIMULATE LANDING THE LUNAR MODULE ON THE MOON WILL BE FLOWN ONLY IF WEATHER CONDITIONS PERMIT.

THE PRIME CREW, ASTRONAUTS ARMSTRONG, ALDRIN, AND MICHAEL COLLINS WILL REVIEW FLIGHT PROGRAM NOTES AND ANOMALIES AND BACK CONTAMINATION PROCEDURES ON MONDAY. SATURDAY, THEY ARE SCHEDULED TO PRACTICE SUITING AND UNSUITING IN THE COMMAND MODULE.

AT THE KENNEDY SPACE CENTER, FLA., THE APOLLO 11 SPACECRAFT IS ON THE LAUNCH PAD ATOP ITS SATURN V LAUNCH VEHICLE UNDERGOING LEAK AND FUNCTIONAL TESTS AND BEING PREPARED TO RECEIVE HYPERGOLIC PROPELLANTS EARLY NEXT WEEK.

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LRID/DR BAUTISTE
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ALL STADIR/M AND O/NASA SHIPS REP/STADAN AND SWITCHING CTR MGRS

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APOLLO 11 TELEVISION:

TWO HOURS AND 40 MINUTES OF LIVE TELEVISION FROM THE
SURFACE OF THE MOON WILL BE TRANSMITTED TO EARTH BY APOLLO
11 IN AN EARLY, EARLY SHOW BEGINNING AT 2:12 A.M., EDT,
JULY 21.

BLACK-AND-WHITE PICTURES WILL SHOW ASTRONAUT NEIL A.
ARMSTRONG STEPPING ONTO THE MOON FROM THE LADDER OF THE
LUNAR MODULE AND ERECTING A U. S. FLAG AND ARMSTRONG AND
EDWIN E. ALDRIN, JR., GATHERING LUNAR ROCKS AND SOIL SAMPLES
AND SETTING OUT SCIENTIFIC EXPERIMENTS.

THE LUNAR SURFACE TRANSMISSION IS ONE THE EIGHT TENTATIVELY
PLANNED FOR THE APOLLO 11 FLIGHT, SCHEDULED FOR LAUNCH
FROM KENNEDY SPACE CENTER, FLA., ON JULY 16.

ALL THE OTHERS ARE IN COLOR FROM THE COMMAND MODULE,
WHICH WILL REMAIN IN ORBIT ABOUT 70 MILES ABOVE THE MOON WHILE
THE LM DESCENDS FOR THE LANDING.

THE TENTATIVE SCHEDULE OF TV TRANSMISSIONS FOLLOWS:

DATE	EDT	EVENT
JULY 17	7:32 - 7:47 P.M.	TRANSLUNAR COAST, ABOUT 150,000 MILES FROM EARTH
JULY 18	7:32 - 7:47 P.M.	TRANSLUNAR COAST, NEARING MOON.
JULY 19	4:02 - 4:17 P.M.	SURFACE VIEWS OF MOON FROM LUNAR ORBIT.
JULY 20	1:52 - 2:22 P.M.	CSM AND LM FLYING FORMATION AFTER SEPARATION.
JULY 21	1:57 - 2:07 P.M.	LANDING SITE TRACKING.
	2:12 - 4:52 A.M.	LUNAR SURFACE.
JULY 22	9:02 - 9:17 A.M.	TRANSEARTH COAST.
JULY 23	7:02 - 7:17 P.M.	TRANSEARTH COAST.

TELEVISION SIGNALS FROM THE MOON WILL BE TRANSMITTED
DIRECT FROM THE LM, OR FROM AN UMBRELLA-LIKE HIGH-GAIN ANTENNA
SET UP ON THE LUNAR SURFACE, TO A 210-FOOT DIAMETER RADIO
TELESCOPE AT THE NATIONAL RADIO ASTRONOMY OBSERVATORY, PARKES,
AUSTRALIA.

FROM PARKES THE SIGNALS, CONVERTED TO A STANDARD U.S.
TELEVISION PICTURE, WILL BE TRANSMITTED TO SYDNEY, AUSTRALIA,
BY MICROWAVE AND THEN VIA THE INTELSAT III PACIFIC SATELLITE
TO NASA'S MISSION CONTROL CENTER AT HOUSTON, TEXAS, FOR RELEASE
TO THE U.S. AND OVERSEAS TELEVISION NETWORKS.

02/1746Z JUL GSTS

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ALL STADIR/M AND O/NASA SHIPS REP/STADAN AND SWITCHING CTR MGRS

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APOLLO 11 PHOTOGRAPHIC TASKS

STILL AND MOTION PICTURES WILL BE MADE OF MOST SPACECRAFT MANEUVERS AS WELL AS OF THE LUNAR SURFACE AND OF CREW ACTIVITIES IN THE APOLLO 11 CABIN. DURING THE LUNAR SURFACE ACTIVITIES AFTER LUNAR MODULE TOUCHDOWN AND THE TWO HOUR 40 MINUTE EVA, EMPHASIS WILL BE ON PHOTOGRAPHIC DOCUMENTATION OF CREW MOBILITY, LUNAR SURFACE FEATURES AND LUNAR MATERIAL SAMPLE COLLECTION.

CAMERA EQUIPMENT CARRIED ON APOLLO 11 CONSISTS OF ONE 70MM HASSELBLAD ELECTRIC CAMERA STOWED ABOARD THE COMMAND MODULE, TWO HASSELBLAD 70MM LUNAR SURFACE SUPERWIDE ANGLE CAMERAS STOWED ABOARD THE LM AND A 35MM STEREO CLOSE-UP CAMERA IN THE LM MESA. THE 2.3 POUND HASSELBLAD SUPERWIDE ANGLE CAMERA IN THE LM IS FITTED WITH A 38MM F/4.5 ZEISS BIOGON LENS WITH A FOCUSING RANGE FROM 12 INCHES TO INFINITY. SHUTTER SPEEDS RANGE FROM TIME XPOSURE AND ONE SECOND TO 1/500 SECOND. THE ANGULAR FIELD OF VIEW WITH THE 38MM LENS IS 71 DEGREES VERTICAL AND HORIZONTAL ON THE SQUARE-FORMAT FILM FRAME.

THE COMMAND MODULE HASSELBLAD ELECTRIC CAMERA IS NORMALLY FITTED WITH AN 80MM F/2.8 ZEISS PLANAR LENS, BUT BAYONET-MOUNT 60MM AND 250MM LENS MAY BE SUBSTITUTED FOR SPECIAL TASKS. THE 80MM LENS HAS A FOCUSING RANGE FROM THREE FEET TO INFINITY AND HAS A FIELD OF VIEW OF 38 DEGREES VERTICAL AND HORIZONTAL. STOWED WITH THE HASSELBLADS ARE SUCH ASSOCIATED ITEMS AS A SPOTMETER, RINGSIGHT, POLARIZING FILTER, AND FILM MAGAZINES. BOTH VERSIONS OF THE HASSELBLAD ACCEPT THE SAME TYPE FILM MAGAZINE.

FOR MOTION PICTURES, TWO MAURER 61MM DATA ACQUISITION CAMERAS (ONE IN THE CSM, ONE IN THE LM) WITH VARIABLE FRAME SPEED (1, 6, 12 AND 24 FRAMES PER SECOND) WILL BE USED. THE CAMERAS EACH WEIGH 2.8 POUNDS WITH A 130-FOOT FILM MAGAZINE ATTACHED. THE COMMAND MODULE 16MM CAMERA WILL HAVE LENSES OF 5, 18 AND 75MM FOCAL LENGTH AVAILABLE, WHILE THE LM CAMERA WILL BE FITTED WITH THE 18MM WIDEANGLE LENS. MOTION PICTURE CAMERA ACCESSORIES INCLUDE A RIGHT-ANGLE MIRROR, A POWER CABLE AND A COMMAND MODULE BORESIGHT WINDOW BRACKET.

DURING THE LUNAR EXTRAVEHICULAR ACTIVITY, THE COMMANDER WILL BE FILMED BY THE LM PILOT WITH THE LM 16MM CAMERA AT NORMAL OR NEAR-NORMAL FRAME RATES (24 AND 12 FPS), BUT WHEN HE LEAVES THE LM TO JOIN THE COMMANDER, HE WILL SWITCH TO A ONE FRAME-PER-SECOND RATE. THE CAMERA WILL BE MOUNTED INSIDE THE LM LOOKING THROUGH THE RIGHT-HAND WINDOW. THE 18MM LENS HAS A HORIZONTAL FIELD OF VIEW OF 32 DEGREES AND A VERTICAL FIELD OF VIEW OF 23 DEGREES. AT ONE FPS, A 130-FOOT 16MM MAGAZINE WILL RUN OUT IN 87 MINUTES IN REAL TIME; PROJECTED AT THE STANDARD 24 FPS, THE FILM WOULD COMPRESS THE 87 MINUTES TO 3.6 MINUTES.

ARMSTRONG AND ALDRIN WILL USE THE HASSELBLAD LUNAR SURFACE CAMERA EXTENSIVELY DURING THEIR SURFACE EVA TO DOCUMENT EACH OF THEIR MAJOR TASKS. ADDITIONALLY, THEY WILL MAKE A 360-DEGREE OVERLAPPING PANORAMA SEQUENCE OF STILL PHOTOS OF THE LUNAR HORIZON, PHOTOGRAPH SURFACE FEATURES IN THE IMMEDIATE AREA, MAKE CLOSE-UPS OF GEOLOGICAL SAMPLES AND THE AREA FROM WHICH THEY WERE COLLECTED AND RECORD ON FILM THE APPEARANCE AND CONDITION OF THE LUNAR MODULE AFTER LANDING.

STOWED IN THE MESA IS A 35MM STEREO CLOSE-UP CAMERA WHICH SHOOTS 24MM SQUARE COLOR STEREO PAIRS WITH AN IMAGE SCALE OF ONE-HALF ACTUAL SIZE. THE CAMERA IS FIXED FOCUS AND IS EQUIPPED WITH A STAND-OFF HOOD TO POSITION THE CAMERA AT THE PROPER FOCUS DISTANCE. A LONG HANDLE PERMITS AN EVA CREWMAN TO POSITION THE CAMERA WITHOUT STOOPING FOR SURFACE OBJECT PHOTOGRAPHY. DETAIL AS SMALL AS 40 MICRONS CAN BE RECORDED.

A BATTERY-POWERED ELECTRONIC FLASH PROVIDES ILLUMINATION. FILM CAPACITY IS A MINIMUM OF 100 STEREO PAIRS. THE STEREO CLOSE-UP CAMERA WILL PERMIT THE APOLLO 11 LANDING CREW TO PHOTOGRAPH SIGNIFICANT SURFACE STRUCTURE PHENOMENA WHICH WOULD REMAIN INTACT ONLY IN THE LUNAR ENVIRONMENT, SUCH AS FINE POWDERY DEPOSITS, CRACKS OR HOLES AND ADHESION OF PARTICLES. NEAR THE END OF EVA, THE FILM CASSETTE WILL BE REMOVED AND STOWED IN THE COMMANDER'S CONTINGENCY SAMPLE CONTAINER POCKET AND THE CAMERA BODY WILL BE LEFT ON THE LUNAR SURFACE.

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FM PAO/202

INFO ANRC/SR N REP

LRID/DR BAUTISTE

LRID/NASA REP

ALL STADIR/M&O/NASA SHIPS REP/STADAN AND SWITCHING CTR MGRS

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THE FOLLOWING IS A SCHEDULE OF MAJOR EVENTS FOR APOLLO 11
MISSION AS OF JULY 3, 1969:

DATE	GET	EDT	EVENT
JULY 16	00:00:00	09:32A	LAUNCH
16	00:11:50	09:44A	EARTH ORBIT INSERTION
16	02:44:15	12:16P	TRANS-LUNAR INJECTION
19	75:54:28	1:26P	LUNAR ORBIT INSERTION
19	80:09:30	5:42P	LUNAR ORBIT CIRCULIZATION
20	100:09:50	1:42P	LM UNDOCKS CSM
20	100:39:50	2:12P	SEPARATION
20	101:38:48	3:12P	DESCENT ORBIT INSERTION
20	102:35:13	4:08P	POWER DESCENT INITIATION
20	102:47:11	4:19P	LUNAR TOUCHDOWN
JULY 21	112:30:00	2:02A	DEPRESSURIZATION OF LM
21	112:30:00	2:02A	START OF EVA
21	115:10:00	4:42A	END EVA
21	115:10:00	4:42A	REPRESSURIZE LM
21	124:23:21	1:55P	LUNAR LIFTOFF
JULY 22	135:24:34	00:57A	TRANSEARTH INJECTION
24	195:19:05	12:51P	SPLASHDOWN

OTHER PERTINENT FACTS ON THIS MISSION:

TOTAL TIME IN LUNAR ORBIT: 59 HOURS 30 MINUTES

LUNAR STAY TIME : 21 HOURS 27 MINUTES

MISSION DURATION : 8 DAYS 3 HOURS

THE B/W TELEVISION CAMERA WILL BE REMOVED FROM THE LM AND SET UP ON
THE LUNAR SURFACE AFTER 33 MINUTES OF EVA HAS ELAPSED.
END

04/0450Z JUL GSTS

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LRID/NASA REP
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LUNAR SURFACE EXTRAVEHICULAR ACTIVITY (EVA)
ARMSTRONG AND ALDRIN WILL SPEND ABOUT 22 HOURS ON THE
LUNAR SURFACE AFTER LUNAR MODULE TOUCHDOWN AT 102:47:11
GET. FOLLOWING EXTENSIVE CHECKOUT OF LM SYSTEMS AND PREPARA-
TIONS FOR CONTINGENCY ASCENT STAGING, THE LM CREW WILL EAT
AND REST BEFORE DEPRESSURIZING THE LM FOR LUNAR SURFACE
EVA. BOTH CREWMEN WILL DON PORTABLE LIFE SUPPORT SYSTEM
(PLSS) BACKPACKS WITH OXYGEN PURGE SYSTEM UNITS (OPS) ATTACH-
ED.

LM DEPRESSURIZATION IS SCHEDULED FOR 112:30 GET WITH THE
COMMANDER BEING THE FIRST TO EGRESS THE LM AND STEP ONTO THE
LUNAR SURFACE. HIS MOVEMENTS WILL BE RECORDED ON STILL AND
MOTION PICTURE FILM BY THE LUNAR MODULE PILOT AND BY TV DE-
PLOYED BY THE COMMANDER PRIOR TO DESCENDING THE LADDER. THE
LM PILOT WILL LEAVE THE LM ABOUT 25 MINUTES AFTER THE COM-
MANDER AND BOTH CREWMEN WILL COLLECT SAMPLES OF LUNAR MATERIAL
AND DEPLOY THE EARLY APOLLO SCIENTIFIC EXPERIMENTS PACKAGE
(EASEP) AND THE SOLAR WIND COMPOSITION (SWC) EXPERIMENT.
THE COMMANDER, SHORTLY AFTER SETTING FOOT ON THE LUNAR
SURFACE, WILL COLLECT A CONTINGENCY SAMPLE OF SURFACE MATER-
IAL AND PLACE IT IN HIS SUIT POCKET. LATER BOTH CREWMEN WILL
COLLECT AS MUCH AS 130 POUNDS OF LOOSE MATERIALS AND CORE
SAMPLES WHICH WILL BE STOWED IN AIR-TIGHT SAMPLE RETURN CON-
TAINERS FOR RETURN TO EARTH.

PRIOR TO SEALING THE SRC, THE SWC EXPERIMENT, WHICH
MEASURES THE ELEMENTAL AND ISOTOPIC CONSTITUENTS OF THE NOBLE
(INERT) GASES IN THE SOLAR WIND, IS ROLLED UP AND PLACED IN
THE CONTAINER FOR RETURN TO EARTH FOR ANALYSIS. PRINCIPAL EX-
PERIMENTER IS DR. JOHANNES GEISS, UNIVERSITY OF BERN, SWITZERLAND.
THE CREW WILL PHOTOGRAPH THE LANDING SITE TERRAIN
AND INSPECT THE LM DURING EVA. THEY CAN RANGE OUT TO
ABOUT 100 FEET FROM THE LM.

AFTER BOTH CREWMEN HAVE INGRESSED THE LM AND HAVE CON-
NECTED TO THE CABIN SUIT CIRCUIT, THEY WILL DOFF THE PLSS
BACKPACKS AND JETTISON THEM ALONG WITH OTHER GEAR NO LONGER
NEEDED, THROUGH THE LM FRONT HATCH ONTO THE LUNAR SURFACE.
THE LM CABIN WILL BE REPRESSURIZED ABOUT 2 HRS. 40 MIN.
AFTER EVA INITIATION TO PERMIT TRANSFER BY THE CREW TO THE
LM LIFE SUPPORT SYSTEMS. THE LM WILL THEN BE DEPRESSURIZED
TO JETTISON UNNECESSARY EQUIPMENT TO THE LUNAR SURFACE AND
BE REPRESSURIZED. THE CREW WILL HAVE A MEAL AND REST PERIOD
BEFORE PREPARING FOR ASCENT INTO LUNAR ORBIT AND RENDEZVOUSING
WITH THE CSM.

04/0920Z JUL GSTS

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TO ALL STADIR/M AND O/NASA SHIPS REP/STADAN AND SWITCHING CTR MGRS

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APOLLO 11 ONBOARD TELEVISION

TWO TELEVISION CAMERAS WILL BE CARRIED ABOARD APOLLO 11.

A COLOR CAMERA OF THE TYPE USED ON APOLLO 10 WILL BE STOWED FOR USE ABOARD THE COMMAND MODULE, AND THE BLACK-AND-WHITE APOLLO LUNAR TELEVISION CAMERA WILL BE STOWED IN THE LM DESCENT STAGE FOR TELEVISION BACK TO EARTH A REAL-TIME RECORD OF MAN'S FIRST STEP ONTO THE MOON.

THE LUNAR TELEVISION CAMERA WEIGHS 7.25 POUNDS AND DRAWS 6.5 WATTS OF 24-32 VOLTS DC POWER. SCAN RATE IS 10 FRAMES-PER-SECOND AT 320 LINES-PER-FRAME. THE CAMERA BODY IS 10.6 INCHES LONG, 6.5 INCHES WIDE AND 3.4 INCHES DEEP. THE BAYONET LENS MOUNT PERMITS LENS CHANGES BY A CREWMAN IN A PRESSURIZED SUIT. TWO LENSES, A WIDEANGLE LENS FOR CLOSE-UPS AND LARGE AREAS, AND A LUNAR DAY LENS FOR VIEWING LUNAR SURFACE FEATURES AND ACTIVITIES IN THE NEAR FIELD OF VIEW WITH SUNLIGHT ILLUMINATION, WILL BE PROVIDED FOR THE LUNAR TV CAMERA.

THE BLACK-AND-WHITE LUNAR TELEVISION CAMERA IS STOWED IN THE MESA (MODULAR EQUIPMENT STOWAGE ASSEMBLY) IN THE LM DESCENT STAGE AND WILL BE POWERED UP BEFORE ARMSTRONG STARTS DOWN THE LM LADDER. WHEN HE PULLS THE LANYARD TO DEPLOY THE MESA, THE TV CAMERA WILL ALSO SWING DOWN ON THE MESA TO THE LEFT OF THE LADDER (AS VIEWED FROM LM FRONT) AND RELAY A TV PICTURE OF HIS INITIAL STEPS ON THE MOON. ARMSTRONG LATER WILL MOUNT THE TV CAMERA ON A TRIPOD SOME DISTANCE AWAY FROM THE LM AFTER ALDRIN HAS DESCENDED TO THE SURFACE. THE CAMERA WILL BE LEFT UNTENDED TO COVER THE CREW'S ACTIVITIES DURING THE REMAINDER OF THE EVA. THE APOLLO LUNAR TELEVISION CAMERA IS BUILT BY WESTINGHOUSE ELECTRIC CORP., AEROSPACE DIVISION, BALTIMORE, MD.

THE COLOR TV CAMERA IS A 12-POUND WESTINGHOUSE CAMERA WITH A ZOOM LENS FOR WIDEANGLE OR CLOSE-UP USE, AND HAS A THREE-INCH MONITOR WHICH CAN BE MOUNTED ON THE CAMERA OR IN THE COMMAND MODULE. THE COLOR CAMERA OUTPUTS A STANDARD 525-LINE 30 FRAME-PER-SECOND SIGNAL IN COLOR BY USE OF A ROTATING COLOR WHEEL. THE BLACK-AND-WHITE SIGNAL FROM THE SPACECRAFT WILL BE CONVERTED TO COLOR AT THE MISSION CONTROL CENTER.

THE FOLLOWING IS A PRELIMINARY PLAN FOR TV PASSES BASED
UPON A 9:32 A.M. EDT, JULY 16 LAUNCH.
TENTATIVE APOLLO 11 TV TIMES

DATE	TIMES OF PLANNED TV (EDT)	GET
JULY 17	7:32 - 7:47 P.M.	34:00-34:15
JULY 18	7:32 - 7:47 P.M.	58:00-58:15
JULY 19	4:02 - 4:17 P.M.	78:30-78:45
JULY 20	1:52 - 2:22 P.M.	100:20-100:50
JULY 21	1:57 - 2:07 A.M.	112:40-115:20
JULY 22	9:02 - 9:17 P.M.	155:30-155:45
JULY 23	7:02 - 7:17 P.M.	177:30-177:45

PRIME SITE	EVENT
GOLDSTONE	TRANSLUNAR COAST
GOLDSTONE	TRANSLUNAR COAST
GOLDSTONE	LUNAR ORBIT (GENERAL SURFACE SHOTS)
MADRID	CM/LM FORMATION FLYING
GOLDSTONE	LANDING SITE TRACKING
&PARKES	BLACK AND WHITE LUNAR SURFACE
GOLDSTONE	TRANSEARTH COAST
GOLDSTONE	TRANSEARTH COAST

&HONEYSUCKLE WILL TAPE THE PARKES PASS AND SHIP TAPE TO MSC.

04/0910Z JUL GSTS

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DE GSTS 044
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FM PAO 202
TO ALL STADIR M&O NASA SHIPS REP STADAN AND SWITCHING CTR MGRS
INFO ANRC/SR N REP
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LRID/NASA REP

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1969 JUL 4 11 20

APOLLO 11

THE UNITED STATES WILL LAUNCH A THREE-MAN SPACECRAFT TOWARD THE MOON ON JULY 16 WITH THE GOAL OF LANDING TWO ASTRONAUT-EXPLORERS ON THE LUNAR SURFACE FOUR DAYS LATER.

IF THE MISSION--CALLED APOLLO 11--IS SUCCESSFUL, MAN WILL ACCOMPLISH HIS LONG-TIME DREAM OF WALKING ON ANOTHER CELESTIAL BODY. THE FIRST ASTRONAUT ON THE MOON'S SURFACE WILL BE 38-YEAR-OLD NEAL A. ARMSTRONG OF WAPAKONETA, OHIO, AND HIS INITIAL ACT WILL BE TO UNVEIL A PLAQUE WHOSE MESSAGE SYMBOLIZES THE NATURE OF THE JOURNEY. AFFIXED TO THE LEG OF THE LUNAR LANDING VEHICLE, THE PLAQUE IS SIGNED BY PRESIDENT NIXON, ARMSTRONG AND HIS APOLLO 11 COMPANIONS, MICHAEL COLLINS AND EDWIN E. ALDRIN, JR. IT BEARS A MAP OF THE EARTH AND THIS INSCRIPTION:

HERE MEN FROM THE PLANET EARTH
FIRST SET FOOT UPON THE MOON
JULY 1969 A.D.

WE CAME IN PEACE FOR ALL MANKIND

THE PLAQUE IS FASTENED TO THE DESCENT STAGE OF THE LUNAR MODULE AND THUS BECOMES A PERMANENT ARTIFACT ON THE LUNAR SURFACE. LATER ARMSTRONG AND ALDRIN WILL EMPLANT AN AMERICAN FLAG ON THE SURFACE OF THE MOON.

THE APOLLO 11 CREW WILL ALSO CARRY TO THE MOON AND RETURN TWO LARGE AMERICAN FLAGS, FLAGS OF THE 50 STATES, DISTRICT OF COLUMBIA AND U.S. TERRITORIES, FLAGS OF OTHER NATIONS AND THAT OF THE UNITED NATIONS ORGANIZATION.

DURING THEIR 22-HOUR STAY ON THE LUNAR SURFACE, ARMSTRONG AND ALDRIN WILL SPEND UP TO 2 HOURS AND 40 MINUTES OUTSIDE THE LUNAR MODULE, ALSO GATHERING SAMPLES OF LUNAR SURFACE MATERIAL AND DEPLOYING SCIENTIFIC EXPERIMENTS WHICH WILL TRANSMIT BACK TO EARTH VALUABLE DATA ON THE LUNAR ENVIRONMENT.

APOLLO 11 IS SCHEDULED FOR LAUNCH AT 9:32 A.M. EDT JULY 16 FROM THE NATIONAL AERONAUTICS AND SPACE ADMINISTRATION'S KENNEDY SPACE CENTER LAUNCH COMPLEX 39-A. THE MISSION WILL BE THE FIFTH MANNED APOLLO FLIGHT AND THE THIRD TO THE MOON.

THE PRIME MISSION OBJECTION OF APOLLO 11 IS STATED SIMPLY:

"PERFORM A MANNED LUNAR LANDING AND RETURN". SUCCESSFUL FULFILLMENT OF THE OBJECTIVE WILL MEET A NATIONAL GOAL OF THIS DECADE, AS SET BY PRESIDENT KENNEDY MAY 25, 1961.

APOLLO 11 COMMANDER ARMSTRONG AND COMMAND MODULE PILOT COLLINS 38, AND LUNAR MODULE PILOT ALDRIN, 39, WILL EACH BE MAKING HIS SECOND SPACE FLIGHT. ARMSTRONG WAS GEMINI 8 COMMANDER, AND BACKUP APOLLO 8 COMMANDER; COLLINS WAS GEMINI 10 PILOT AND WAS COMMAND MODULE PILOT ON THE APOLLO 8 CREW UNTIL SPINAL SURGERY FORCED HIS TO LEAVE THE CREW FOR RECUPERATION; AND ALDRIN WAS GEMINI 12 PILOT AND APOLLO 8 BACKUP LUNAR MODULE PILOT. ARMSTRONG IS A CIVILIAN, COLLINS A USAF LIEUTENANT COLONEL AND ALDRIN A USAF COLONEL.

APOLLO 11 BACKUP CREWMEN ARE COMMANDER JAMES A. LOVELL, COMMAND MODULE PILOT WILLIAM A. ANDERS, BOTH OF WHOM WERE ON THE APOLLO 8 FIRST LUNAR ORBIT MISSION CREW, AND LUNAR MODULE PILOT FRED W. HAISE.

THE BACKUP CREW PERFORMS FUNCTIONS IN THREE SIGNIFICANT CATEGORIES. THEY HELP THE PRIME CREW THE MISSION PREPARATION AND HARDWARE CHECKOUT ACTIVITIES. THEY RECEIVE NEARLY COMPLETE MISSION TRAINING WHICH BECOMES A VALUABLE FOUNDATION FOR LATER ASSIGNMENT AS A PRIME CREW AND FINALLY, SHOULD THE PRIME CREW BECOME UNAVAILABLE, THEY ARE PREPARED TO FLY AS PRIME CREW ON SCHEDULE UP UNTIL THE LAST FEW WEEKS AT WHICH TIME FULL DUPLICATE TRAINING BECOMES TOO COSTLY AND TIME CONSUMING TO THE PRACTICAL.

APOLLO 11, AFTER LAUNCH FROM LAUNCH COMPLEX 39-A, WILL BEGIN THE THREE-DAY VOYAGE TO THE MOON ABOUT TWO AND A HALF HOURS AFTER THE SPACECRAFT IS INSERTED INTO A 100-NAUTICAL MILE CIRCULAR EARTH PARKING ORBIT. THE SATURN V LAUNCH VEHICLE THIRD STAGE WILL RESTART TO INJECT APOLLO 11 INTO A TRANSLUNAR TRAJECTORY AS THE VEHICLE PASSES OVER THE PACIFIC MIDWAY THROUGH THE SECOND EARTH PARKING ORBIT. THE "GO" FOR TRANSLUNAR INJECTION WILL FOLLOW A COMPLETE CHECKOUT OF THE SPACE VEHICLE'S READINESS TO BE COMMITTED FOR INJECTION. ABOUT A HALF HOUR AFTER TRANSLUNAR INJECTION (TLI), THE COMMAND/SERVICE MODULE WILL SEPARATE FROM THE SATURN THIRD STAGE, TURN AROUND AND DOCK WITH THE LUNAR MODULE NESTED IN THE SPACECRAFT LM ADAPTER. SPRING-LOADED LUNAR MODULE HOLDDOWNS WILL BE RELEASED TO EJECT THE DOCKED SPACECRAFT FROM THE ADAPTER. LATER, LEFTOVER LIQUID PROPELLANT IN THE SATURN THIRD STAGE WILL BE VENTED THROUGH THE ENGINE BELL TO PLACE THE STAGE INTO A "SLINGSHOT" TRAJECTORY TO MISS THE MOON AND GO INTO SOLAR ORBIT. DURING THE TRANSLUNAR COAST, APOLLO 11 WILL BE IN THE PASSIVE THERMAL CONTROL MODE IN WHICH THE SPACECRAFT ROTATES SLOWLY ABOUT ONE OF ITS AXES TO STABILIZE THERMAL RESPONSE TO SOLAR HEATING. FOUR MIDCOURSE CORRECTION MANEUVERS ARE POSSIBLE DURING TRANSLUNAR COAST AND WILL BE PLANNED IN REAL TIME TO ADJUST THE TRAJECTORY. APOLLO 11 WILL FIRST BE INSERTED INTO A 60-BY-170-NAUTICAL MILE ELLIPTICAL LUNAR ORBIT, WHICH TWO REVOLUTIONS LATER WILL BE ADJUSTED TO A NEAR-CIRCULAR 54 X 66 NM. BOTH LUNAR ORBIT INSERTION BURNS (LOI), USING THE SPACECRAFT'S 20,500-POUND-THRUST SERVICE PROPULSION SYSTEM, WILL BE MADE WHEN APOLLO 11 IS BEHIND THE MOON AND OUT OF "SLIGHT" OF MANNED SPACE FLIGHT NETWORK STATIONS. SOME 21 HOURS AFTER ENTERING LUNAR ORBIT, ARMSTRONG AND ALDRIN WILL MAN AND CHECK OUT THE LUNAR MODULE FOR THE DESCENT TO THE SURFACE. THE LM DESCENT PROPULSION SYSTEM WILL PLACE THE LM IN AN ELLIPTICAL ORBIT WITH A PERICYNTHION, OR LOW POINT ABOVE THE MOON, OF 50,000 FEET, FROM WHICH THE ACTUAL DESCENT AND TOUCHDOWN WILL BE MADE. AFTER TOUCHDOWN, THE LANDING CREW WILL FIRST READY THE LUNAR MODULE FOR IMMEDIATE ASCENT AND THEN TAKE A BRIEF REST BEFORE DEPRESSURIZING THE CABIN FOR TWO-MAN EVA ABOUT 10 HOURS AFTER TOUCHDOWN. ARMSTRONG WILL STEP ONTO THE LUNAR SURFACE FIRST, FOLLOWED BY ALDRIN SOME 40 MINUTES LATER.

DURING THEIR TWO HOURS AND 40 MINUTES ON THE SURFACE, ARMSTRONG AND ALDRIN WILL GATHER GEOLOGIC SAMPLES FOR RETURN TO EARTH IN SEALED SAMPLE RETURN CONTAINERS AND SET UP TWO SCIENTIFIC EXPERIMENTS FOR RETURNING MOON DATA TO EARTH LONG AFTER THE MISSION IS COMPLETE. ONE EXPERIMENT MEASURES MOONQUAKES AND METEOROID IMPACTS ON THE LUNAR SURFACE, WHILE THE OTHER EXPERIMENT IS A SOPHISTICATED REFLECTOR THAT WILL MIRROR LASER BEAMS BACK TO POINTS ON EARTH TO AID IN EXPANDING SCIENTIFIC KNOWLEDGE BOTH OF THE PLANET AND THE MOON. THE LUNAR MODULE'S DESCENT STAGE WILL SERVE AS A LAUNCHING PAD FOR THE CREW CABIN AS THE 3,500-POUND-THRUST ASCENT ENGINE PROPELS THE LM ASCENT STAGE BACK INTO LUNAR ORBIT FOR RENDEZVOUS WITH COLLINS IN THE COMMAND/SERVICE MODULE--ORBITING 60 MILES ABOVE THE MOON.

OUR BASIC MANEUVERS, ALL PERFORMED BY THE LM CREW USING THE SPACECRAFT'S SMALL MANEUVERING THE ATTITUDE THRUSTERS, WILL BRING THE LM AND THE COMMAND MODULE TOGETHER FOR DOCKING ABOUT THREE AND A HALF HOURS AFTER LIFTOFF FROM THE MOON. THE BOOST OUT OF LUNAR ORBIT FOR THE RETURN JOURNEY IS PLANNED FOR ABOUT 135 HOURS AFTER EARTH LIFTOFF AND AFTER THE LM ASCENT STAGE HAS BEEN JETTISONED THE LUNAR SAMPLES AND FILM STOWED ABOARD THE COMMAND MODULE. AN OPTIONAL PLAN PROVIDES FOR A 12-HOUR DELAY IN THE TRANSEARTH INJECTION BURN TO ALLOW THE CREW MORE REST AFTER A LONG HARD DAY'S WORK ON THE LUNAR SURFACE AND FLYING THE RENDEZVOUS. THE TOTAL MISSION TIME TO SPLASHDOWN WOULD REMAIN ABOUT THE SAME, SINCE THE TRANSEARTH INJECTION BURN WOULD IMPART A HIGHER VELOCITY TO BRING THE SPACECRAFT BACK TO THE MID-PACIFIC RECOVERY LINE AT ABOUT THE SAME TIME. THE RENDEZVOUS SEQUENCE TO BE FLOWN ON APOLLO 11 HAS TWICE BEEN FLOWN WITH THE APOLLO SPACECRAFT--ONCE IN EARTH ORBIT ON APOLLO 9 AND ONCE IN LUNAR ORBIT WITH APOLLO 10. THE APOLLO 10 MISSION DUPLICATED, EXCEPT FOR THE ACTUAL LANDING, ALL ASPECTS OF THE APOLLO 11 TIMELINE.

DURING THE TRANSEARTH COAST PERIOD, APOLLO 11 WILL AGAIN CONTROL SOLAR HEAT LOADS BY USING THE PASSIVE THERMAL CONTROL "BARBEQUE" TECHNIQUE. THREE TRANSEARTH MIDCOURSE CORRECTIONS ARE POSSIBLE AND WILL BE PLANNED IN REAL TIME TO ADJUST THE EARTH ENTRY CORRIDOR. APOLLO 11 WILL ENTER THE EARTH'S ATMOSPHERE (400,000 FEET) AT 195. HOURS AND FIVE MINUTES AFTER LAUNCH AT 36,194 FEET PER SECOND. COMMAND MODULE TOUCHDOWN WILL BE 1285 NAUTICAL MILES DOWNRANGE FROM ENTRY AT 10.6 DEGREES NORTH LATITUDE BY 172.4 WEST LONGITUDE AT 195 HOURS, 19 MINUTES AFTER EARTH LAUNCH 12:46 P.M. EDT JULY 24. THE TOUCHDOWN POINT IS ABOUT 1040 NAUTICAL MILES SOUTHWEST OF HONOLULU, HAWAII. (END OF GENERAL RELEASE; BACKGROUND INFORMATION FOLLOWS)

04/0810Z JUL GSIS

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FM PAO 202
TO ALL STADIR/M&O/NASA SHIPS REP/STADAN AND SWITCHING CTR MGRS
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LRID/DR BAUTISTE
LRID/NASA REP

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RECOVERY OPERATIONS, QUARANTINE

THE PRIME RECOVERY LINE FOR APOLLO 11 IS THE MID-PACIFIC ALONG THE 175TH WEST MERIDIAN OF LONGITUDE ABOVE 15 DEGREES NORTH LATITUDE, AND JOGGING TO 615 DEGREES WEST LONGITUDE BELOW THE EQUATOR. THE AIRCRAFT CARRIER USS HORNET, APOLLO 11 PRIME RECOVERY SHIP, WILL BE STATIONED NEAR THE END-OF-MISSION AIMING POINT PRIOR TO ENTRY.

SPLASHDOWN FOR A FULL-DURATION LUNAR LANDING MISSION LAUNCHED ON TIME JULY 16 WILL BE AT 10.6 DEGREES NORTH BY 172.5 DEGREES WEST AT A GROUND ELAPSED TIME OF 195 HRS 15 MIN.

THE LATITUDE OF SPLASHDOWN DEPENDS UPON THE TIME OF THE TRANS-EARTH INJECTION BURN AND THE DECLINATION OF THE MOON AT THE TIME OF THE BURN. A SPACECRAFT RETURNING FROM A LUNAR MISSION WILL ENTER THE EARTH'S ATMOSPHERE AND SPLASH DOWN AT A POINT ON THE EARTH'S FAR SIDE DIRECTLY OPPOSITE THE MOON. THIS POINT, CALLED THE ANTIPODE, IS A PROJECTION OF A LINE FROM THE CENTER OF THE MOON THROUGH THE CENTER OF THE EARTH TO THE SURFACE OPPOSITE THE MOON. THE MID-PACIFIC RECOVERY LINE ROTATES THROUGH THE ANTIPODE ONCE EACH 24 HOURS, AND THE TRANSEARTH INJECTION BURN WILL BE TARGETED FOR SPLASHDOWN ALONG THE PRIMARY RECOVERY LINE.

OTHER PLANNED RECOVERY LINES FOR LUNAR MISSIONS ARE THE EAST PACIFIC LINE EXTENDING ROUGHLY PARALLEL TO THE COASTLINES OF NORTH AND SOUTH AMERICA; THE ATLANTIC OCEAN LINE RUNNING ALONG THE 30TH WEST MERIDIAN IN THE NORTHERN HEMISPHERE AND ALONG THE 25TH WEST MERIDIAN IN THE SOUTHERN HEMISPHERE, AND THE INDIAN OCEAN ALONG THE 65TH EAST MERIDIAN.

SECONDARY LANDING AREAS FOR A POSSIBLE EARTH ORBITAL ALTERNATE MISSION ARE IN THREE ZONES---ONE IN THE PACIFIC AND TWO IN THE ATLANTIC.

LAUNCH ABORT LANDING AREAS EXTEND DOWNRANGE 3,200 NAUTICAL MILES FROM KENNEDY SPACE CENTER, FANWISE 50 NM ABOVE AND BELOW THE LIMITS OF THE VARIABLE LAUNCH AZIMUTH (72-106 DEGREES). SHIPS ON STATION IN THE LAUNCH ABORT AREA WILL BE THE DESTROYER USS NEW, THE INSERTION TRACKING SHIP USNS VANGUARD AND THE MINESWEEPER-COUNTERMEASURES SHIP USS OZARK.

IN ADDITION TO THE PRIMARY RECOVERY SHIP LOCATED ON THE MID-PACIFIC RECOVERY LINE AND SURFACE VESSELS ON THE ATLANTIC OCEAN RECOVERY LINE AND IN THE LAUNCH ABORT AREA, 13 HC-130 AIRCRAFT WILL BE ON STANDBY AT SEVEN STAGING BASES AROUND THE EARTH: GUAM; HAWAII; BERMUDA; LAJES, AZORES; ASCENSION ISLAND; MAURITIUS AND THE PANAMA CANAL ZONE.

APOLLO 11 RECOVERY OPERATIONS WILL BE DIRECTED FROM THE RECOVERY OPERATIONS CONTROL ROOM IN THE MISSION CONTROL CENTER AND WILL BE SUPPORTED BY THE ATLANTIC RECOVERY CONTROL CENTER, NORFOLK, VA., AND THE PACIFIC RECOVERY CONTROL CENTER, KUNIA, HAWAII. AFTER SPLASHDOWN, THE APOLLO 11 CREW WILL DON BIOLOGICAL ISOLATION GARMENTS PASSED TO THEM THROUGH THE SPACECRAFT HATCH BY A RECOVERY SWIMMER. THE CREW WILL BE CARRIED BY HELICOPTER TO THE HORNET WHERE THEY WILL ENTER A MOBILE QUARANTINE FACILITY (MQF) ABOUT 90 MINUTES AFTER LANDING. THE MQF, WITH CREW ABOARD, WILL BE OFFLOADED AT FORD ISLAND, HAWAII AND LOADED ON A C-141 AIRCRAFT FOR THE FLIGHT TO ELLINGTON AFB, TEXAS, AND THENCE TRUCKED TO THE LUNAR RECEIVING LABORATORY (LRL).

THE CREW WILL ARRIVE AT THE LRL ON JULY 2, FOLLOWING A NOMINAL LUNAR LANDING MISSION AND WILL GO INTO THE LRL CREW RECEPTION AREA FOR A TOTAL OF 21 DAYS QUARANTINE STARTING FROM THE TIME THEY LIFTED OFF THE LUNAR SURFACE. THE COMMAND MODULE WILL ARRIVE AT THE LRL TWO OR THREE DAYS LATER TO UNDERGO A SIMILAR QUARANTINE. LUNAR MATERIAL SAMPLES WILL UNDERGO A CONCURRENT ANALYSIS IN THE LRL SAMPLE OPERATIONS AREA DURING THE QUARANTINE PERIOD.

LUNAR RECEIVING LABORATORY

THE MANNED SPACECRAFT CENTER LUNAR RECEIVING LABORATORY HAS AS ITS MAIN FUNCTION THE QUARANTINE AND TESTING OF LUNAR SAMPLES, SPACECRAFT AND FLIGHT CREWS FOR POSSIBLE HARMFUL ORGANISMS BROUGHT BACK FROM THE LUNAR SURFACE.

DETAILED ANALYSIS OF RETURNED LUNAR SAMPLES WILL BE DONE IN TWO PHASES---TIME-CRITICAL INVESTIGATIONS WITHIN THE QUARANTINE PERIOD AND POST-QUARANTINE SCIENTIFIC STUDIES OF LUNAR SAMPLES REPACKAGED AND DISTRIBUTED TO PARTICIPATING SCIENTISTS.

THERE ARE 36 SCIENTISTS AND SCIENTIFIC GROUPS SELECTED IN OPEN WORLD-WIDE COMPETITION ON THE SCIENTIFIC MERITS OF THEIR PROPOSED EXPERIMENTS. THEY REPRESENT SOME 20 INSTITUTIONS IN AUSTRALIA, BELGIUM, CANADA, FINLAND, FEDERAL REPUBLIC OF GERMANY, JAPAN, SWITZERLAND AND THE UNITED KINGDOM. MAJOR FIELDS OF INVESTIGATION WILL BE MINERALOGY AND PETROLOGY, CHEMICAL AND ISOTOPE ANALYSIS PHYSICAL PROPERTIES, AND BIOCHEMICAL AND ORGANIC ANALYSIS.

THE CREW RECEPTION AREA SERVES AS QUARTERS FOR THE FLIGHT CREW AND ATTENDANT TECHNICIANS FOR THE QUARANTINE PERIOD IN WHICH THE PILOTS WILL BE DEBRIEFED AND EXAMINED. THE OTHER CREW RECEPTION AREA OCCUPANTS ARE PHYSICIANS, MEDICAL TECHNICIANS, HOUSEKEEPERS AND COOKS. THE CRA IS ALSO A CONTINGENCY QUARANTINE AREA FOR SAMPLE OPERATIONS AREA PEOPLE EXPOSED TO SPILLS OR VACUUM SYSTEM BREAKS.

BOTH THE CREW RECEPTION AREA AND THE SAMPLE OPERATIONS AREA ARE CONTAINED WITHIN BIOLOGICAL BARRIER SYSTEMS THAT PROTECT LUNAR MATERIALS FROM EARTH CONTAMINATION AS WELL AS PROTECT THE OUTSIDE WORLD FROM POSSIBLE CONTAMINATION BY LUNAR MATERIALS.

ANALYSIS OF LUNAR SAMPLES WILL BE DONE IN THE SAMPLE OPERATIONS AREA, AND WILL INCLUDE VACUUM, MAGNETICS, GAS ANALYSIS, BIOLOGICAL TEST, RADIATION COUNTING AND PHYSICAL-CHEMICAL TEST LABORATORIES. LUNAR SAMPLE RETURN CONTAINERS, OR "ROCK BOXES," WILL FIRST BE BROUGHT TO THE VACUUM LABORATORY AND OPENED IN THE ULTRA-CLEAN VACUUM SYSTEM. AFTER PRELIMINARY EXAMINATION, THE SAMPLES WILL BE REPACKAGED FOR TRANSFER, STILL UNDER VACUUM, TO THE GAS ANALYSIS, BIOLOGICAL PREPARATION, PHYSICAL-CHEMICAL TEST AND RADIATION COUNTING LABORATORIES.

THE GAS ANALYSIS LAB WILL MEASURE AMOUNTS AND TYPES OF GASES PRODUCED BY LUNAR SAMPLES, AND GEOCHEMISTS IN THE PHYSICAL-CHEMICAL TEST LAB WILL TEST THE SAMPLES FOR THEIR REACTIONS TO ATMOSPHERIC GASES AND WATER VAPOR. ADDITIONALLY, THE PHYSICAL-CHEMICAL TEST LAB WILL MAKE DETAILED STUDIES OF THE MINERALOGIC, PETROLOGIC, GEOCHEMICAL AND PHYSICAL PROPERTIES OF THE SAMPLES.

OTHER PORTIONS OF LUNAR SAMPLES WILL TRAVEL THROUGH THE LRL VACUUM SYSTEM TO THE BIOLOGICAL TEST LAB WHERE THEY WILL UNDERGO TESTS TO DETERMINE IF THERE IS LIFE IN THE MATERIAL THAT MAY REPLICATE. THESE TESTS WILL INVOLVE INTRODUCTION OF LUNAR SAMPLES INTO SMALL GERM-FREE ANIMALS AND PLANTS. THE BIOLOGICAL TEST LABORATORY IS MADE UP OF SEVERAL SMALLER LABS--BIOPREP, BIO-ANALYSIS, GERM-FREE, HISTOLOGY, NORMAL ANIMALS (AMPHIBIA AND INVERTEBRATES), INCUBATION, ANAEROBIC AND TISSUE CULTURE, CREW MICROBIOLOGY AND PLANTS.

SOME 50 FEET BELOW THE LRL GROUND FLOOR, THE RADIATION COUNTING LAB WILL CONDUCT LOW-BACKGROUND RADIOACTIVE ASSAY OF LUNAR SAMPLES USING GAMMA RAY SPECTROMETRY TECHNIQUES.

(SEE CONTAMINATION CONTROL PROGRAM SECTION FOR MORE DETAILS ON LRL, BIGS, AND THE MOBILE QUARANTINE FACILITY.)

SCHEDULE FOR TRANSPORT OF SAMPLES, SPACECRAFT, CREW SAMPLES

TWO HELICOPTERS WILL CARRY LUNAR SAMPLES FROM THE

RECOVERY SHIP TO JOHNSTON ISLAND WHERE THEY WILL BE PUT ABOARD A C-141 AND FLOWN DIRECTLY TO HOUSTON AND THE LUNAR RECEIVING LABORATORY (LRL). THE SAMPLES SHOULD ARRIVE AT ELLINGTON AIR FORCE BASE AT ABOUT 27 HOURS AFTER RECOVERY AND RECEIVED IN THE LRL AT ABOUT 9 OR 10 A.M. CDT, JULY 25.

SPACECRAFT

THE SPACECRAFT IS SCHEDULED TO BE BROUGHT ABOARD THE RECOVERY SHIP ABOUT TWO HOURS AFTER RECOVERY. ABOUT 55 HOURS AFTER RECOVERY THE SHIP IS EXPECTED TO ARRIVE IN HAWAII. THE SPACECRAFT WILL BE DEACTIVATED IN HAWAII (FORD ISLAND) BETWEEN 55 AND 127 HOURS AFTER RECOVERY. AT 130 HOURS IT IS SCHEDULED TO BE LOADED ON A C-133 FOR RETURN TO ELLINGTON AFB. ESTIMATED TIME OF ARRIVAL AT THE LRL IS ON JULY 29, 140 HOURS AFTER RECOVERY.

CREW

THE FLIGHT CREW IS EXPECTED TO ENTER THE MOBILE QUARANTINE FACILITY (MQF) ON THE RECOVERY SHIP ABOUT 90 MINUTES AFTER SPLASH-DOWN. THE SHIP IS EXPECTED TO ARRIVE IN HAWAII AT RECOVERY PLUS 55 HOURS AND THE MOBILE QUARANTINE FACILITY WILL BE TRANSFERRED TO A C-141 AIRCRAFT AT RECOVERY PLUS 57 HOURS. THE AIRCRAFT WILL LAND AT ELLINGTON AFB AT RECOVERY PLUS 65 HOURS AND THE MQF WILL ARRIVE AT THE LRL ABOUT TWO HOURS LATER (JULY 27).

04/1111Z JUL GSTS

GMD007A

RR DSDC GCTR HFOS HNET HPSR

DE HMSC 004

15/0206Z

FM NC/RANDALL

TO M&O

OPN NCG 725

AT 15/02:00:00Z THE COUNT IS T MINUS 23:00:00 AND COUNTING.

15/0207Z JUL HMSC

GMD056A
NN ANRC DSDB DSDL DSSW GSTS LRID
DE GMIL 009A
15/1459Z
FM DON WITTEN PAO
TO ALL ABOVE ADDEES
INFO ANRC/SR NASA REP
GSTS/MASON CODE 202
LRID/DR BAUTISTE NASA REP
ALL STADIR/M&O/NASA SHIPS REP/STADAN AND SWITCHING CTR MGRS

PAGE ONE OF TWO

ALL TIMES QUOTED IN THIS AND ANY FOLLOWING MESSAGES FOR THE MSFN WILL BE IN EDT PRELAUNCH APOLLO-11 REPORTS AND CDT FOR POST LAUNCH. THIS IS AN APOLLO 11 STATUS REPORT AT 7 A.M. EDT TUESDAY, JULY 15, 1969. THE COUNTDOWN FOR THE APOLLO 11 MOON-LANDING MISSION IS TICKING AWAY SLIGHTLY AHEAD OF SCHEDULE. ALL OBJECTIVES IN THE COUNT TO DATE HAVE BEEN SUCCESSFULLY COMPLETED WITH NO PROBLEMS REPORTED. THE MAJOR EVENTS DURING THE NIGHT WERE LAUNCH VEHICLE BATTERY INSTALLATION AND A LAUNCH VEHICLE POWER TRANSFER TEST. OTHER ACTIVITIES IN WORK EARLY THIS MORNING WERE COMPLETING THE TOPOFF OF THE SUPER-CRITICAL HELIUM IN THE LUNAR MODULE AND INSTALLATION OF THE THERMAL SHIELD ON THE LUNAR MODULE. THE NEXT BIG EVENT WILL BE THE MOVING OF THE MOBILE SERVICE STRUCTURE (MSS) FROM PAD A TO ITS NEARBY PARK SITE. THE JACKING-UP OF THE M-S-S WILL BEGIN ABOUT 10:45 A.M., EDT, FOLLOWED IN ABOUT 40 MINUTES BY THE FIRST MOVEMENT OF THE GIGANTIC STEEL STRUCTURE. AT NOON TODAY, THE COUNT WILL ENTER A PLANNED 11 HOUR BUILT IN HOLD TO ALLOW TIME FOR CREW REST AND FOR ANY CLEAN-UP WORK THAT MIGHT BE REQUIRED. AFTER THE HOLD, THE SUPER-COLD LIQUID HYDROGEN AND LIQUID OXYGEN WILL BE LOADED ABOARD THE SATURN V ROCKET. THEN, AFTER A ONE HOUR, 32 MINUTE HOLD AT T-3:30, THE CREW OF COMMANDER NEIL ARMSTRONG, COMMAND MODULE PILOT MICHAEL COLLINS, AND LUNAR MODULE PILOT EDWIN ALDRIN WILL COME ABOARD THEIR SPACECRAFT FOR THE FINAL TWO HOURS AND 40 MINUTES PRIOR TO LIFTOFF AT 9:32 A.M. WEDNESDAY, JULY 16.

THE ASTRONAUTS PLAN TO TAKE IT EASY TODAY ON THE EVE OF THEIR HISTORIC MISSION. THEY HAVE NO ANNOUNCED SLATE OF ACTIVITIES, BUT ARE EXPECTED TO REVIEW FLIGHT PLANS AND GO OVER CHECKLISTS OF ONBOARD DATA. IT IS POSSIBLE THAT ALDRIN MAY SPEND A BRIEF PERIOD OF TIME TODAY IN A LUNAR MODULE SIMULATOR.

THE FINAL COUNT DOWN FOR THE HISTORIC APOLLO 11 MISSION WAS PICKED UP AT 5:00 P.M. EDT LAST NIGHT.

THE PRIME CREW FOR APOLLO 11 SPENT MOST OF SUNDAY, JULY 13, RELAXING IN THE CREW QUARTERS AT KENNEDY SPACE CENTER. EARLY SUNDAY AFTERNOON, APOLLO 11 COMMANDER NEIL ARMSTRONG FLEW THE H-13 HELICOPTER FOR ABOUT AN HOUR AND COMMAND MODULE PILOT MICHAEL COLLINS FLEW A T-38 JET TRAINER FOR ABOUT AN HOUR IN THE LOCAL CAPE AREA. EDWIN ALDRIN REMAINED IN THE CREW QUARTERS WHERE HE WAS VISITED BY HIS FATHER, EDWIN ALDRIN, SR. JULY 14, THE CREW RETURNED TO THE MISSION SIMULATORS AT KSC WHERE ARMSTRONG AND ALDRIN REHEARSED VARIOUS PORTIONS OF THE MISSION IN THE LUNAR MODULE SIMULATOR AND MICHAEL COLLINS WORKED IN THE COMMAND MODULE SIMULATOR.

U.S. WEATHER BUREAU SPACE FLIGHT METEOROLOGY GROUP SAID THIS MORNING THAT WEATHER CONDITIONS ARE EXPECTED TO BE SATISFACTORY FOR THE FLIGHT OF APOLLO 11 ON WEDNESDAY JULY 16. CLEAR SKIES ARE ANTICIPATED IN THE EARLY MORNING WEDNESDAY, WITH LIGHT WINDS PROBABLY FROM THE NORTHWEST, AND TEMPERATURES CLIMBING RAPIDLY TO ABOUT 85 DEGREES BY THE PLANNED LAUNCH TIME. LATER IN THE DAY CLOUDINESS WILL INCREASE SOMEWHAT LEADING UP TO SCATTERED AFTERNOON THUNDERSHOWERS AFTER THE TEMPERATURE CLIMBS TO THE LOW 90'S.

DURING THE EARTH ORBITAL PHASE OF THE MISSION, NOT MUCH WEATHER OF CONSEQUENCE WILL BE OVERFLOWN. POTENTIAL ABORT LANDING AREAS IN BOTH OCEANS WILL HAVE SATISFACTORY WIND AND SEA CONDITIONS.

15/1515Z JUL GMIL

GMD060A
RR ANRC DSDB DSDL DSSW LRID
DE GSTS 021
15/1527Z
FM JAMES S LACY
INFO ANRC/SR W REP
LRID/DR BAUTISTE
LRID/NASA REP
ALL STADIR M&O/NASA SHIPS REP/STADAN AND SWITCHING CTR MGRS.

PAGE ONE OF TWO
CAPE KENNEDY, FLA. (AP)-THE THREE ASTRONAUTS ARE READY TO FLY TO THE MOON. THEY SAY THEY ARE NOT AFRAID. THEY ARE CONFIDENT THEIR SPACESHIP AND TRAINING WILL SEE THEM THROUGH. THE ROCKET THAT WILL VAULT THEM IS RECEIVING THE FINAL SERVICING FOR LIFTOFF AT 9:32 A.M. WEDNESDAY. THE WEATHER OUTLOOK IS GOOD.

"THE THREE OF US HAVE NO FEAR OF LAUNCHING OUT ON THIS EXPEDITION," SAID NEIL A. ARMSTRONG, SET TO BECOME EARTH'S FIRST MESSENGER ON THE MOON. "I'M SURE THAT AMERICAN INGENUITY AND AMERICAN CRAFTSMANSHIP HAVE GIVEN US THE BEST EQUIPMENT THAT CAN BE MADE AVAILABLE. WE ARE HAPPY TO BE READY TO FLY." ARMSTRONG APPEARED AT A TELEVISED NEWS CONFERENCE MONDAY NIGHT WITH EDWIN E. ALDRIN JR., WHO WILL FOLLOW HIM DOWN THE STEPS OF THEIR MOON LANDING CRAFT, AND MICHAEL COLLINS, WHO WILL ORBIT OVERHEAD AWAITING THEIR RETURN. NOT FAR AWAY, BATHED IN FOOTLIGHTS LIKE THE PAMPERED STAR IT IS, STOOD THE 363-FOOT TALL SATURN 5 ROCKET THAT WILL PROPEL THEM ONTO THE JOURNEY DREAMED OF PERHAPS SINCE MAN FIRST WALKED THE EARTH.

VICE PRESIDENT SPIRO T. AGNEW AND FORMER PRESIDENT LYNDON B. JOHNSON WERE TO BE AMONG THE MILLION PER SONS EXPECTED AT THIS MOONPORT TO SEE THE LAUNCHING.

IN THE LUNAR MODULE, WHICH IS NESTED BENEATH THE COMMAND AND SERVICE MODULES, IS A DISC THE SIZE OF A HALF DOLLAR INSCRIBED WITH MESSAGES OF CONGRATULATIONS AND GOOD WILL FROM 75 NATIONS. THE MICRODISC WILL BE IMPLANTED IN THE POWDERY MOON SOIL.

RUSSIA, WHICH SENT A MYSTERY SATELLITE TO THE MOON--WITH ARRIVAL TIMED NEARLY TO COINCIDE WITH AMERICA'S HISTORIC LAUNCH--DELIVERED NO MESSAGE. SOME EXPERTS SAW IN THEIR UNMANNED VEHICLE AN ATTEMPT TO PLUCK SOIL SAMPLES FROM THE MOON AND RETURN THEM BEFORE ARMSTRONG, ALDRIN AND COLLINS CAN DELIVER THEIRS EIGHT DAYS AFTER LIFTOFF.

ASKED IF HE WOULD BE DISAPPOINTED IF THE RUSSIANS FIRST SNARED LUNAR DIRT, ALDRIN SAID: "I'M SURE ALL OF US WOULD. WED LIKE TO RETURN WITH EVERYTHING WE SET OUT TO DO ON THIS FLIGHT."

WHAT THEY SET OUT TO DO WAS PROPOSED BY PRESIDENT JOHN E. KENNEDY IN 1961, "I BELIEVE THAT THIS NATION SHOULD COMMIT ITSELF TO ACHIEVING THE GOAL BEFORE THIS DECADE IS OUT, OF LANDING A MAN ON THE MOON AND RETURNING HIM SAFELY TO EARTH." THEIR PRECISE FLIGHT PLAN CALLS FOR GOING INTO MOON ORBIT AT 1:26 P.M. SATURDAY, UNDOCKING THE LUNAR LANDER FROM THE MOTHER SHIP 24 HOURS LATER, AND TOUCHING DOWN ON THE MOON AT 4:19 P.M. SUNDAY.

BUT THEY'LL HAVE TO WAIT BEFORE MAKING THEIR SELF-TELEVISED IMPRINT ON THE MOON. FIRST THEY MUST CHECK THE SYSTEMS TO PROPEL THEM BACK UP TO THE ORBITING MOTHER SHIP WITH COLLINS ABOARD, THEN TRY TO SLEEP FOR FOUR HOURS.

MAN'S FIRST STEP ON THE MOON IS SET FOR 2:17 A.M. NEXT MONDAY.

15/1545Z JUL GSTS

GMD 09 1A
RR ANRC DSDB DSDL DSSW LRID
DE GSTS 030
15/1855Z
FM JAMES S LACY PAO
INFO ANRC/SR N REP
LRID/DR BAUTISTE/NASA REP
ALL STADIR M&O/NASA SHIPS REP/STADAN AND SWITCHING CTR MGRS

PAGE ONE OF THREE

CAPE KENNEDY, FLA. (AP)-POISED FOR THE CENTURYS GRANDEST ADVENTURE, APOLLO 11 ASTRONAUTS, ROCKET AND SPACESHIP WERE PRONOUNCED READY FOR BLAST OFF WEDNESDAY TO LAND TWO AMERICANS ON THE MOON.

"NO PROBLEMS HAVE BEEN ENCOUNTERED," OFFICIALS OF THE NATIONAL AERONAUTICS AND SPACE ADMINISTRATION SAID AS COUNTDOWN PREPARATIONS MOVED SLIGHTLY AHEAD OF SCHEDULE TOWARD A 9:32 A.M. LIFT OFF.

LUNAR EXPLORERS NEIL A. ARMSTRONG, 38; MICHAEL COLLINS, 38, AND EDWIN E. ALDRIN JR., 39, WERE REPORTED CONFIDENT AND IN FINE SPIRITS FOR THEIR VOYAGE.

THEY SPENT MOST OF TODAY IN CREW QUARTERS, REVIEING THE FLIGHT PLAN AND CONSERVING THEIR STRENGTH FOR THE DEMANDING EIGHT-DAY MISSION TO AND FROM THE MOON.

ALDRIN SET ASIDE SOME TIME TO HONE HIS PILOT PROFICIENCY IN A LUNAR LANDING CRAFT TRAINER, WHILE ARMSTRONG TALKED WITH HIS WIFE.

MRS. ARMSTRONG FLEW TO THE AREA MONDAY NIGHT IN A PRIVATE PLANE. SHE IS THE ONLY ONE OF THE THREE ASTRONAUTS WIVES PLANNING TO WATCH THE LAUNCHING AT CAPE KENNEDY. THE OTHER

APOLLO 11 WIVES WILL VIEW IT ON TELEVISION AT THEIR HOMES NEAR THE MANNED SPACECRAFT CENTER AT HOUSTON, TEX.

"EVERYTHING CONCEIVABLE HAS BEEN DONE TO ASSURE OUR SAFETY," SAID ARMSTRONG. "WE HAVE HIGH CONFIDENCE. OTHERWISE WE WOULD NOT GO."

NEARLY ONE MILLION PERSONS WERE EXPECTED TO WITNESS THE BLAST OFF FIRSTHAND. THEY INCLUDE FORMER PRESIDENT LYNDON JOHNSON, VICE PRESIDENT SPIRO AGNEW, HUNDREDS OF CONGRESSMEN AND OFFICIALS FROM FOREIGN LANDS, AND POOR PEOPLE IN MULE-DRAWN WAGONS PROTESTING THAT MONEY FOR THE \$355 MILLION MISSION COULD BE BETTER SPENT HELPING THEM.

PLANE LOADS OF VIPS BEGAN FLYING TO THE AREA TODAY.

AT THE LAUNCH PAD, CREWS INSTALLED BATTERIES ABOARD APOLLO 11S 36-STORY-TALL SATURN 5 ROCKET AND COMPLETED PREPARING THE SPACECRAFT. WEATHERMEN PREDICTED NEAR-PERFECT CONDITIONS AT LIFT-OFF TIME. PARTLY CLOUDY SKIES "WILL PROBABLY NOT OBSCURE MUCH OF THE FLIGHT," THEY SAID.

SUCCESS ON APOLLO 11 WOULD MEAN THE ACCOMPLISHMENT OF THE GOAL SET BY PRESIDENT JOHN KENNEDY MAY 25, 1961, WHEN HE SUMMONED THE NATION TO TAKE ON THE TASK "BEFORE THIS DECADE IS OUT, OF LANDING MAN ON THE MOON AND RETURNING HIM SAFELY TO EARTH."

FAILURE ON APOLLO 11 WOULD DELAY A MANNED LUNAR LANDING BY THE UNITED STATES UNTIL AT LEAST SEPTEMBER--THE SOONEST ANOTHER SATURN-APOLLO MOONSHIP COULD BE READIED. IT ALSO WOULD MEAN ANOTHER ASTRONAUT CREW, HEADED BY APOLLO 12 COMMANDER CHARLES CONRAD, WOULD GET THE HONORS.

IF ALL GOES WELL, APOLLO 11 WILL SWING INTO ORBIT AROUND THE MOON SATURDAY. ON SUNDAY, ARMSTRONG AND ALDRIN WILL CRAWL INTO A LUNAR MODULE--LM--LANDING CRAFT HOOKED TO THE COMMAND SHIPS NOSE AND LAND ON A PLAIN IN THE MOONS SEA OF TRANQUILLITY AT 4:19 P.M.

LIKE STAYING ABOARD THE SANTA MARIA WHILE COLUMBUS WENT ASHORE, COLLINS WILL BE LEFT BEHIND TO TAKE CARE OF THE COMMAND SHIP AND SERVE AS LIFEGUARD IN CASE TROUBLE DEVELOPS WITH THE LM. WHILE THE TWO CRAFT ARE SEPARATED, THE COMMAND SHIP WILL HAVE THE RADIO CALL NAME "COLUMBIA," NAMED AFTER THE NATIONAL SYMBOL, A STATUE OF WHICH STANDS ATOP THE CAPITOL IN WASHINGTON. TH LM WILL BE REFERRED TO AS "EAGLE."

ARMSTRONG IS TO EASE OUT OF THE LMS HATCH AND CLIMB DOWN NINE RUNGS OF A LADDER ATTACHED TO THE CRAFTS FRONT LANDING LEG. THEN WITH HIS RIGHT FOOT ON THE LM LANDING PAD, HE IS TO STRETCH OUT HIS SIZE 9 1/2 LEFT FOOT AND MAKE MANS FIRST STEP ON THE LUNAR CRUST MONDAY AT 2:21 A.M., EDT.

PACKED IN THE LANDER CRAFT IS A TELEVISION CAMERA TO GIVE EARTHLINGS A KNOT-HOLE VIEW OF THE HISTORIC MOMENT AND SHOW ARMSTRONG AND ALDRIN SETTING UP EXPERIMENTS AND COLLECTING ROCKS DURING THE 2 1/2 HOURS THEY PLAN TO WALK ON THE MOON.
WE204PED JULY 15

15/2009Z JUL GSTS

GMD 069A

NN DSDC GCTR HNET HPSR

DE HMSC 007

16/0841Z

COUNT STAT NCG-725

AT 16/08:32:00Z THE COUNT IS T MINUS 03:30:00 AND HOLDING
THE COUNT IS AT LAUNCH MINUS 05:00:00

16/0843Z JUL HMSC



GMD006A

SS DSDC GCTR HAMC HSRA HNET HFOS

DE HMSC 014

16/1555Z

SPE

15:52:00.78Z/15:52:00.78Z APOLLO LIFTOFF

072.06 LAUNCH AZIMUTH

GMT OF GET START 15:52:01/15:52:01

16/1555Z JUL HMSC

GMD090A
TNN ANRC DSDB DSDL DSSW GSTS LRID
DE GMIL 011A
16/1501Z
FM DON WITTEN PAO
TO ALL ABOVE ADDEES
INFO ANRC/SR NASA REP
GSTS/MASON, CODE 202
LRID/DR BAUTISTE NASA REP
ALL STADIR/M&O/NASA SHIPS REP/STADAN AND SWITCHING CTR MGRS
GSTS/HOLD FOR FILE GSFC

PAGE ONE OF TWO

THE APOLLO 11 SPACECRAFT, CARRYING ASTRONAUTS NEIL ARMSTRONG, MICHAEL COLLINS AND EDWIN ALDRIN INTO EARTH ORBIT WAS LAUNCHED AT 9:32 A.M. EDT THIS MORNING.

THE COUNTDOWN PROGRESSED WITHOUT A HITCH RIGHT UP TO LIFTOFF. SOME 12 MINUTES AFTER LIFTOFF, THE THRUST FROM THE SATURN LAUNCH VEHICLE'S THIRD STAGE DROVE THE APOLLO SPACECRAFT INTO A PARKING ORBIT ABOUT 100 NAUTICAL MILES HIGH.

IF ALL GOES ACCORDING TO THE FLIGHT PLAN, THE RESTARTABLE SATURN THIRD STAGE WILL BE IGNITED FOR THE SECOND TIME TO PUSH APOLLO 11 OUT OF EARTH ORBIT AND ON ITS WAY TO THE MOON. THE FIRST OPPORTUNITY FOR THE MANUEVER WILL OCCUR AT ABOUT 12:22 PM EDT.

ONCE ON ITS WAY TO THE MOON, THE COMMAND SERVICE MODULE UNIT WILL SEPARATE FROM THE SATURN THIRD STAGE AND DOCK WITH THE LUNAR MODULE. ONCE THIS MANUEVER IS COMPLETED, ALL THREE-MODULE UNITS WILL BE SPRUNG LOOSE FROM THE THIRD STAGE. FUEL VENTED FROM THIS STAGE BY GROUND COMMAND WILL CAUSE THE THIRD STAGE TO PASS BEHIND THE MOON AND GO INTO SOLAR ORBIT WHILE THE APOLLO 11 CONTINUES ON ITS LUNAR JOURNEY.

APOLLO 11 IS SCHEDULED TO GO INTO LUNAR ORBIT AT 1:26 P.M., JULY 19. POWERED DESCENT TO THE LUNAR SURFACE SHOULD OCCUR ON JULY 20, WITH TOUCHDOWN OCCURRING AT ABOUT 4:19 P.M. EDT. AFTER CHECKING THE LUNAR MODULE AND RESTING, APOLLO 11 COMMANDER NEIL ARMSTRONG WILL STEP OUT ONTO THE MOON. THIS WILL TAKE PLACE AT ABOUT 2:10 A.M. EDT, JULY 21. SHORTLY THEREAFTER, LUNAR MODULE PILOT, EDWIN ALDRIN WILL FOLLOW HIM TO ASSIST IN COLLECTING LUNAR SOIL SAMPLES AND SET UP SEVERAL SCIENTIFIC EXPERIMENTS.

AFTER SPENDING SOME TWO HOURS AND 40 MINUTES, THE ASTRONAUTS WILL RE-ENTER THE LUNAR MODULE AND PREPARE FOR LUNAR LIFTOFF. ASCENT IS SCHEDULED FOR 1:55 P.M. JULY 21.

FOLLOWING A RENDEZVOUS AND DOCKING MANUEVER BETWEEN THE COMMAND MODULE, CARRYING MIKE COLLINS, AND THE LUNAR MODULE, ARMSTRONG AND ALDRIN WILL ENTER THE COMMAND MODULE. LEAVING THE LUNAR MODULE BEHIND, THE APOLLO 11 WILL BE KICKED OUT OF LUNAR ORBIT INTO A PATH BACK TO EARTH.

TOUCHDOWN IS SCHEDULED FOR 12:51 P.M. ON JULY 24. TOTAL MISSION TIME SHOULD BE 195 HOURS, 19 MINUTES AND FIVE SECONDS.

ALL THREE ASTRONAUTS WERE MORE RELAXED DURING LIFTOFF THAN THEY HAD BEEN ON PREVIOUS MISSIONS. ARMSTRONG'S PULSE RATE WAS 110 BEATS PER MINUTE WHILE COLLIN'S WAS 99 AND ALDRIN'S WAS 88.

16/1527Z JUL GMIL

GMD 129A
TRR ANRC DSDB DSDL DSSW LRID
DE GSTS 027
16/1547

FM JAMES S LACY PAO
TO M&O NASA SHIPS REP STADAN AND SWITCHING CTR MGRS
INFO ANRC/SR N REP
LRID/DR BAUTISTE
LRID/NASA REP ALL STADIR

CAPE KENNEDY, FLA. (AP)- HERE ARE THE FACTS AND FIGURES OF THE
APOLLO 11 MISSION:
ASTRONAUTS: CIVILIAN NEIL A. ARMSTRONG, 38; AIR FORCE COL. EDWIN
E. ALDRIN JR., 39; AIR FORCE LT. COL. MICHAEL COLLINS, 38.
PURPOSE: AFTER ATTAINING LUNAR ORBIT, ARMSTRONG AND ALDRIN
FLY A LANDING CRAFT TO MANS FIRST LANDING ON THE MOON ON
SUNDAY. THEY ARE TO WALK ON THE MOON FOR 2 1/2 HOURS MONDAY,
SETTING UP SCIENTIFIC EXPERIMENTS, GATHERING SOIL SAMPLES AND
DETERMINING ABILITY TO WORK IN ONE-SIXTH GRAVITY FIELD.
TOTAL LENGTH OF TIME ON MOON: 22 HOURS, AFTER WHICH THEY
RENDEZVOUS WITH COLLINS ORBITING IN COMMAND SHIP.
FLIGHT DURATION: EIGHT DAYS, 3 HOURS, 19 MINUTES.
ROCKET: THREE-STAGE SATURN 5, WHICH, WITH APOLLO SPACECRAFT,
STANDS 363 FEET TALL. IT IS THE WORLDS MOST POWERFUL BOOSTER,
WITH FIRST STAGE THRUST OF 7.7 MILLON POUNDS.
COST OF MISSION: SATURN 5, \$165 MILLION; APOLLO 11 COMMAND
SHIP, \$5 MILLION; LUNAR MODULE, \$41 MILLION; LAUNCH OPERATIONS,
INCLUDING RECOVERY FORCES, \$74 MILLION. TOTAL \$355 MILLION.
TOTAL COST OF APOLLO PROGRAM TO DATE: \$22 BILLION.

16/1635Z JUL GSTS

GMD128A
RR ANRC DSDB DSDL DSSW LRID
DE GSTS 026
16/1546Z

FM JAMES S LACY PAO
TO M&O NASA SHIPS REP STADAN AND SWITCHING CTR MGRS
INFO ANRC/SR N REP
LRID/DR BAUTISTE
LRID/NASA REP ALL STADIR

WASHINGTON (AP)-PRESIDENT NIXON AND ASTRONAUT FRANK BORMAN WATCHED ON TELEVISION TODAY THE APOLLO 11 LAUNCH NIXON PREDICTED WOULD "LIFT THE SPIRITS OF THE AMERICAN PEOPLE AND THE WHOLE WORLD". NIXON AND BORMAN WENT INTO A SMALL OFFICE BESIDE THE OVAL PRESIDENTIAL OFFICE TO WITNESS THE EVENT ON A COLOR TV SET BROUGHT IN FOR THE OCCASION. NIXON HAS NO TV SET IN HIS WORKING QUARTERS. BORMAN, COMMANDER OF THE APOLLO 8 MISSION LAST CHRISTMAS, HAS BEEN GIVEN A TEMPORARY DESK AT THE WHITE HOUSE WHERE HE IS SERVING AS NIXONS BRIEFING OFFICER ON THE APOLLO 11 FLIGHT. IN A TELEPHONE CALL TUESDAY NIGHT TO THE THREE APOLLO 11 ASTRONAUTS, NIXON SAID THE LAUNCH WOULD LIFT SPIRITS AROUND THE GLOBE BECAUSE THE FLIGHT IS THE "GREATEST ADVENTURE MAN HAS EVER UNDERTAKEN."

16/1630Z JUL GSTS

GMD132A
RR ANRC DSDB DSDL DSSW LRD
DE GSTS 029
16/1549Z
FM JAMES S LACY PAO
TO M&O NASA SHIPS REP STADAN AND SWITCHING CTR MGRS
INFO ANRC/SR N REP
LRID/DR BAUTISTS
LRID/NASA REP ALL STADIR

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1969 JUL 17 00 02
CAPE KENNEDY FLA. (AP)--REACHING FOR A DREAM, THE APOLLO 11
ASTRAONUTS ROCKETED FROM EARTH TODAY TO MAKE MANS FIRST ATTEMPT
TO LAND ON THE MOON.
NEIL A. ARMSTRONG, AIR FORCE COL. EDWIN E. ALDRIN JR. AND AIR
FORCE LT. COL. MICHAEL COLLINS RODE A SATURN 5 ROCKETT INTO SPACE
AT 9:32 A.M. EDT TO START THE EPIC JOURNEY.
THE ROCKET AND SPACECRAFT, 363 FEET TALL ON THE LAUNCH PAD,
LIFTED OFF FROM A SPACEPORT AREA JAMMED WITH HUNDREDS OF THOUSANDS
OF VISITORS EAGER FOR A CLIMPSE OF THE ADVENTURES BLAZING START.
PUSHING APOLLO 11 TOWARD EARTH ORBIT, THE 3,817-TON SATURN 5
ROARED TO LIFE, PUNISHING ITS LAUNCH PEDESTAL WITH A DAZZLING SHEET
OF FLAME.
THE ROCKET SCREAMED ON ITS PAD FOR 8.9 SECONDS AS A COMPUTER
SYSTEM MADE CERTAIN ALL FIVE BOOSTER ENGINES REACHED FULL THRUST
OF 7.7 MILLION POUNDS-MORE POWERFULL THAN 92,000 LOCOMOTIVES OR
500,000 AUTOMOBILES.
WHEN THE COMPUTER SENSED ALL WAS RIGHT, IT COMMANDED FOUR 40,000-
POUND STEEL RESTRAINING ARMS TO FLIP BACK TO THE PULSATING GIANT.
WITH AGNOZING SLOWNESS THE SATURN 5 CLIMBED ON A WIDE PILLAR
OF FIRE, GRADUALLY PICKING UP SPEED AS ITS HUNGRY POWERPLANT
GULPED FUEL AT THE RATE OF 15 TONES A SECOND.
AFTER 12 SECOND, THE GUIDANCE SYSTEM TIPPED THE ROCKET SLIGHTLY
ONTO A SOUTHEAST HEADING AND IT SPED OUT OVER THE ATLANTIC OCEAN.
AMONG THOSE WHO WATCHED THE START OF THE MOON MISSION FROM CAPE
KENNEDY WERE FORMER PRESIDENT LYNDON B. JOHNSON, VICE PRESIDENT
SPIRO T. AGNEW, AND ARMSTRONGS WIFE, JANET, AND THEIR TWO SONS,
ERIC, 12, AND MARK, 6.
ALSO WATCHING THE START OF THE MOON MISSION WAS ARMSTRONGS
PERENTS, MR. AND MRS. STEPHEN ARMSTRONG IN WAPAKONETA, OHIO.
BEFORE LAUNCH.
"HE WAS HAPPY," SHE SAID. "HIS USUAL SELF. JUST LIKE HE
ALWAYS IS."
AS THE ASTRONAUTS PARENTS SPOKE, ONE OF THE SPACEMEN IN THE
CAPSULE TOLD MISSION CONTROL: "IT SURE IS CLEAR DOWN THERE. ITS
LIKE SITTING IN YOUR LIVING ROOM."

16/1645Z JUL GSTS

GMD130A
TRR ANRC DSDB DSDL DSSW LRID
DE GSTS 028
16/1548Z
FM JAMES S LAC PAO
TO M&O NASA SHIPS REP STADAN AND SWITCHING CTR MGRS
INFO ANRC/SR N REP
LRID/DR BAUTISTE
LRID/NASA REP ALL STADIR

(CASTEL GANDOLFO, ITALY)--FOR THE SECOND TIME IN FOUR DAYS,
POPE PAUL URGED ALL CHRISTIANS TODAY TO PRAY FOR THE APOLLO
ELEVEN ASTRONAUTS.
HE SAID THEY ARE ON THEIR WAY TO "THE PALE AND SILENT
SATELLITE OF THE EARTH, IN THE FACE OF UNHEARD OF DIFFICULTIES."
SPEAKING AT THIS SUMMER RESIDENCE IN THE ALBAN HILLS TO HIS
WEEKLY GENERAL AUDIENCE, THE POPE RECALLED HIS CHILDHOOD READING
OF JULES VERNES "FROM THE EARTH TO THE MOON."
HE SAID "THAT WAS THE KINGDOM OF FANTASY, A PROPHETIC FANTASY,
PERHAPS, BUT GRATUITOUS, UNREAL. TODAY, HOWEVER, WE ARE IN THE
KINGDOM OF REAL."
"LOOK AT THE PANORAMA OF THE SKY AND OF THE WORLD," HE
CONTINUED. "MEASURE, IF YOU CAN, ITS VASTNESS. TRY TO CONCEIVE
OF THE DENSITY OF REALITY, OF TRUTH, OF HIDDEN THINGS WHICH IT
CONTAINS."
THE POPE SAID "SHIVER WITH WONDER AT THE BOUNDLESS GREATNESS
WHICH WE HAVE BEFORE US, AFFIRM THE IRREDUCIBLE DISTINCTION
BETWEEN GOD THE CREATOR AND THE WORLD HE CREATED AND THEN YOU
WILL RECOGNIZE, CONFESS AND CELEBRATE THE INDIVISIBLE NECESSITY
WHICH UNITES CREATION TO ITS CREATOR."

16/1640Z JUL GSTS



GMD 135A
RR ANRC DSDB DSDL DSSW LRID
DE GSTS 039
16/1805Z
INFO ANRC/SR N REP
LRID/DR BAUTISTE
LRID/NASA REP
ALL STADIR M&O/NASA SHIPS REP/STADAN AND SWITCHING CTR MGRS

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JODRELL BANK, ENGLAND (AP)-THE 250-FOOT RADIO TELESCOPE AT JODRELL BANK TRACED THE SOVIET LUNA 15 THREE-QUARTERS OF THE WAY TO THE MOON TODAY.

SIR BERNARD LOVELL, DIRECTOR OF THIS OBSERVATORY, SAID THE OBSERVATORY RECEIVED SIGNALS FROM LUNA 15 UNTIL A FEW MINUTES BEFORE THE APOLLO 11 LIFTOFF FROM FLORIDA.

AN AIDE SAID NO MORE SIGNALS WERE EXPECTED TODAY, AS LUNA 15 WAS BELOW THE HORIZON OF THE SOVIET CRIMEAN TRACKING STATION WHERE THEY WOULD BE RECEIVED.

WITH LUNA 15 NEARING THE MOON, SIR BERNARD SAID THE UNMANNED SOVIET PROBE WAS AS MUCH A PUZZLE AS EVER.

"WE SIMPLY DO NOT KNOW WHAT LUNA 15 IS GOING TO DO," HE SAID. "BUT I HAVE NO DOUBT IT IS THE BEGINNING OF A SERIES TO BRING BACK LUNAR SOIL."

"WHETHER IT WILL BE DONE WITH THIS ONE I DONT KNOW. BUT IF IT WERE, IT WOULD BE A REMARKABLE ACHIEVEMENT."

LOVELL SAID ANOTHER PUZZLING FEATURE OF LUNA 15 WAS ITS LAUNCHING SUNDAY IN THE FACE OF A NEW MOON. HE SAID HE THOUGHT THAT IF THE RUSSIANS WERE GOING TO LAND THE SPACECRAFT ON THE MOON THEY WOULD HAVE WANTED TO WATCH IT THROUGH TELEVISION CAMERAS--AND THIS WOULD BE MORE FEASIBLE IF THE MOON WERE FULL.

LOVELLS AIDE SAID LUNA 15 WOULD REACH THE VICINITY OF THE MOON THURSDAY BETWEEN 10 A.M. AND NOON--5 A. M. AND 7 A.M., EDT. HE SAID THE SPACECRAFT WAS TAKING 100 HOURS TO REACH THE MOON, INSTEAD OF 80 AS ON PREVIOUS SOVIET MOON SHOTS, AND WAS ALSO SENDING A NEW KIND OF SIGNAL THAT "WE CANNOT INTERPRET."

16/1840Z JUL GSTS

GMD 136A
RR ANRC DSDB DSDL DSSW LRID
DE GSTS 040
16/1806Z
INFO ANRC/SR N REP
LRID/DR BAUTISTE
LRID/NASA REP
ALL STADIR M&O/NASA SHIPS REP/STADAN AND SWITCHING CTR MGRS

CAPE KENNEDY, FLA, (AP)-WITH THE MEN AND THEIR SHIP WORKING PERFECTLY, AMERICAS APOLLO 11 ASTRONAUTS HURTTLED THROUGH SPACE TODAY.

CIVILIAN COMMANDER NEIL A. ARMSTRONG, 38; AIR FORCE COL. EDWIN E. ALDRIN JR., 39, AND AIR FORCE LT. COL. MICHAEL COLLINS, 38, CONTINUED A PERFORMANCE THAT HAD BEEN FLAWLESS SINCE LAUNCH. THEY DELICATELY SEPARATED THEIR COMMAND MODULE FROM A SPENT BOOSTER AND THEN LINKED WITH THE MOON LANDER, STILL HOUSED IN THE BOOSTER. THE TRIO STARTED THEIR JOURNEY ON A SATURN 5 ROCKET THAT THUNDERED FROM CAPE KENNEDY RIGHT ON SCHEDULE AT 9:32 A.M., EDT, AND SHOT THEM INTO AN ORBIT 118 MILES HIGH.

TWO AND ONE-HALF HOURS LATER, THE STILL ATTACHED SATURN THIRD STAGE FIRED AGAIN TO HURL APOLLO 11 OUT OF EARTHS ORBIT AND START IT FLEETING TOWARD THE MOON.

A HALF-HOUR AFTER THIS MANEUVER, THE ASTRONAUTS SEPARATED THEIR COMMAND SHIP, PIVOTED AROUND 180 DEGREES AND POKED ITS HARPOON-LIKE DOCKING MECHANISM INTO A CONNECTING DEVICE IN THE NOSE OF THE MOON LANDING SHIP, OR LUNAR MODULE, CRADLED ATOP THE THIRD STAGE. THE TWO SHIPS, LOCKED NOSE TO NOSE, STREAKED OUTWARD TOWARD THEIR DISTANT TARGET.

AFTER NEARLY AN HOUR, THE ASTRONAUTS WERE TO PULL THE LUNAR MODULE (LM) OUT OF ITS GARAGE IN THE THIRD STAGE AND THE SPENT ROCKET WAS TO GO INTO AN ORBIT OF THE SUN.

16/1905Z JUL GSTS

GMD020B
NN ANRC DSDB DSDL DSSW LRID
DE GSTS 062
16/2025Z
INFO ANRC/SR N REP
LRID/DR BAUTISTE NASA REP
ALL STADIR M&O NASA SHIPS REP STADAN AND SWITCHING CTR MGRS

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LONDON (AP)- "BOYS, COME BACK SAFELY," BANNERED A WEST GERMAN NEWSPAPER.

IN MANY EUROPEAN CITIES STREETS WERE ALMOST DESERTED AS CITIZENS STAYED WITH THEIR TELEVISION SETS.

A HOUSEWIFE IN FRANKFURT, PERCHED ON HER HUSBANDS SHOULDERS IN FRONT OF A TELEVISION SHOP YELLED, "THIS IS A DAY WE WONT FORGET."

HUBERT H. HUMPHREY LIFTED A GLASS OF BRANDY IN A TOAST WITH A RUSSIAN IN MOSCOW.

AROUND THE WORLD TODAY PEOPLE HAD THEIR ATTENTION FOCUSED ON THREE AMERICANS ABOARD APOLLO 11 AS IT ROARED OFF AT 9:32 A.M., TO LAND A MAN ON A PLANET OTHER THAN HIS OWN FOR THE FIRST TIME.

IN LANCASHIRE, ENGLAND, DAVID THRELFALL NEARED THE END OF A FIVE-YEAR WAIT TO COLLECT 24,000 DOLLARS. IN 1964 HE PLACED A 24 DOLLAR BET WITH A BOOKIE AT 1,000 TO 1 ODDS THAT MAN WOULD REACH THE MOON BEFORE 1971.

FORMER VICE PRESIDENT HUMPHREY SAT IN THE MOSCOW OFFICE OF LEV TOLKUNOV, CHIEF EDITOR OF THE SOVIET GOVERNMENT NEWSPAPER IZVESTIA. AS THE TWO MEN READ DISPATCHES ABOUT THE SUCCESSFUL LAUNCH OF APOLLO 11, TOLKUNOV OFFERED A TOAST WISHING THE CREW "EVERY SUCCESS" IN THEIR MOON LANDING ATTEMPT.

TASS, THE SOVIET NEWS AGENCY, REPORTED THE APOLLO LIFT OFF WITH UNUSUAL SWIFTNESS. IN A DISPATCH FROM NEW YORK ONLY EIGHT MINUTES AFTER TAKE OFF, IT NAMED THE THREE ASTRONAUTS AND SAID: "THEIR MISSION IS TO LAND TWO COSMONAUTS, ARMSTRONG AND ALDRIN, ON THE MOON AND RETURN THE WHOLE CREW TO EARTH."

THERE WAS LITTLE FRESH WORD, HOWEVER, ON THE SOVIETS OWN MOONBOUND CRAFT--LUNA 15. BRITAINS JODRELL BANK SPACE STATION REPORTED A 28-MINUTE BURST OF SIGNALS FROM THE UNMANNED LUNIK THAT ENDED JUST FOUR MINUTES BEFORE APOLLO 11 LEAPT INTO THE SKY.

IN WARSAW, ABOUT 500 POLES PACKED INTO THE LOBBY OF THE AMERICAN EMBASSY TO WATCH A TELECAST RELAYED THROUGHOUT THE COUNTRY BY POLISH STATE TELEVISION. THERE WERE CHEERS OF "MARVELOUS - WONDERFUL - SUCCESS!".

THE POLISH COMMENTATOR DESCRIBED THE APOLLO SHOT AS AN "EPOCH MAKING EVENT" BEING WATCHED BY THE WORLD WITH "UTMOST ATTENTION, EMOTION AND ANXIETY."

SPANISH WAITER CARMELO RODRIGUEX WATCHED THE TELEVISED LAUNCHING IN MADRID - WHERE SPANIARDS GATHERED IN HOUSES, BARS AND CAFES - AND SAID: "THIS IS THE MOST INTERESTING EVENT IN THE WORLD SINCE CHRISTOPHER COLUMBUS DISCOVERED AMERICA IN 1492."

THE WEST GERMAN NEWSPAPER FRANKFURTER RUNDSCHAU HEADLINED: "THEY ARE UP. THEY ARE UP," AND A SCIENCE MINISTRY SPOKESMAN IN BONN SAID: "WE ARE OVERJOYED AT THE PRECISION OF THE MISSIONS START."

IT WAS IN GERMANY DURING WORLD WAR 11 THAT WERNHER VON BRAUN LAID THE GROUNDWORK FOR TODAYS SPACE VEHICLES.

16/2140Z JUL GSTS

GMD021A

RR ANRC DSDB DSDL DSSW LRID

DE GSTS 025

17/1405Z

FM JAMES S LACY PAO

INFO ANRC/SR N REP

LRID/DR BAUTISTE

LRID/NASA REP

LRID/ALL STADIR M&O/NASA SHIPS REP/STADAN AND SWITCHING CTR MGRS

GOVERNOR MARVIN MANDEL OF MARYLAND, YESTERDAY CAME TO THE GODDARD SPACE FLIGHT CENTER IN GREENBELT, TO WATCH THE LAUNCH AND TOUR THE CENTER. THE GOVERNOR APPEARED AWED BY THE PRECISION NECESSARY IN SPACECRAFT TRACKING AND COMMUNICATIONS.

AFTER SPENDING THE EXCITING MORNING AT THE CENTER, HE RETURNED TO HIS OFFICES AND ORDERED MOST STATE OFFICES CLOSED ON MONDAY IN OBSERVANCE OF THE SCHEDULED LANDING. HE ALSO URGED ALL MARYLANDERS TO DISPLAY AMERICAN FLAGES ON THE HISTORIC DAY AND TO PRAY FOR THE SAFETY OF THE AMERICAN SPACEMAN.

17/1427Z JUL GSTS

GMD020A
RR ANRC DSDB DSDL DSSW LRID
DE GSTS 026
17/1406Z
FM JAMES S LACY PAO
INFO ANRC/SR N REP
LRID/DR BUATISTE
LRID/NASA REP
LRID/ALL STADIR M&O/NASA SHIPS REP/STADAN AND SWITCHING CTR MGRS

MOSCOW (AP)--THE UNMANNED SOVIET SPACESHIP LUNA 15 TODAY "BECAME ANOTHER IN THE SERIES OF SOVIET LUNAR SATELLITES," TASS REPORTED.

THE WORDING OF THE ANNOUNCEMENT BY THE OFFICIAL SOVIET NEWS AGENCY STRONGLY IMPLIED THAT LUNA 15 WOULD STAY IN LUNAR ORBIT AND NOT ATTEMPT TO RETURN MOON SOIL TO THE EARTH, BUT THE POSSIBILITY OF SUCH A FEAT WAS NOT EXCLUDED.

THE TASS ANNOUNCEMENT, READ ON MOSCOW RADIOS REGULAR AFTERNOON NEWSCAST, WAS THE FIRST WORD HERE ON THE PROGRESS OF THE UNMANNED SPACESHIP.

THE TASS ANNOUNCEMENT SAID LUNA 15 WAS PUT INTO LUNAR ORBIT AT 6 A.M. WHEN IT WAS ON THE DARK SIDE OF THE MOON. IT SAID EVERYTHING ON BOARD WAS WORKING NORMALLY AND RADIO CONTACT CONTINUED.

THE FLIGHT FROM EARTH WAS DESCRIBED AS TAKING 102 HOURS, WITH THE TRAJECTORY CORRECTED ONCE, ON MONDAY. THE LAUNCH TOOK PLACE SUNDAY.

FOUR OTHER UNMANNED SPACESHIPS IN THE LUNA SERIES, STARTING WITH LUNA 10 IN APRIL OF 1966, HAVE BEEN PUT INTO ORBIT AROUND THE MOON. THE UNITED STATES HAS MATCHED THIS FEAT, WHICH IS NO LONGER CONSIDERED A MAJOR ACCOMPLISHMENT IN THE SPACE RACE.

/1441Z JUL GSTS

GMD0068
NN DSDC GCEN HNET HPSR HAMC
DE HMSC 031
17/1200Z
FM NC
TO ALL

SECTION ONE OF TWO PAGE ONE OF THREE

OPN

SUBJ UNOFFICIAL MISSION PROGRESS REPORT

THE FOLLOWING REPORT IS PROVIDED FOR STATION INFORMATION ONLY AND IS NOT TO BE RELEASED AS OFFICIAL PAO INFORMATION.

IN REPLY REFER TO: MAO

TO: DISTRIBUTION

FROM: MA/APOLLO MISSION DIRECTOR

SUBJECT: APOLLO 11 DAILY OPERATIONS REPORT NO. 1.

DATE: 17 JULY 1969 TIME: 0700 EDT GET: 21:28

CSM/LM WEIGHT: 96,361 POUNDS VELOCITY: 5,667 FEET PER SECOND

DISTANCE FROM EARTH: 93,236 NAUTICAL MILES

MISSION EVENTS

THE APOLLO 11 SPACE VEHICLE WAS SUCCESSFULLY LAUNCHED FROM KENNEDY SPACE CENTER, FLORIDA, AT 9:32 A.M. EDT ON 16 JULY 1969, WITH NO UNSCHEDULED HOLDS. ALL LAUNCH VEHICLE STAGES PERFORMED SATISFACTORILY INSERTING THE S-1VB/1U/LM/CSM COMBINATION INTO AN EARTH PARKING ORBIT OF 103 NAUTICAL MILES CIRCULAR--PRECISELY AS PLANNED. ALL SYSTEMS OPERATED SATISFACTORILY.

A BRIEF TELEVISION TRANSMISSION WAS ATTEMPTED OVER GOLDSTONE ON THE FIRST REVOLUTION TO CHECK OUT THE TV CAMERA BUT IT WAS UNSUCCESSFUL APPARENTLY DUE TO LOW ELEVATION ANGLE. SUBSEQUENTLY MILA RECEIVED APPROXIMATELY ONE MINUTE OF USABLE TV SIGNAL INDICATING THAT THE SYSTEM WAS OPERATING SATISFACTORILY.

PRE-TLI (TRANSLUNAR INJECTION) CHECKOUT WAS CONDUCTED AS PLANNED AND THE SECOND S-1VB BURN WAS INITIATED ON SCHEDULE. ALL SYSTEMS OPERATED SATISFACTORILY AND ALL END CONDITIONS WERE NOMINAL FOR THE TRANSLUNAR COAST ON A FREE RETURN, CIRCULUNAR TRAJECTORY.

THE CSM WAS SEPARATED FROM THE LM/SLA/1U/S-1VB AT ABOUT 3:17 (HR: MIN) GET. THE CREW REPORTED AT 3:29 GET THAT CSM TRANSPOSITION AND DOCKING WERE COMPLETE. EJECTION OF THE CSM/LM WAS SUCCESSFULLY ACCOMPLISHED AT ABOUT 4:17 GET AND AN SPS EVASIVE MANEUVER WAS PERFORMED AS PLANNED AT 4:40 GET. ALL LAUNCH VEHICLE SAFING ACTIVITIES WERE PERFORMED AS SCHEDULED.

THE S-1VB/1U SLINGSHOT MANEUVER WAS SUCCESSFUL IN AVOIDING LUNAR IMPACT AND EARTH CAPTURE. THE PREDICTED POINT OF CLOSEST APPROACH FROM THE MOON OF 1625 NAUTICAL MILES WILL OCCUR AT 79:12:30 GET. THE ACCURACY WITH WHICH THE TLI MANEUVER WAS PERFORMED WAS SUCH THAT MID COURSE CORRECTION NUMBER ONE (MCC-1) WAS NOT REQUIRED.

AN UNSCHEDULED 16-MINUTE TELEVISION TRANSMISSION WAS RECORDED AT THE GOLDSTONE STATION BEGINNING AT 10:32 GET. THE TAPE WAS PLAYED BACK AT GOLDSTONE AND TRANSMITTED TO HOUSTON BEGINNING AT 11:26 GET.

THE CREW SLEEP PERIOD BEGAN EARLY AT APPROXIMATELY 11:00 GET DUE TO THE DECISION NOT TO ACCOMPLISH MCC-1.

MAJOR APOLLO 11 ACTIVITIES SCHEDULED FOR TODAY ARE MCC-2 AT APPROXIMATELY 26:40 GET, A TELEVISION TRANSMISSION AT 34:00 GET (19:32 EDT), AND STAREARTH HORIZON NAVIGATION SIGHTINGS.

SYSTEMS STATUS

SATURN V IGNITION, HOLDDOWN RELEASE, AND LIFTOFF WERE ACCOMPLISHED WITHIN EXPECTED LIMITS. ALL INDICATIONS ARE THAT ALL SATURN V SYSTEMS AND ENGINES PERFORMED AT OR NEAR NOMINAL.

PRELIMINARY EVALUATION INDICATED THAT TELEMETRY DATA DROPOUTS OBSERVED DURING THE BERMUDA AND USNS VANGUARD STATION COVERAGE OF LAUNCH WAS CAUSED BY FAILURE TO SELECT CSM OMNI ANTENNA D AT THE SCHEDULED TIME.

A LATE COMMUNICATIONS HANDOVER FROM USNS REDSTONE TO USNS MERCURY AND AN EARLY HANDOVER FROM USNS MERCURY TO THE HAWAII STATION WERE ACCOMPLISHED BECAUSE OF COMMAND COMPUTER PROBLEMS ABOARD USNS MERCURY. COMMUNICATIONS WAS LOST DURING TRANSPOSITION AND DOCKING PROBABLY DUE TO FAILURE TO CHANGE SPACECRAFT OMNI ANTENNAS DURING THE MANEUVER. COMMUNICATIONS WERE RESTORED BY SELECTION OF THE HIGH GAIN ANTENNA AFTER DOCKING.

SM RCS QUAD B PACKAGE TEMPERATURE WAS LOW (101 DEG F VICE 122 DEG F) AT 1:45 GET. THE CREW DETERMINED THAT THE PRIMARY SWITCH WAS STILL OPEN. WHEN THE SWITCH WAS CLOSED, THE TEMPERATURE ROSE TO NORMAL.

AT CSM SEPARATION FROM THE REMAINDER OF THE VEHICLE, THE CREW REPORTED AN ANOMALY ON BOTH THE PRIMARY AND SECONDARY PROPELLANT ISOLATION VALVES OF RCS QUAD B. DURING TRANSPOSITION, DOCKING, AND EJECTION MORE RCS PROPELLANT WAS USED THAN PLANNED. AS A MINIMUM, ONE OF THE PRIMARY AND ONE OF THE SECONDARY VALVES WOULD HAVE TO BE CLOSED. THE VALVES HAVE SINCE BEEN REOPENED.

THE OXYGEN FLOWRATE WAS READING SIGNIFICANTLY LOWER THAN EXPECTED DURING THE PAST FEW HOURS, INDICATING THAT PERHAPS THE CABIN OXYGEN ENRICHMENT PURGE IS NOT PROGRESSING SATISFACTORILY IN COMPARISON TO PREVIOUS MISSIONS. THIS CONDITION COULD OCCUR IF THE WASTE STORAGE VENT VALVE WAS CLOSED OR IF THE OVERBOARD DUMP LINE WAS RESTRICTED.

17/1205Z JUL HMSC

GMD031A
RR ANRC DSDB DSDL DSSW LRID
DE GSTS 030

17/1515Z
FM JAMES S LACY PAO
INFO ANRC/SR N REP
LRID/DR BAUTISTE
LRID/NASA REP
LRID/ALL STADIR M&O/NASA SHIPS REP/STADAN AND SWITCHING CTR MGRS

WASHINGTON (AP)--PRESIDENT NIXON ANNOUNCED TODAY THE AMERICAN MOON TEAM WILL LEAVE BEHIND ON THE LUNAR SURFACE MEDALS AWARDED TO SOVIET COSMONAUTS KILLED WHILE PARTICIPATING IN SPACE PROGRAMS. NIXON SAID THE MEDALS WERE GIVEN TO ASTRONAUT FRANK BORMAN BY THE WIDOWS OF YURI A. GAGARIN AND VLADIMIR KOMAROV DURING BORMAN'S RECENT TRIP TO THE SOVIET UNION. THE MEDALS WERE RELAYED TO THE CREW OF THE APOLLO 11 WHICH WILL LEAVE THEM ON THE MOON.

ALSO TO BE LEFT THERE ARE THE PATCHES FOR MEDALS AWARDED THE THREE APOLLO 2 ASTRONAUTS KILLED IN A FIRE ON THE CAPE KENNEDY, FLA., LAUNCH PAD ON JAN. 27, 1967. THEY WERE AIR FORCE LT. COL. VIRGIL I. GRISSOM, NAVY LT. COMDR. ROGER B. CHAFFEE AND AIR FORCE LT. COL. EDWARD H. WHITE JR.

GAGARIN, THE FIRST MAN IN SPACE, WAS KILLED MARCH 27, 1968 IN A JET PLANE CRASH. KOMAROV WAS KILLED APRIL 27, 1967 WHEN THE PARACHUTES FOR HIS SPACECRAFT FAILED TO FUNCTION PROPERLY AS IT WAS RETURNING TO EARTH.

THE OCCASION FOR NIXON'S ANNOUNCEMENT WAS A WHITE HOUSE CEREMONY AT WHICH HE PRESENTED THE DISTINGUISHED SERVICE MEDAL TO GEN. JOHN P. MCCONNELL, RETIRING AIR FORCE CHIEF OF STAFF.

THE PRESIDENT NOTED THAT MCCONNELL'S SERVICE HAD SPANNED A GREAT PERIOD IN THE DEVELOPMENT OF MANNED FLIGHT--FROM 1928, OR A YEAR AFTER CHARLES A. LINDBERGH'S SOLO TRANSATLANTIC FLIGHT, TO THE MISSION OF APOLLO 11.

17/1519Z JUL GSTS

GMD018A

RR ANRC DSDB DSDL DSSW LRID GWAB

DE GSTS 063

17/2025Z

FM JAMES S LACY PAO

INFO ANRC/SR N REP

LRID/DR BAUTISTE/NASA REP

ALL STADIR M&O/NASA SHIPS REP/STADAN AND SWITCHING CTR MGRS
GWAB

APOLLO 11 PASSED THE HALFWAY MARK TO THE MOON AT 10:33 A.M., EDT.
AT THAT TIME THEY WERE 120,003 MILES FROM THE MOON AND THE EARTH.
SHORTLY AFTER NOON TODAY THE ASTRONAUTS FIRED THE SERVICE PROPULSION
ENGINE FOR THREE SECONDS, BOOSTING THEIR SPEED BY A MERE 14
MILES AN HOUR. IT SET THE SPACECRAFT ON A PATH THAT WOULD TAKE IT
69 MILES FROM THE MOON. THE OLD COURSE WOULD HAVE TAKEN THE APOLLO
11 WITHIN 20 MILES OF THE SURFACE OF THE MOON.

IT WILL TAKE THE SPACECRAFT TWICE AS LONG TO GO THE REMAINING
DISTANCE TO THE MOON. THE APOLLO 11'S INITIAL SPEED OF 24,200
M.P.H. HAS BEEN REDUCED TO ABOUT 3,000 M.P.H. BECAUSE OF THE
EARTH'S GRAVITY.

AT APOLLO'S PRESENT SPEED IT SHOULD ENTER THE MOON'S GRAVITATIONAL
FIELD AT 61HRS, 39MINS., 58SECS. (GET), WHICH WOULD BE ABOUT
11:12 P.M. (EDT) JULY 18.

17/2058Z JUL GSTS

GMD009A
NN ANRC DSDB DSDL DSSW LRID
DE GSTS 064
17/2026Z
FM JAMES S LACY PAO
INFO ANRC/SR N REP
LRID/DR BAUTISTE NASA REP
ALL STADIR M&O SHIPS REP STADAN AND SWITCHING CTR MGRS
GWAB

SPACE CENTER, HOUSTON (AP)-AN UNMANNED VISITOR FROM RUSSIA, LUNA 15, TODAY ZIPPED INTO A CLOSE-IN LUNAR ORBIT JUST 62 MILES ABOVE THE SURFACE. A MOSCOW REPORT SAID THE CRAFT HAD BECOME A MOON SATELLITE, BUT SPECULATION CONTINUED THAT IT MIGHT ATTEMPT TO LAND, SCOOP UP SOIL SAMPLES AND RETURN THEM TO EARTH BEFORE APOLLO 11 CAN BRING BACK A CARGO OF ROCKS.

SIR BERNARD LOVELL, DIRECTOR OF BRITAIN'S JODRELL BANK OBSERVATORY, AT FIRST REPORTED THE SATELLITE WAS IN A WIDE-LOOPING ORBIT RANGING FROM 600 TO 1,200 MILES HIGH. FROM THIS ALTITUDE, IT WOULD BE DIFFICULT TO INITIATE A LANDING.

FROM THE NEW PATH, 62 MILES, IT WOULD BE MUCH SIMPLER, U.S. OFFICIALS REPORTED. IT IS VERY SIMILAR TO APOLLO 11'S PLANNED ALTITUDE WHICH IS TO RANGE FROM 63 TO 75 MILES HIGH. IT WAS NOT KNOWN WHETHER LUNA 15 WOULD BE TRAVELING OVER THE SAME GROUND TRACK AS APOLLO 11. EVEN IF IT WERE, THE U.S. OFFICIALS SAID CHANCES OF A COLLISION WERE ALMOST NIL.

17/2100Z JUL GSTS

GMD006A

NN DSDB DSDL DSSW ANRC LRID GWAB HAMC HNET

DE HMSC 059

17/2238Z

FM DON WITTEN/APOLLO 11 NEWS CENTER HOUSTON

TO ALL STADIR/M70/NASA SHIPS REP/STADAN AND SWITCHING CENTERS
MHRS.

INFO ANRC/SR NASA REP

LRID/DR. BEUTISTA

LRID/NASA REP

GSTS/DON WITTEN CODE 202

PAGE ONE OF THREE

APOLLO 11 ASTRONAUTS ARMSTRONG, ALDRIN AND COLLINS ENDED THEIR FIRST REST PERIOD AT 7 A.M. CENTRAL DAYLIGHT TIME AFTER TRAVELING MORE THAN 40,000 MILES DURING THEIR 9 HOUR REST. THE TRIO HAS BEEN SLEEPING SINCE ABOUT 10:30 P.M. WEDNESDAY AND AT THE MISSION CONTROL CENTER IN HOUSTON, BIOMEDICAL TELEMETRY SHOWS THEIR HEARTBEAT RATES TO BE IN THE FORTIES, AN INDICATION THAT THEY ARE SLEEPING SOUNDLY.

AFTER ARISING, THEY ATE A BREAKFAST OF FRUIT COCKTAIL, SAUSAGE PATTIES, TOAST CUBES WITH COCCA AND A GRAPEFRUIT DRINK.

AT 5:10 A.M. CENTRAL DAYLIGHT TIME, APOLLO 11 WAS 104,085 MILES FROM EARTH, TRAVELING AT 3,940 MPH RELATIVE TO EARTH.

"GOOD MORNING, HOUSTON" WAS THE GREETING FROM APOLLO 11 ASTRONAUTS ARMSTRONG, ALDRIN AND COLLINS AS THE MISSION CONTROL CENTER OPENED COMMUNICATIONS WITH THE SPACECRAFT AFTER THE CREW ENDED A NINE HOUR REST PERIOD THIS MORNING.

APOLLO 11 SYSTEMS FUNCTIONED NORMALLY DURING THE FIRST NIGHT OF THE MANNED LUNAR LANDING MISSION. AT 7:25 A.M. CENTRAL DAYLIGHT TIME TODAY, FLIGHT SURGEONS MONITORING THE ASTRONAUT'S PHYSICAL CONDITION BY TELEMETRY REPORTED THE APOLLO 11 CREW HAD BEEN AWAKE FOR SOME TIME.

INITIAL COMMUNICATIONS THIS MORNING INCLUDED AN EXCHANGE OF INFORMATION TO UPDATE THE MISSION FLIGHT PLAN.

THE FIRST MAJOR EVENT IN THE MISSION PLAN TODAY WAS A MIDCOURSE CORRECTION SHORTLY BEFORE NOON. THE SCHEDULE ALSO CALLS FOR A TELEVISION BROADCAST AT 6:17 P.M. CENTRAL DAYLIGHT TIME.

THE CREW OF THE APOLLO 11 IS PREPARING FOR THE FIRST MIDCOURSE CORRECTION THAT WILL CHANGE SLIGHTLY THE COURSE OF THE SPACECRAFT ON ITS WAY TO THE MOON. THE SHORT BURN OF THE SERVICE PROPULSION SYSTEM ENGINE IS SCHEDULED FOR ABOUT 11:22 A.M. CENTRAL DAYLIGHT TIME.

EARLIER THIS MORNING THE CREW PROVIDED THE WORLD WITH A QUICK WEATHER SUMMARY.

LUNCH TODAY FOR THE ASTRONAUTS CONSISTED OF FRANKFURTERS, APPLE SAUCE, CHOCOLATE PUDDING AND AN ORANGE-GRAPEFRUIT DRINK.

SHORTLY AFTER 10:00 A.M. THE SPACECRAFT WAS 116-THOUSAND MILES FROM EARTH AND TRAVELING AT A SPEED OF 3575 MILES PER HOUR.

NOTE:
MCC 2
SPS ENGINE BURN
GET/ 26:44:57
BURN TIME/ 3 SECONDS
DELTA V/ 21.3 FPS
WILL CHANGE PERICYNTHION AT LOI 1 BURN FROM 175 NAUTICAL MILES TO
60 NAUTICAL MILES.
THE APOLLO 11 IS CONTINUING ON ITS COURSE FOR THE MOON. A
MID COURSE CORRECTION WAS MADE AT 11:17 A.M., CENTRAL DAYLIGHT TIME,
TO CORRECT THE TRAJECTORY.
THE FIRING OF THE SERVICE PROPULSION SYSTEM ENGINE LASTED ABOUT
THREE SECONDS AND CHANGED THE SPACECRAFT'S VELOCITY SOME 21
FEET PERSECOND. IT WAS A GOOD BURN AND WILL PLACE SPACECRAFT AT 60
NAUTICAL MILE PERICYNTHION.
AT 11:30 A.M. THE APOLLO 11 WAS 126,700 MILES FROM EARTH AND WAS
TRAVELING AT A SPEED OF ABOUT 34-HUNDRED MILES PER HOUR. THE
SPACECRAFT SPEED WILL CONTINUE TO SLOW DOWN UNTIL IT REACHES A
POINT WHERE THE GRAVITATIONAL PULL OF THE MOON WILL BEGIN TO
ACCELERATE THE SPEED.
THE SPACECRAFT IS IN A SLOW ROLL, CALL PASSIVE THERMAL CONTROL.
IT ROTATES, LIKE A BARBEQUE SPIT, THREE TIMES PER HOUR. THIS
PREVENTS THE APOLLO 11 FROM HEATING UP ON THE SIDE FACING THE SUN.
AT 2:00 P.M., THE SPACECRAFT WAS ABOUT 117,000 NM FROM THE EARTH
TRAVELING AT APPROX. 3,180 STATUTE MILES AN HOUR. THE SPACECRAFT'S
SPEED CONTINUED TO SLOW THIS MORNING UNTIL IT REACHES THE POINT
WHERE THE MOON'S GRAVITATIONAL PULL WILL CAUSE AN ACCELERATION.
APOLLO 11 REACHED THE HALFWAY MARK AT ABOUT 10:52 A.M. THIS
MORNING.
THE APOLLO 11 SPACECRAFT WAS 139-THOUSAND MILES FROM THE EARTH
AND TRAVELING AT A SPEED OF 3150 MILES PER HOUR SHORTLY BEFORE
4 P.M., CENTRAL DAYLIGHT TIME. THE CONDITON OF THE CREW REMAINS
GOOD... AND FROM ALL INDICATIONS THEY HAVE HAD A SLOW AFTERNOON,
SO FAR.
SHORTLY BEFORE 3:00 P.M. THE CREW BEAMED SOME TELEVISION TO THE
TRACKING STATION AT GOLDSTONE, CALIFORNIA WHERE IT WAS TAPE
RECORDED. IT MAY BE PLAYED LATER.
AT ABOUT 6:32 P.M. THE REGULARLY SCHEDULED LIVE TV TRANSMISSION
IS SCHEDULED FOR NETWORK COMMERCIAL TELEVISION.
ASTRONAUT COLLINS DID SOME EXERCISES THIS AFTERNOON. HIS HEART
RATE WENT TO 96 BEATS PER MINUTE BEFORE HE SAID HE WOULD STOP
BEFORE HE GOT TO HOT AND SWEATY.

17/2355Z JUL HMSC

GMD010A
RR ANRC DSDB DSDL DSSW LRID GWAB
DE GSTS 037
18/1725Z
INFO ANRC/SR E REP
LRID/DR BAUTISTE
LRID/NASA REP
ALL STADIR M&O/NASA SHIPS REP/STADAN AND SWITCHING CTR MGRS
GWAB

1969 JUL 19 03 59
JL. BAUTISTE
A-1

SPACE CENTER, HOUSTON (AP) - THE SOVIET UNION HAS GIVEN AMERICAN SPACE OFFICIALS ASSURANCE THAT THE ORBIT OF ITS LUNA 15 WOULD NOT INTERFERE WITH THE FLIGHT OF APOLLO 11, ASTRONAUT FRANK BORMAN SAID HERE TODAY.

THE SOVIET RESPONSE TO INQUIRIES FROM HERE, RELAYED BY BORMAN, GAVE NO HINT OF WHETHER THE LUNA SPACECRAFT WOULD MAKE A LANDING.

IN A CABLE FROM M. V. KELVYSH, PRESIDENT OF THE SOVIET ACADEMY OF SCIENCES, BORMAN WAS TOLD THAT THE LUNA ORBIT WOULD NOT "INTERSECT THE PUBLISHED TRAJECTORY" OF APOLLO 11 AND THAT SOVIET OFFICIALS WOULD INFORM BORMAN IF THERE WERE ANY CHANGE.

BORMAN, WHO RETURNED RECENTLY FROM A TOUR OF THE SOVIET UNION, ASKED FOR DETAILS OF THE LUNA FLIGHT IN A TELEPHONE CALL, NASA OFFICIALS HERE SAID.

THE SOVIET RESPONSE WAS RECEIVED HERE LAST NIGHT IN THE FORM OF A CABLE FROM KELVYSH.

19/0300Z JUL GSTS

GMD 101A

RR ANRC DSDB DSDL DSSW LRID GWAB

DE GSTS 044

18/1956Z

INFO ANRC/SR H REP LRID/DR BAUTISTE LRID/NASA REP ALL STADIR
M&O/NASA SHIPS REP/STADAN AND SWITCHING CTR MGRS AND GWAB

WASHINGTON (AP)-PRESIDENT NIXON WILL TALK BY RADIO TO THE
APOLLO 11 ASTRONAUTS DURING THEIR "MOON WALK," THE WHITE HOUSE
ANNOUNCED TODAY.

SPACE CENTER, HOUSTON (AP)--

AT 11:22 P.M. TONIGHT, THE MOON WILL WIN THE GRAVITATIONAL TUG-OF-
WAR AND APOLLO 11 WILL BE IN THE GRIP OF THE MOONS GRAVITY. THE
ASTRONAUTS WILL PASS THROUGH THIS INVISIBLE BARRIER WHEN THEY ARE
43,495 MILES FROM THE MOON AND 214,402 MILES FROM THEIR SHRINKING
HOME PLANET.

ONCE ACROSS THIS LINE, APOLLO 11S SPEED WILL INCREASE FROM ABOUT
2,000 TO 57,700 MILES AN HOUR AS THE PILOTS SWEEP TOWARD THE FAR
SIDE OF THE MOON.

18/2030Z JUL GSTS

GMD056A
NN DSDC GCEN HAMC HNET HPSR
DE HMSC 056
20/1221Z
FM NC
TO ALL

SECTION ONE OF TWO PAGE ONE OF THREE

OPN

SUBJ: UNOFFICIAL MISSION PROGRESS REPORT

THE FOLLOWING REPORT IS PROVIDED FOR STATION INFORMATION ONLY AND IS NOT TO BE RELEASED AS OFFICIAL PAO INFORMATION.

SUBJECT: APOLLO 11 DAILY OPERATIONS REPORT NO. 4

TIME: 0700 EDT GET: 93:28 WEIGHT: 70,321 POUNDS

APOLUNE: 64.0 NAUTICAL MILES PERILUNE: 55.5 NAUTICAL MILES

MISSION EVENTS

MAJOR EVENTS SINCE THE LAST REPORT INCLUDED LUNAR ORBIT INSERTION MANEUVERS 1 AND 2 (LOI-1 AND 2), A LIVE TELEVISION TRANSMISSION OF THE LUNAR SURFACE, LUNAR LANDMARK TRACKING, LUNAR MODULE (LM) HOUSEKEEPING AND TELECOMMUNICATIONS TEST. MIDCOURSE CORRECTION 4, ORIGINALLY SCHEDULED FOR 75:54 GET, WAS NOT REQUIRED AND THEREFORE WAS NOT PERFORMED.

LUNAR ORBIT INSERTION WAS PERFORMED IN TWO SEPARATE MANEUVERS USING THE SERVICE MODULE SERVICE PROPULSION SYSTEM (SPS). THE FIRST MANEUVER, LOI-1, WAS INITIATED AT 75:50 GET. THE RETROGRADE MANEUVER PLACED THE SPACECRAFT IN A 168.8 X 61.3 NAUTICAL MILE (NM) ELLIPTICAL ORBIT.

DURING THE SECOND LUNAR ORBIT, A SCHEDULED LIVE COLOR TELEVISION TRANSMISSION WAS ACCOMPLISHED. SPECTACULAR VIEWS OF THE LUNAR SURFACE INCLUDED THE APPROACH PATH TO LUNAR LANDING SITE 2.

AFTER TWO REVOLUTIONS AND A NAVIGATION UPDATE, A SECOND SPS RETROGRADE BURN (LOI-2) WAS MADE. THE RESULTING ORBIT HAD AN APOLUNE OF 65.7 NM AND A PERILUNE OF 63.8 NM.

AFTER LOI-2, THE CREW TRANSFERRED TO THE LM AND FOR ABOUT TWO HOURS, PERFORMED VARIOUS HOUSEKEEPING FUNCTIONS, A VOICE AND TELEMTRY TEST AND AN OXYGEN PURGE SYSTEM CHECK. LM FUNCTIONS AND CONSUMMABLES QUANTITIES CHECKED OUT VERY WELL. ADDITIONALLY, BOTH LH HASSELBLAD AND MAURER CAMERAS WERE CHECKED AND VERIFIED AS BEING OPERATIONAL.

LUNAR LANDMARK TRACKING WAS ACCOMPLISHED AND INDICATIONS ARE THAT THESE LANDMARKS WERE WELL SPACED, OF GOOD QUALITY AND IN CONFORMANCE WITH GROUND TRACKING DATA.

THE S-IVB/1U CLOSEST APPROACH TO THE MOON WAS 2340 NM AT 78:50:34 GET (4:22:34 PM EDT SATURDAY).

MAJOR EVENTS SCHEDULED FOR TODAY INCLUDE LM CHECKOUT, DESCENT TO THE LUNAR SURFACE, LANDING AT 102:45 GET (4:17 EDT) AND LUNAR SURFACE OPERATIONS.

ALL LUNAR ORBIT MANEUVERS FROM DESCENT ORBIT INSERTION THROUGH LANDING WILL TAKE PLACE APPROXIMATELY 2 MINUTES EARLIER THAN PRE-LAUNCH PLANNED TIMES. THIS AND THE SLIGHT CHANGES IN LOI-1 AND 2 TIMES ARE AS A RESULT OF HAVING PERFORMED ONLY A SINGLE MIDCOURSE CORRECTION DURING TRANSLUNAR COAST. MISSION PLANNING STILL CALLS FOR A 4-HOUR REST PERIOD PRIOR TO EVA. NOMINAL EVA WILL START AT 112:40 GET (2:12AM EDT MONDAY). THIS COULD BE CHANGED IN REAL TIME AS A CREW OPTION. LIVE BLACK AND WHITE TELEVISION COVERAGE OF THE ENTIRE EVA WILL BE TRANSMITTED TO EARTH.

SYSTEM STATUS

THE COMMAND MODULE (CM) ENVIRONMENTAL CONTROL SYSTEM OXYGEN (O₂) MANIFOLD PRESSURE HAS BEEN NOMINAL THROUGHOUT THE MISSION AND HAS RESPONDED PROPERLY TO ALL OXYGEN DEMANDS. THE O₂ FLOW TRANSDUCER REMAINS ANOMALOUS WITH ITS OUTPUT APPARENTLY SHIFTED AS MUCH AS 3 LBS PER HOUR LOW. FLIGHT CREW CHECKLIST PROCEDURES WERE UPDATED TO PROVIDE ALTERNATE MEASUREMENT INTELLIGENCE. THE CM WAS PRESSURIZED TO APPROXIMATELY 5.2 PSIA PRIOR TO OPENING THE LM PRESSURE EQUALIZATION VALVE. THE LM PRESSURIZATION WAS NORMAL AND THE CM PRESSURE DROPPED TO 4.7 PSIA. THE INDICATED O₂ FLOWRATE INCREASED TO APPROXIMATELY 0.68 LBS PER HOUR AS THE CABIN PRESSURE REGULATOR BECAME ACTIVE. THIS DATA SUGGESTS THAT THE O₂ FLOW TRANSDUCER IS BIASED BY APPROXIMATELY 0.7 LBS PER HOUR TOWARD THE LOW END OF THE TRANSDUCER RANGE.

THE MINOR DISTURBANCES IN FUEL CELL NO. 2 CONDENSER EXHAUST TEMPERATURE CONTINUE TO BE OBSERVED; NO CHANGE IN MAGNITUDE OR PERIOD HAS BEEN NOTED.

SERVICE PROPULSION SYSTEM OPERATION DURING LOI-1 APPEARED NOMINAL IN ALL RESPECTS EXCEPT FOR AN APPARENT LEAK IN THE BANK B GN₂ (GASEOUS NITROGEN) ACTUATION SYSTEM. FOLLOWING SHUTDOWN, THE PRESSURE STABILIZED AND THERE HAS BEEN NO ADDITIONAL LEAKAGE. BANK B WAS ISOLATED AND LOI-2 WAS PERFORMED SATISFACTORILY USING ONLY BANK A. ALL SPS PARAMETERS WERE NOMINAL AFTER THE BURN.

PICTURE QUALITY OF THE 34-MINUTE TELEVISION BROADCAST BEGINNING AT 78:24 GET WAS GOOD THROUGHOUT. A WHITE SPOT AT THE BOTTOM OF THE SCREEN FIRST OBSERVED ON FRIDAY AND ATTRIBUTED TO A BURN IN THE CAMERA TUBE, WAS STILL PRESENT AND IS NOT NOW EXPECTED TO DECREASE IN SIZE AS FIRST ANTICIPATED.

FOLLOWING LOI-2, INITIAL ACQUISITION OF SIGNAL AT GOLDSTONE OCCURRED AT 80:34:03 GET WITH TWO-WAY LOCK USING THE HIGH GAIN ANTENNA (HGA) ESTABLISHED AT 80:35:07 GET. A PROBLEM OCCURED WITH THE GOLDSTONE UDATA BUFFER AND AN UPLINK HANDOVER TO HAWAII WAS ATTEMPTED AT 80:40:15. COMMUNICATIONS WERE THEN LOST FOR APPROXIMATELY 6 MINUTES. IT APPEARS THAT AT HANDOVER THE HGA SLEWED OFF. COMMUNICATIONS WERE RE-ESTABLISHED AT 80:46:12 WHEN THE CREW DID AN HGA RE-ACQUISITION.

THE CREW REPORTED AT 81:29 THAT MOISTURE WAS DISCOVERED ON THE AFT BULKHEAD. THIS HAS OCCURRED ON PREVIOUS MISSIONS FOLLOWING SPS BURNS AND WAS ATTRIBUTED TO CONDENSATION REACTING TO ACCELERATION, AND COLLECTING. IT WAS RECOMMENDED THAT THE VACUUM QUICK DISCONNECT ASSEMBLY BE USED IN CONJUNCTION WITH THE URINE TRANSFER SYSTEM TO VACUUM THE WATER OVERBOARD. IF THE QUANTITY OF WATER IS SMALL, TOWELS OR TISSUES WILL BE USED TO WIPE UP.

FLIGHT CREW PERFORMANCE CONTINUES TO BE EXCELLENT. ALL CREW MEMBERS HAVE SLEPT WELL, ARE FEELING FINE AND HAVE TAKEN NO MEDICATION.

GMD078A
NN ANRC DSDB DSDL DSSW LRID GWAB
DE GSTS 021
20/1825Z
SUSDUPE
FM JAMES S LACY
INFO ANRC/SR N REP
LRID/DR BAUTISTE
LRID/NASA REP
ALL STADIR M&O NASA SHIPS REP STADAN AND SWITCHING CTR MGRS
GWAB

PAGE ONE OF TWO
(HOUSTON)--THE APOLLO-ELEVEN ASTRONAUTS HAVE UNLOCKED THE
"EAGLE" LUNAR-LANDING MODULE FROM THE MOTHER SHIP "COLUMBIA"
ON SCHEDULE. ASTRONAUTS NEIL ARMSTRONG AND ED ALDRIN ARE
INSIDE THE MODULE, WHICH THEY CHECKED OUT THIS MORNING.
THE TWO CRAFT WILL FLY IN FORMATION WHILE ASTRONAUT MIKE
COLLINS--INSIDE THE COMMAND SHIP--INSPECTS THE EXTERIOR OF THE
MOON-LANDER.
THE EAGLE MODULE IS NOW MANEUVERING FOR TOUCH-DOWN ON THE
MOON, WHICH IS SCHEDULED FOR ABOUT 4:18 P-M (EDT). AS PLANS NOW
STAND, ARMSTRONG WILL CRAWL BACKWARD OUT OF THE MODULE AND FIRST
SET FOOT ON THE MOON ABOUT TEN HOURS LATER--OR AT ABOUT 2:18
A-M (EDT) TOMORROW. ALDRIN WILL FOLLOW ABOUT 20 MINUTES LATER.
THE TWO WILL SPEND ABOUT TWO AND A HALF HOURS WALKING AROUND ON THE
MOON, CONDUCTING EXPERIMENTS AND SEEING HOW MAN CAN FUNCTION IN
LUNAR GRAVITY--ONE-SIXTH OF THE EARTHS.
FOR THE EXPLORATION THEY ALREADY HAVE DONNED 300,000 DOLLARS SPACE
SUITS, DESIGNED FOR MAXIMUM PROTECTION. THE SUITS CARRY THEIR OWN
OXYGEN, AIR CONDITIONING, SUN VISORS AND METEORITE SHIELD.
APOLLO-ELEVEN RECEIVED THE GO-AHEAD FROM MISSION CONTROL AT
12:56 P-M (EDT), TO UNLOCK THE LUNAR MODULE FROM THE MOTHER
SHIP "COLUMBIA".
(JODRELL BANK, ENGLAND)--BRITISH ASTRONOMERS SAY THE SOVIET
LUNA-15 IS EITHER DOING RECONNAISSANCE OR PREPARING TO LAND ON THE
MOON. THE JODRELL BANK OBERVATORY SAYS THE UNMANNED RUSSIAN
SPACECRAFT IS NOW ABOUT 20 MILES FROM THE MOONS SURFACE--MUCH
CLOSER THAN IT HAD BEEN PREVIOUSLY.
LUNA ALSO IS REPORTEDLY FOLLOWING A COURSE NEARER THE
APOLLO-ELEVEN ORBIT. BUT THE TWO CRAFT ARE STILL FAR APART.
THE BRITISH SCIENTISTS SAY LUNA-15 PROBABLY HAS MOVED CLOSER TO
SEE WHAT APOLLO IS DOING.
THEY SAY THE RUSSIANS MAY BE PLANNING TO PULL LUNA OUT OF
ORBIT AND RETURN IT TO EARTH--SOMETHING THEY NEVER HAVE DONE
BEFORE.

20/1850Z JUL GSTS

GMD020B

NN ANRC DSDB DSDL DSSW LRID

DE GSTS 026

20/1916Z

FM JAMES S LACY

INFO ANRC/SR N REP

LRID/DR BAUTISTE

LRID/NASA REP

ALL STADIR M&O NASA SHIPS REP STADAN AND SWITCHING CTR MGRS

EAGLE GETS GREEN LIGHT FOR FIRING ROCKETS.

(HOUSTON)--THE ASTRONAUTS ABOARD THE EAGLE FLYING SHIP HAVE BEEN GIVEN A GO-AHEAD TO FIRE THEIR BRAKING ROCKET.

NEIL ARMSTRONG AND ED ALDRIN WILL FIRE THE SPACE SHIPS ENGINE AT ABOUT 3:09 P.M. EDT. THE BURN, LASTING FOR 29 SECONDS, IS INTENDED TO LOWER THE LANDING CRAFTS ORBIT FROM A 69-MILE-HIGH ORBIT TO ONE RANGING FROM TEN TO 66 MILES HIGH. IT IS FROM THIS ORBIT THAT THE MOON LANDING WOULD BE ATTEMPTED.

20/1925Z JUL GSTS

GM0092A

TRR ANRC DSDB DSDL LRID

DE GSTS 028

20/2210Z

FM JAMES S LACY PAO

TO ALL STADIR M&O NASA SHIPS REP STADAN AND SWITCHING CTR MGRS

INFO ANRC/SR N REP

LRID/DR BAUTISTE

LRID/NASA REP

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SPACE CENTER, HOUSTON (AP)--MAN LANDED ON THE MOON TODAY, JULY 20, 1969, AT 4:17:40 (EDT).

NEIL A. ARMSTRONG AND EDWIN E. ALDRIN JR., FROM A PLANET CALLED EARTH AND A NATION CALLED THE UNITED STATES OF AMERICA, SETTLED DOWN ONTO SOIL NO MAN HAD EVER TOUCHED BEFORE. A DREAM OF THE AGES HAD COME TRUE. THESE TWO MEN, WHO ETCHED THEIR NAMES BESIDE THE GREAT EXPLORERS OF THE PAST, BROUGHT THEIR SPACESHIP NAMED EAGLE DOWN ON THE MOONS SEA OF TRANQUILITY AFTER A DANGEROUS AND DIFFICULT DESCENT FROM THE APOLLO 11 COMMAND SHIP AT 4:18 P.M.

ASTRONAUT MICHAEL COLLINS REMAINED AT THE CONTROLS OF THE COMMAND VEHICLE, CALLED COLUMBIA, ORBITING MORE THAN 60 MILES OVERHEAD. THE DROP TO THE SURFACE IN THE FOUR-LEGGED LANDER TOOK MORE THAN TWO HOURS AND REQUIRED THE FLAWLESS MESHING OF MEN AND MACHINE TO ACCOMPLISH MANS FIRST VISIT TO A PLANET OTHER THAN EARTH. ARMSTRONG AND ALDRIN HAD LITTLE TIME TO ENJOY THE VIEW. THEY IMMEDIATELY BEGAN AN EXTENSIVE CHECK OF THE LANDING VEHICLE. ANY MAJOR PROBLEM WOULD CAUSE THEM TO ATTEMPT AN IMMEDIATE BLASTOFF TO REJOIN COLLINS.

TWO MEN, NEIL A. ARMSTRONG AND EDWIN E. ALDRIN JR., 240,000 MILES AWAY FROM THEIR HOME PLANET CALLED EARTH AND THEIR NATION, THE UNITED STATES OF AMERICA, CAME TO A DUSTY LANDING ON THE MOONS SURFACE, THE FIRST MEN TO TOUCH ITS ALIEN SOIL.

"TRANQUILLITY BASE HERE," SAID ALDRIN, AN AIR FORCE COLONEL.

"EAGLE HAS LANDED."

FROM SOME 60-ODD MILES ABOVE THE MOON, AIR FORCE LT. COL MICHAEL COLLINS IN THE COMMAND SHIP COLUMBIA CHIMED IN WITH "FANTASTIC". THE UNOFFICIAL TIME OF THE EAGLES LANDFALL ON THE MOONS SEA OF TRANQUILLITY WAS 102 HOURS, 45 MINUTES AND 42 SECONDS AFTER BLASTOFF LAST WEDNESDAY, JULY 16, FROM CAPE KENNEDY, FLA.

THE FIRST MINUTES ON THE LUNAR SURFACE WERE MOSTLY SILENT, AS ARMSTRONG AND ALDRIN QUICKLY READIED EVERYTHING IN THEIR SPIDER-LIKE SPACE TAXI FOR AN EMERGENCY BLAST-OFF FROM THE MOON, IF NECESSARY. THE INITIAL MOMENTS WERE FOR A DECISION ON WHETHER TO STAY ON THE DUSTY SURFACE. THE SPACECRAFT ENGINE BEGAN KICKING UP DUST FROM THE MOMENT IT WAS 40 FEET ABOVE ON ITS DESCENT.

THE LANDING WAS THE START OF AN EPIC EXPLORATION IN WHICH ARMSTRONG AND ALDRIN WERE TO WALK THE LUNAR SURFACE, COLLECTING PRECIOUS BITS OF THIS NEW WORLD, DEPLOYING SCIENTIFIC INSTRUMENTS AND SEEING WHAT IT IS LIKE FOR MAN TO WORK IN THE MOONS ONE-SIXTH GRAVITY. ARMSTRONG PLANNED TO TAKE MANS FIRST STEP ON ANOTHER CELESTIAL BODY ON MONDAY AT 2:16 A.M., FOLLOWED ABOUT 20 MINUTES LATER BY ALDRIN. THROUGH TELEVISION, MUCH OF THE WORLD WAS TO WATCH THEIR EXCURSION ON THE SURFACE. LIVE PICTURES WERE TO BE RELAYED FROM A TV CAMERA WHICH THE ASTRONAUTS WERE TO MOUNT 30 FEET FROM THE LANDING CRAFT. ARMSTRONG AND ALDRIN PLANNED TO EXPLORE OUTSIDE ABOUT 2 1/2 HOURS. IN ALL, THEY WERE TO BE ON THE LUNAR SURFACE ABOUT 22 HOURS. IN THAT TIME THEY WILL OPEN THE BOUNDLESS FRONTIER OF SPACE A LITTLE MORE AND CLEAR THE WAY FOR FUTURE FLIGHTS BEYOND PRESENT IMAGINATION.

20/2235Z JUL GSTS

GMD096A

RR ANRC DSDB DSDL DSSW LRID GWAB

DE GSTS 029

20/2211Z

INFO ANRC/SR N REP LRID/DR BAUTISTE LRID/NASA REP ALL STADIR
M&O/NASA SHIPS REP/STADAN AND SWITCHING CTR MGRS AND GWAB

PAGE ONE OF TWO

ALMOST IMMEDIATELY, MISSION CONTROL BEGAN REFERRING TO THE
LANDED MEN WITH A NEW RADIO CALL SIGN, "TRANQUILLITY BASE,"
DROPPING THE OLD CODE NAME, "EAGLE."

DURING THE DESCENT, ARMSTRONG SAID, HE WAS TOO BUSY WITH THE
CONTROL PANELS TO PICK OUT SOME OF THE REQUIRED LANDMARKS.
MISSION CONTROL TOLD HIM NOT TO WORRY.

"BE ADVISED THERE ARE LOTS OF SMILING FACES HERE AND ALL AROUND
THE WORLD," SAID MISSION CONTROL.

"THERE ARE TWO UP HERE ALSO", ARMSTRONG BEAMED BACK.

"DONT FORGET THE THIRD ONE UP HERE," SAID COLLINS FROM THE
ORBITING COMMAND SHIP.

"TRANQUILLITY BASE, YOU GUYS DID A FANTASTIC JOB," SAID COLLINS.

"JUST KEEP THAT ORBITING BASE UP THERE FOR US," ARMSTRONG REPLIED.

"WE DONT THINK THERE IS ANY DIFFICULTY ADAPTING TO THE ONE-
SIXTH GRAVITY OF THE MOON," THE TRANQUILLITY BASE REPORTED.
ARMSTRONG SAID THEY FLEW BEYOND THEIR INTENDED LANDING SITE
BECAUSE ON CLOSE INSPECTION IT WAS JUST TOO ROUGH TO ATTEMPT
IT, TOUCHING DOWN THERE.

"EXTREMELY ROUGH CRATERS AND A LARGE NUMBER OF ROCKS," ARMSTRONG
SAID. "MANY OF THEM WERE LARGER THAN 10 FEET."

PRESIDENT NIXON WATCHED THE TELEVISED NEWS OF THE LANDING IN
HIS WORKING OFFICE IN THE EXECUTIVE OFFICE BUILDING NEXT DOOR TO
THE WHITE HOUSE.

IT WAS A DIFFERENT VIEW FOR THE ASTRONAUTS ON THE MOON.

"WE ARE IN A RELATIVELY SMOOTH PLAIN WITH MANY CRATERS FIVE TO
50 FEET IN SIZE," ARMSTRONG REPORTED. "WE SEE SOME RIDGES. AND
THERE ARE LITERALLY THOUSANDS OF LITTLE ONE AND TWO FOOT CRATERS.
WE SEE SOME ANGULAR BLOCKS SOME FEET IN FRONT OF US, ABOUT TWO-TO-
THREE FEET IN SIZE.

"THERES A HILL IN VIEW ON THE GROUND TRACK AHEAD OF US. ITS
DIFFICULT TO ESTIMATE BUT IT MIGHT BE ONE-HALF MILE OR A
MILE AWAY." THE NORMAL LUNAR HORIZON IS 1 1/2 TO TWO MILES AWAY.

20/2255Z JUL GSTS

GMD095A
RR ANRC DSDB DSDL DSSW LRID GWAB
DE GSTS 030 .

20/2212Z

INF ANRC/SR N REP
LRID/DR BAUTISTE
LRIE/NASA REP ALL STADIR
M&O/NASA SHIPS REP/STADAN AND SWITCHING CTR MGRS AND GWAB

FAMOUS WORDS

SPACE CENTER, HOUSTON (AP)- "TRANQUILLITY BASE HERE. THE EAGLE HAS LANDED." THOSE WERE THE FIRST WORDS FROM THE LUNAR SURFACE, FROM COMMAND PILOT NEIL ARMSTRONG AFTER THE TOUCHDOWN ON THE MOON.

OTHER FAMOUS FIRST WORDS THROUGH HISTORY:

CHARLES LINDBERGH, ON ARRIVING IN PARIS MAY 21, 1927, AFTER THE FIRST SOLO FLIGHT ACROSS THE ATLANTIC:

"IM CHARLES LINDBERGH."

SIR HENRY MORTON STANLEY, ON MEETING DR. DAVID LIVINGSTONE IN UJJI, CENTRAL AFRICA, NOV. 10, 1871:

"DOCTOR LIVINGSTONE I PRESUME?"

GEN. DOUGLAS MACARTHUR, ARRIVING IN AUSTRALIA MARCH 24, 1942, FROM CORREGIDOR AND THE PHILIPPINES:

"I SHALL RETURN."

SAMUEL F.B. MORSE, IN TRANSMITTING THE FIRST LONG DISTANCE MESSAGE OVER THE FIRST TELEGRAPH LINE FROM WASHINGTON TO BALTIMORE, MAY 24, 1844:

"WHAT HATH GOD WROUGHT."

ALEXANDER GRAHAM BELL, ON MARCH 10, 1876, IN THE FIRST INTELLIGIBLE WORDS TRANSMITTED BY TELEPHONE, TO HIS ASSISTANT:

"MR. WATSON, COME HERE. I WANT YOU."

20/2245Z JUL GSTS

GMD011A
RR ANRC DSDB DSDL DSSW LRID GWAB
DE GSTS 006
21/0126Z

INFO ANRC/SR N REP LRID/DR BAUTISTE LRID/NASA REP ALL STADIR
M&O/NASA SHIPS REP/STADAN AND SWITCHING CTR MGRS AND GWAB

SPACE CENTER, HOUSTON (AP)-WHOOPS AND HOLLERS OF HAPPINESS ROCKED
THE APOLLO 11 HOMES TODAY AS NEIL ARMSTRONG AND EDWIN E. ALDRIN JR.
LANDED ON THE MOON.

"GOOD, GOOD, GOOD," SHOUTED MRS. ARMSTRONG AND LEAPED FROM A
BED COVERED WITH MAPS AND CHARTS ON WHICH SHE FOLLOWED THE FINAL
MINUTES OF DESCENT.

"I JUST CANT BELIEVE IT," SAID MRS. ALDRIN, HUGGING HER FATHER,
MICHAEL ARCHER, HO HO KUS, N.J.

THERE WAS NO OFFICIAL COMMENT ON THE TOUCHDOWN FROM THE HOME
OF MICHAEL COLLINS, WHO RODE THE COMMAND CAPSULE IN MOON ORBIT.
HOWEVER, A NEWSMAN HEARD A LOUD CHEER INSIDE THE HOUSE WHEN THE
LANDING CAME.

ALL THREE WIVES HAVE ALREADY MADE PLANS FOR A PRE-SPLASHDOWN
CELEBRATION TUESDAY NIGHT AT A PARTY HOSTED BY ASTRONAUT BILL
ANDERS.

21/0145Z JUL GSTS

GMD013A
RR ANRC DSDB DSDL DSSW LRID GWAB
DE GSTS 003
21/0120Z

INFO ANRC/SR N REP LRID/DR BAUTISTE LRID/NASA REP ALL STADIR
M&O/NASA SHIPS REP/STADAN AND SWITCHING CTR MGRS AND GWAB

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SPACE CENTER, HOUSTON (AP)--MAN LANDED ON THE MOON AT 4:18 P.M.
TODAY, JULY 20, 1969.

TWO AMERICANS, NEIL A. ARMSTRONG AND EDWIN E. ALDRIN JR., 240,000
MILES AWAY FROM HOME ON THE PLANET EARTH, DROPPED TO A DUSTY LANDING
ON THE MOON'S ALIEN SOIL, THE FIRST MEN IN THAT STRANGE LAND.
"HOUSTON," ARMSTRONG'S VOICE CALLED OUT FROM THE LUNAR SURFACE.
HE PAUSED A FULL TWO SECONDS. "TRANQUILLITY BASE HERE. THE
EAGLE HAS LANDED."

"FANTASTIC," SAID THE THIRD APOLLO 11 ASTRONAUT, MICHAEL COLLINS,
PILOTING THE COMMAND SHIP COLUMBIA ON ITS LONELY ORBITAL PATROL SOME
69 MILES ABOVE.

WITHIN HOURS, FIRST ARMSTRONG AND THEN ALDRIN WOULD WALK THE LUNAR
SURFACE.

AS EAGLE NEARED THE SURFACE, ITS COMPUTERIZED AUTOMATIC PILOT
SENT THE FRAGILE SHIP TOWARD A NEST OF ROCKS AND BOULDERS IN THE
PROJECTED LANDING SITE IN THE MOON'S SEA OF TRANQUILLITY.

ARMSTRONG GRABBED CONTROL OF HIS SHIP, STEERED IT CLEAR OF CERTAIN
DISASTER AND PUT IT DOWN FOUR MILES BEYOND THE ORIGINAL LANDING
POINT.

"THE AUTO TARGETTING WAS TAKING US RIGHT INTO A FOOTBALL FIELD
SIZED CRATER WITH A LARGE NUMBER OF BIG BOULDERS AND ROCKS,"
ARMSTRONG SAID. "AND IT REQUIRED US TO FLY MANUALLY OVER THE ROCK
FIELD TO FIND A REASONABLY GOOD AREA."

21/0155Z JUL GSTS

GMD017A
RR ANRC DSDB DSDL DSSW LRID GWAB
DE GSTS 013
21/0512Z
INFO ALL STADIR M&O/NASA SHIPS/STADAN AND SWITCHING CTR MGRS
ANRC/SR N REP
LRID/DR BAUTISTE NASA REP
GWAB

PAGE ONE OF TWO
(HOUSTON)--MAN WALKED AND WORKED ON THE MOON TONIGHT AND SHOWED
THE WORLD BELOW HIM HOW HE DID IT.
NEIL ARMSTRONG STEPPED ONTO THE MOON AT 10:56 P.M., EASTERN
DAYLIGHT TIME.
FORTY-FIVE MINUTES LATER, HE AND BUZZ ALDRIN PUT UP THE UNITED
STATES FLAG NEXT TO THE LUNAR MODULE IN WHICH THEY HAD LANDED AT
4:18 P.M.
THE TWO WERE HOURS AHEAD OF THEIR PLANNED SCHEDULE IN MANS FIRST
EXPLORATION OF ANOTHER WORLD.
IT WAS A CONTINUATION OF THE SUCCESS THAT HAD MARKED THE
APOLLO-ELEVEN MISSION FROM THE VERY START--THE BLASTOFF FROM CAPE
KENNEDY LAST WEDNESDAY.
THE TELEVISION CAMERA THAT SHOWED THE WATCHING WORLD MANS
GREATEST ADVENTURE TO DATE WAS SWITCHED ON EVEN BEFORE ARMSTRONG
TOUCHED THE LUNAR SURFACE.
HE HAD TURNED IT ON AS HE BACKED DOWN THE LADDER LEADING FROM THE
L-M CALLED "EAGLE."
OVERHEAD, THE COMMAND SHIP "COLUMBIA," PILOTED ALONE BY MIKE
COLLINS, CONTINUED ITS ORBITS OF THE MOON LEADING TOWARD EVENTUAL
RENDEZVOUS WITH ARMSTRONG AND ALDRIN IN THE ASCENT STAGE OF THEIR
LANDER.
AS HE STEPPED ONTO THE MOON, ARMSTRONG SAID:
"THATS ONE SMALL STEP FOR MAN, ONE GIANT LEAP FOR MANKIND."
EVEN BEFORE HE PICKED UP HIS CONTINGENCY SAMPLE, ARMSTRONG
BEGAN TAKING PICTURES.
BUT HE GOT THE SAMPLE AND THEN HE GUIDED ALDRIN DOWN THE STEPS
OF THE LADDER.
AT 11:48 P.M., PRESIDENT NIXON CALLED THE TWO ASTRONAUTS FROM THE
OVAL ROOM OF THE WHITE HOUSE.
NIXON SAID: "I SIMPLY CANT TELL YOU HOW PROUD WE ALL ARE...
BECAUSE OF WHAT YOU HAVE DONE, THE HEAVENS HAVE BECOME PART OF MANS
WORLD."
ARMSTRONG AND ALDRIN STOOD QUIETLY BELOW THE L-M AS NIXON SPOKE.
HE TOLD THEM:
"OUR PRAYERS ARE THAT YOU RETURN SAFELY TO EARTH."
ARMSTRONG REPLIED: "THANK YOU, MR. PRESIDENT."
NIXON SAID HE LOOKED FORWARD TO "SEEING YOU ALL ON THE HORNET
THURSDAY."
THE PRESIDENT REFERRED TO THE RECOVERY CARRIER WHICH IS TO PICK
UP ARMSTRONG, ALDRIN AND COLLINS IN THE PACIFIC 1,200 MILES SOUTH-
WEST OF HAWAII.
SPLASHDOWN IS SET FOR 12.52 P.M. EDT.
ITS A TIME THE ASTRONAUTS AND THE WORLD LOOKED FORWARD TO.
BUT IT STILL WAS HOURS AND MORE HAZARDS AWAY.
AND AFTER THEY FINISHED THEIR TALK WITH NIXON, ARMSTRONG AND
ALDRIN CONTINUED TO WORK AROUND THE SPACECRAFT CLOSE BY THE SHADOW
CAST BY THE STARS AND STRIPES THEY PLANTED AS MEN OF EARTH WHO
CAME TO THE MOON IN PEACE.

21/0558Z JUL GSTS

BMDO31A
NN DSDC GUNV HNET
DE HMSC 039
21/1011Z
FM ALSEP NETWORK
TO ALL

M

OPN
SUBJECT: ALSEP STATUS
THE ALSEP WAS DELAYED DURING THE EVA AT 04:38:40Z. SIGNAL
STRENGTH AT INITIAL ACQUISITION WAS - 137 DBM (20,000 DOOL PARAMPS)
AND HAS NOT FLUCTUATED SINCE.
INITIAL LEVELING AND GAIN SETTING HAVE BEEN ACCOMPLISHED.
THE ASTRONAUT EQUIPMENTS AND EQUIPMENT ATTACHING WERE MONITORED
BY THE SENSITORS.

21/1011Z JUL 1970

GMD073A
NN DSDC GCEN HAMC HNET HPSR
DE HMSC 055
21/1600Z
FM NC
TO ALL

SECTION ONE OF FIVE PAGE ONE OF THREE
OPN

SUBJECT: UNOFFICIAL MISSION PROGRESS REPORT

THE FOLLOWING REPORT IS PROVIDED FOR STATION INFORMATION ONLY
AND IS NOT TO BE RELEASED AS OFFICIAL PAO INFORMATION.

SUBJECT: APOLLO 11 DAILY OPERATIONS REPORT NO. 5

TIME: 0700 EDT GET: 117:28 ORBITAL WEIGHT: 36,567 POUNDS

APOLUNE: 62.3 NAUTICAL MILES PERILUNE: 56.8 NAUTICAL MILES

MISSION EVENTS

MAJOR EVENTS SINCE THE LAST REPORT INCLUDED LUNAR MODULE (LM)
CHECKOUT, SEPARATION OF THE LM FROM THE CSM (COMMAND/SERVICE
MODULE), LM DESCENT TO THE LUNAR SURFACE, LANDING AND LUNAR
SURFACE OPERATIONS.

THE COMMANDER (CDR) AND LUNAR MODULE PILOT (LMP) ENTERED THE
LM AT APPROXIMATELY 95:20 GET TO PERFORM A THOROUGH CHECK OF
ALL LM SYSTEMS IN PREPARATION FOR DESCENT. UNDOCKING OF THE LM
FROM THE CSM OCCURRED AT APPROXIMATELY 100:14 GET. STATION-
KEEPING WAS THEN INITIATED. AT 100:40 GET, THE SM REACTION
CONTROL SYSTEM WAS USED TO PERFORM A SMALL SEPARATION MANEUVER
DIRECTED RADIALLY DOWNWARD TOWARD THE CENTER OF THE MOON. THE
DESCENT ORBIT INSERTION (DOI) MANEUVER WAS PERFORMED BY A LM
DESCENT PROPULSION SYSTEM (DPS) RETROGRADE BURN ONE-HALF
REVOLUTION AFTER LM/CSM SEPARATION, PLACING THE LM IN AN
ELLIPTICAL ORBIT WHOSE PERILUNE WAS 8.5 NAUTICAL MILES.

THE LM POWERED DESCENT MANEUVER WAS INITIATED AT PERILUNE OF THE
DESCENT ORBIT. THE TIME OF POWERED DESCENT INITIATE (PDI) WAS
AS PLANNED.

DURING THE FINAL APPROACH PHASE, THE CREW NOTED THAT THE LANDING
POINT TO WHICH THE SPACECRAFT WAS HEADED WAS IN THE CENTER OF A
LARGE CRATER WHICH APPEARED EXTREMELY RUGGED WITH BOULDERS OF 5
TO 10 FEET IN DIAMETER AND LARGER. CONSEQUENTLY, THE CREW ELECTED
TO FLY TO A LANDING POINT BEYOND THIS CRATER. THIS REQUIRED
MANUAL ATTITUDE CONTROL AND FINE ADJUSTMENTS OF THE RATE OF DESCENT
PLUS HIGH HORIZONTAL VELOCITY TO TRANSLATE BEYOND THE ROUGH
TERRAIN AREA. THE FINAL LANDING POINT IS ESTIMATED TO BE ABOUT
FOUR MILES DOWNRANGE FROM THAT WHICH WAS PLANNED. DESCENT ENGINE
CUTOFF OCCURRED AT 102:45:45 GET (4:17:45 P.M. EDT) AFTER PROBE
CONTACT INDICATION. ONBOARD INERTIAL SYSTEM COORDINATES OF THE
LANDING POINT WERE .69 DEG N, 23.46 DEG E. EXACT COORDINATES HAVE NOT
BEEN ESTABLISHED AS OF THIS TIME.

LM TILT ON THE SURFACE IS 4.5 DEG FROM THE VERTICAL, AND THE LM IS YAWED LEFT ABOUT 13 DEG. THE CREW INDICATED THE LANDING SITE AREA CONTAINED NUMEROUS BOULDERS OF VARYING SHAPES AND SIZES UP TO 2 FEET. THE SURFACE COLOR VARIED FROM VERY LIGHT TO DARK GRAY. FROM HIS WINDOW VIEW, THE CDR REPORTED SEEING SOME BOULDERS THAT WERE APPARENTLY FRACTURED BY ENGINE EXHAUST. HE REPORTED THAT THE SURFACE OF THESE BOULDERS APPEARED TO BE COATED LIGHT GREY WHEREAS THE FRACTURES WERE MUCH DARKER. AT ZERO PHASE ANGLE (BETWEEN SUN ANGLE AND VIEWING ANGLE), THE SURFACE WAS REPORTED AS BEING ALMOST WHITE. A HILL IS IN SIGHT AT ABOUT 1/2 TO 1 MILE IN FRONT OF THE LM.

THE CREW INDICATED THAT THEY COULD IMMEDIATELY ADAPT TO THE 1/6 GRAVITY IN THE LM AND MOVED VERY EASILY IN THIS ENVIRONMENT. ABOUT TWO HOURS AFTER LANDING, THE CREW REQUESTED THAT THE EXTRA-VEHICULAR ACTIVITY (EVA) BE ACCOMPLISHED PRIOR TO THE SLEEP PERIOD, OR ABOUT 4 1/2 HOURS EARLIER THAN ORIGINALLY SCHEDULED. THE REST PERIOD ORIGINALLY PLANNED TO OCCUR PRIOR TO EVA WAS SLIPPED UNTIL POST EVA AND ADDED TO THE SECOND SLEEP PERIOD.

AFTER THE POSTLANDING CHECKS, THE LM HATCH WAS OPENED AT 101:07:55 GET. THE CDR'S FIRST STEP ON THE MOON OCCURRED AT 102:24:25 GET (10:56:25 P.M. EDT). HE MADE A BRIEF CHECK OF THE LM EXTERIOR, INDICATING THAT PENETRATION OF THE FOOTPADS WAS ONLY ABOUT 1 TO 2 INCHES AND COLLAPSE OF THE STRUT WAS MINIMAL. HE REPORTED SINKING APPROXIMATELY 1/8 INCH INTO THE FINE, POWDERY SURFACE MATERIAL, WHICH ADHERED READILY TO THE LUNAR BOOTS IN A THIN LAYER. THERE WAS NO CRATER FROM THE EFFECTS OF THE DESCENT ENGINE, AND ABOUT ONE FOOT OF CLEARANCE WAS OBSERVED BETWEEN THE ENGINE BELL AND THE LUNAR SURFACE. HE ALSO REPORTED THAT IT WAS QUITE DARK IN THE SHADOWS WHICH MADE IT DIFFICULT TO SEE HIS FOOTING.

THE CDR THEN COLLECTED A CONTINGENCY SAMPLE OF LUNAR SOIL FROM THE VICINITY OF THE LM LADDER. HE REPORTED THAT ALTHOUGH THE SURFACE MATERIAL WAS LOOSE CREATING A SOFT SURFACE, AS HE DUG DOWN SIX OR EIGHT 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 AND READ THE PLAQUE MOUNTED ON THE STRUT BEHIND THE LADDER. NEXT, THE CDR REMOVED THE TV CAMERA FROM THE DESCENT STAGE MESA, OBTAINED A PANORAMA, AND PLACED THE CAMERA ON ITS TRIPOD IN POSITION TO VIEW THE SUBSEQUENT SURFACE EVA OPERATIONS.

THE LMP DEPLOYED THE SOLAR WIND COMPOSITION EXPERIMENT ON THE LUNAR SURFACE IN DIRECT SUNLIGHT TO THE NORTH OF THE LM AS PLANNED.

SUBSEQUENTLY, THE CREW ERECTED A 3 BY 5-FOOT AMERICAN FLAG ON AN 8-FOOT ALUMINUM STAFF. DURING THE ENSUING ENVIRONMENTAL EVALUATION THE LMP INDICATED THAT HE HAD TO BE CAREFUL OF HIS CENTER OF MASS IN MAINTAINING BALANCE. HE NOTED THAT THE LM SHADOW HAD NO SIGNIFICANT EFFECT ON HIS EMU TEMPERATURE.

A CONVERSATION BETWEEN PRESIDENT NIXON AND ARMSTRONG AND ALDRIN WAS HELD. THE CONVERSATION ORIGINATED FROM THE WHITE HOUSE AND CONTAINED CONGRATULATIONS AND GOOD WISHES.

THE CDR COLLECTED A BULK SAMPLE OF LUNAR SURFACE MATERIAL CONSISTING OF ASSORTED SURFACE MATERIAL AND SELECTED ROCK CHUNKS. FOLLOWING THE BULK SAMPLE COLLECTION, THE CREW INSPECTED THE LM AND REPORTED NO DISCREPANCIES. THE QUADS, STRUTS, SKIRTS, AND ANTENNAS WERE SATISFACTORY.

THE PASSIVE SEISMIC EXPERIMENT PACKAGE (PSEP) AND LASER RANGING RETRO REFLECTOR WERE DEPLOYED SOUTH OF THE LM. EXCELLENT PSEP DATA WAS OBTAINED INCLUDING DETECTION OF THE CREWMEN WALKING ON THE SURFACE AND LATER IN THE LM. THE CREW THEN COLLECTED MORE LUNAR SAMPLES UNTIL EVA TERMINATION INCLUDING TWO CORE SAMPLES AND ABOUT 20 POUNDS OF DISCRETELY SELECTED MATERIAL. THE LMP HAD TO EXERT A CONSIDERABLE FORCE TO DRIVE THE CORE TUBES AN ESTIMATED EIGHT TO NINE INCHES DEEP.

THROUGHOUT THE EVA, TV WAS USEFUL IN PROVIDING CONTINUOUS OBSERVATION FOR TIME CORRELATION OF CREW ACTIVITY WITH TELEMETERED DATA AND VOICE COMMENTS AND IN PROVIDING LIVE DOCUMENTATION OF THIS HISTORICALLY SIGNIFICANT ACHIEVEMENT. LUNAR SURFACE PHOTOGRAPHY CONSISTED OF BOTH STILL AND SEQUENCE COVERAGE USING THE HASSELBLAD CAMERA, THE MAURER DATA ACQUISITION CAMERA AND THE APOLLO LUNAR SURFACE CLOSE-UP CAMERA

EVA TERMINATION, FILM AND SAMPLE TRANSFER, LM INGRESS, AND EQUIPMENT JETTISON WERE ACCOMPLISHED ACCORDING TO PLAN. A REST PERIOD FOLLOWED THE POST-EVA ACTIVITIES PRIOR TO PREPARATION FOR LIFTOFF LATER TODAY.

MAJOR EVENTS SCHEDULED FOR TODAY INCLUDE THE POWERED ASCENT OF THE LM FROM THE LUNAR SURFACE AT 124:22 GET (1:35 P.M. EDT), RENDEZVOUS, AND DOCKING WITH THE CSM. AFTER CLEANING EQUIPMENT, TRANSFERRING TO THE CSM AND JETTISONING THE LM, THE TRANSEARTH INJECTION MANEUVER WILL BE INITIATED AT 135:24 GET (00:36 A.M. EDT TUESDAY).

SYSTEMS STATUS

THE LM/MSFN COMMUNICATION SYSTEM PROVIDED THE VOICE AND DATA REQUIRED FOR THE POWERED DESCENT. PRIOR TO THE YAW MANEUVER, CONTINUOUS STEERABLE ANTENNA AUTO-TRACK COULD NOT BE MAINTAINED AND THE AFT OMNI HAD TO BE SELECTED. AFTER THE YAW MANEUVER, THE STEERABLE ANTENNA WAS REACQUIRED AND THE ANTENNA TRACKED PERFECTLY THROUGH TOUCHDOWN. THE COMMUNICATION SYSTEM PERFORMANCE HAS BEEN NOMINAL SINCE LANDING EXCEPT FOR AN UNEXPLAINED ECHO HEARD AT THE MISSION CONTROL CENTER ON THE VOICE CHANNEL DURING THE EVA. TELEVISION VIA THE PARKES 210-FOOT ANTENNA AND EVA DATA VIA THE MARS 210-FOOT ANTENNA WAS GOOD.

LM RADAR SYSTEM PERFORMANCE DURING DESCENT WAS ENTIRELY NOMINAL. THE LANDING RADAR ACQUIRED THE LUNAR SURFACE AND PROVIDED ALTITUDE DATA IN THE VICINITY OF 38,000 TO 41,000 FEET SLANT RANGE. VELOCITY DATA WAS ACQUIRED IN THE VICINITY OF 22,000 TO 26,000 FEET SLANT RANGE. TWO VELOCITY DROPOUTS OCCURRED DUE TO ZERO DOPPLER CONDITIONS IN THE VICINITY OF 100 TO 300 FEET. THESE OCCURRED AS EXPECTED. LANDING RADAR CONTINUED DOWN TO AN ALTITUDE OF APPROXIMATELY 25 FEET.

AT APPROXIMATELY 105:00 GET, THE AUTOMATIC EVAPORATOR INLET TEMPERATURE APPARENTLY MALFUNCTIONED. THE TEMPERATURE AS MEASURED AT EVAPORATOR OUTLET DROPPED TO 31 DEG F. THE CONDITION WAS CORRECTED BY CYCLING THE CONTROL SWITCH FROM "AUTO" TO "MANUAL" AND BACK TO "AUTO." PERFORMANCE HAS SINCE BEEN NORMAL.

IT WAS REPORTED BY THE CREW AFTER LUNAR LANDING THAT THE MISSION TIMER HAD MALFUNCTIONED. INITIAL EFFERTS TO CORRECT THIS WERE NOT SUCCESSFUL, BUT FOLLOWING EVA, THE TIMER WAS SUCCESSFULLY REACTIVATED.

ALL EXTRAVEHICULAR MOBILITY UNIT SYSTEMS OPERATED NOMINALLY DURING THE LUNAR SURFACE EVA.

FLIGHT CREW PERFORMANCE DURING THIS PERIOD WAS OUTSTANDING. DURING THE HIGH ACTIVITY EVENTS, BIO-MEDICAL PARAMETERS WERE MONITORED CAREFULLY. FROM DOI TO LANDING, THE CDR'S PULSE RATE WENT FROM 110 BEATS PER MINUTE TO A MAXIMUM OF 156. DURING THE LUNAR SURFACE ACTIVITIES, BOTH CREWMEN HAD LOW PULSE RATES OF 90 BEATS PER MINUTE. THE LMP'S MAXIMUM WAS 125 WHILE THE CDR'S WENT TO A MAXIMUM OF 160 DURING THE LM EQUIPMENT TRANSFER. NONE OF THE CREW MEMBERS HAS TAKEN ANY MEDICATION.

21/1655Z JUL HMSC

GMD 108A
RR ANRC DSDB DSDL DSSW LRID GWAB
DE GSTS 037
21/1817Z
FM JAMES S LACY PAO
TO ALL STADIR M&O/NASA SHIPS REP/STADAN AND SWITCHING CTR MGRS
INFO ANRC/SR M REP
LRID/DR BAUTISTE/NASA REP
GWAB

PAGE ONE OF TWO

SPACE CENTER, HOUSTON (AP)-THEIR BOLD EXPLORATION OF THE MOON COMPLETED, ASTRONAUTS NEIL A. ARMSTRONG AND EDWIN E. ALDRIN JR. NOW DEPEND UPON ONE ENGINE TO LIFT THEM TO THE SAFETY OF THEIR MOTHER SHIP FOR THE VOYAGE HOME. FOR AT LEAST SIX CRITICAL MINUTES, THIS ENGINE MUST FIRE TO BOOST THEM TO THE SHIP CIRCLING OVERHEAD WITH MICHAEL COLLINS.

THERES NO WAY TO PRETEST, ON THE MOON, WHETHER THIS ASCENT ENGINE WILL WORK AS ITS SUPPOSED TO.

THE 3,500-POUND-THRUST ENGINE, WHICH COST \$250,000, MUST CARRY THE TWO MEN STRAIGHT UP FOR 14 SECONDS, THEN TIP OVER TO AN ANGLE OF 52 DEGREES TO PLACE THEM IN AN EGG-SHAPED ORBIT RANGING FROM 11 TO 52 MILES ABOVE THE MOON.

IT IS PROGRAMMED TO FIRE FOR 7 MINUTES, 18 SECONDS.

IF IT FAILED AFTER SIX MINUTES, THE ASTRONAUTS COULD USE SMALL THRUSTER ROCKETS TO PUSH ON UP INTO THEIR ORBIT. BUT IF IT FAILED BEFORE SIX MINUTES ELAPSED, THE LITTLE ROCKETS COULDN'T FINISH THE TASK. THE ASTROUANTS WOULD GO INTO A TRAJECTORY LIKE A BALLISTIC MISSILE AND CRASH ON THE MOON.

THE ASCENT ENGINE IS AT THE BASE OF THE LUNAR CRAFTS CABIN SECTION--THE UPPER PART OF THE LM OR LUNAR MODULE. THE BOTTOM SECTION OF THE LM IS COMPOSED OF THE BRAKING ROCKET AND LANDING LEGS. TO DEPART THE MOON, ARMSTRONG AND ALDRIN WILL SEPARATE THE UPPER AND LOWER STAGES BY DETONATION OF EXPLOSIVE BOLTS AND USE THE LOWER STAGE AS A LAUNCHING PAD.

COLLINS, ORBITING 69 MILES ABOVE, CAN COME LOWER IN AN ATTEMPT TO RESCUE IF THE ASCENT ENGINE PUTS THE MEN INTO AN ORBIT LOWER THAN EXPECTED. BUT THERE ARE HIGH MOUNTAINS ON THE MOON, SOME ESTIMATED AT 20,000 TO 30,000 FEET, SO HE WOULD HAVE DIFFICULTY COMING DOWN LOWER THAN ABOUT EIGHT MILES OR SO.

21/1950Z JUL GSTS

GMD109A
RR ANRC DSDB DSDL DSSW GWAB
DE GSTS 038
21/1818Z
FM JAMES S LACY PAO
TO ALL STADIR M&O/NASA SHIPS REP/STADAN AND SWITCHING CTR MGRS
INFO ANRC/SR N REP
LRID/DR BAUTISTE
LRID/NASA REP

PAGE ONE OF TWO

(HOUSTON)--HERE ARE THE HIGHLIGHTS OF SUNDAYS MOON LANDING BY THE LUNAR MODULE AND THE MOON WALK OF NEIL ARMSTRONG AND ED ALDRIN: AWAKENED AT 7:02 A.M. (EDT), ARMSTRONG, ALDRIN AND MIKE COLLINS WERE ALL REPORTED IN EXCELLENT CONDITION.

ALDRIN CLIMBED INTO THE L-M AT 9:20 A.M. ARMSTRONG JOINED HIM AN HOUR LATER.

AT 1 P.M., APOLLO ELEVEN WAS GIVEN A "GO" FOR UNDOCKING. FORTY-FIVE MINUTES LATER, WHILE BEHIND THE MOON, THE TWO SHIPS SEPARATED. BACK IN COMMUNICATION WITH GROUND CONTROL, ARMSTRONG REPORTED: "THE EAGLE HAS WINGS."

AT 3:09 P.M. THE LEMS BRAKING ROCKET WAS FIRED, TO LOWER THE SHIPS ORBIT.

AT 4:06 THE FINAL 12-MINUTE BURN OF THE BRAKING ROCKET BEGAN.

TOUCHDOWN CAME AT 17 MINUTES AND 40 SECONDS PAST 4 P.M. (EDT). ARMSTRONG REPORTED: "HOUSTON. TRANQUILLITY BASE HERE. EAGLE HAS LANDED.

AT 10:40 P.M. THE L-M HATCH OPENED AND ARMSTRONG CRAWLED OUT, TRIGGERED A TELEVISION CAMERA, CLIMBED DOWN A LADDER AND STEPPED ONTO THE SURFACE OF THE MOON AT 56 MINUTES AND 20 SECONDS PAST 10 P.M. (EDT). AS HE DID SO, HE SAID: "THATS ONE SMALL STEP FOR MAN, A GIANT LEAP FOR MANKIND."

ALDRIN STEPPED ONTO THE SURFACE ELEVEN MINUTES LATER, SAYING "BEAUTIFUL, BEAUTIFUL DESOLATION."

AFTER TESTING THEIR STABILITY IN ONE-SIXTH GRAVITY AND PICKING UP SAMPLES OF THE LUNAR SOIL, ARMSTRONG DEPLOYED THE TELEVISION CAMERA ABOUT 30 FEET FROM THE L-M.

AT 11:40 P.M., THE ASTRONAUTS PLANTED AN AMERICAN FLAG ON THE MOON. PRESIDENT NIXON THEN CALLED THEM AND SAID: "BECAUSE OF WHAT YOU HAVE DONE, THE HEAVENS HAVE BECOME A PART OF MANS WORLD." AFTER A TWO-HOUR, 14-MINUTE MOON WALK, THE ASTRONAUTS CLIMBED BACK INTO THE L-M AND ITS HATCH WAS CLOSED AT 1:10 A.M.

21/1900Z JUL GSTS

GMD 113A
RR ANRC DSDB DSDL DSSW GWAB LRID
DE GSTS 039

21/1819Z
FM JAMES S LACY PAO
TO ALL STADIR M&O/NASA SHIPSREP/STADAN AND SWITCHING CTR MGRS
INFO ANRC/SR N REP
LRID/DR BAUTISTE
LRID/NASA REP

PAGE ONE OF TWO
SPACE CENTER, HOUSTON (AP)-THE APOLLO ASTRONAUTS
STRUCK PAYDIRT IN THEIR PROSPECTING ON THE MOON.
DIFFERENT ROCKS, WHICH COULD TELL MUCH ABOUT THE MOONS AGE
AND ORIGIN.
THEY SAW A CURIOUS PURPLE ROCK AND PERHAPS PUT IT IN ONE
OF THE TWO TREASURE CHESTS THEY ARE BRINGING HOME.
AND THEY CORED OUT A FIVE-INCH DEEP SAMPLE OF LUNAR SOIL
THAT "LOOKED MOIST," A SUGGESTION THERE MIGHT BE WATER AND
SO PERHAPS MICROSCOPIC LIFE BENEATH THE MOONS SURFACE. BUT
THE MOIST, DARK APPEARANCE COULD SIMPLY BE FROM TIGHT PACKING
OF FINE PARTICLES OF MATERIAL, CAUTIONS DAVID MCKAY, GEOLOGIST
OF THE MANNED SPACECRAFT CENTER.
THEY FOUND THE CRUST OF THE MOON MUCH HARDER THAN
NUMEROUS GEOLOGISTS AND ASTRONOMERS EXPECTED THEY WOULD.
IT TOOK WORK TO DIG OUT TWO CORE SAMPLES AND TO PLANT THE
AMERICAN FLAG.
THEY FOUND ROCKS THAT LOOK LIKE BASALT, BORN OF VOLCANOES,
AND ROCKS RESEMBLING BIOTITE, A DARK COLORED MICA THAT USUALLY
CONTAINS TWO TO FOUR PER CENT WATER. THEY FOUND THE SURFACE
DUSTY, GETTING THEIR BOOTS COATED COCOA BROWN WITH IT.
THEY SET UP A SEISMOMETER WHICH SOON WAS RECORDING MOON
TREMORS, ALTHOUGH THESE MIGHT BE ONLY FROM THE FOOTSTEPS OF
THE ASTRONAUTS, ESPECIALLY WHEN THEY CAVORTED ON THE DESERT-LIKE
MOON LIKE KIDS IN A PLAYGROUND.

21/1850Z JUL GSTS

GMD 107A
RR ANRC DSDB DSDL DSSW LRID
DE GSTS 035
21/1815Z

FM JAMES S LACY PAO
TO ALL STADIR M&O/NASA SHIPS REP/STADAN AND SWITCHING CTR MGRS
INFO ANRC/SR M REP
LRID/DR BAUTISTE/NASA REP
GWAB

SPACE CENTER, HOUSTON (AP) - NEIL A. ARMSTRONG AND EDWIN E. ALDRIN JR.--THE FIRST MEN TO WALK ON THE MOON--FIRED THE ENGINE TO BLAST THEMSELVES OFF FROM THE LUNAR SURFACE TODAY.
"BEAUTIFUL," SAID ALDRIN AS THE ENGINE IGNITED. "VERY QUIET RIDE."
THE APOLLO 11 ASTRONAUTS IGNITED THE SINGLE DO-OR-DIE ENGINE OF THEIR FRAGILE LANDING CRAFT AFTER NEARLY 22 HOURS ON THE MOON. THEY LEFT BEHIND THE FOUR-LEGGED DESCENT STAGE FROM WHICH THE WORLD WATCHED THEM STEP TO THE SURFACE.
THEIR AIM WAS TO ACHIEVE THE RELATIVE SAFETY OF LUNAR ORBIT AFTER AN ENGINE FIRING OF SEVEN MINUTES AND 16 SECONDS. ONCE IN ORBIT, THEY WERE TO BEGIN MANEUVERS TOWARD LINKING UP WITH THE COMMAND SHIP CARRYING MICHAEL COLLINS, WHO ORBITED ABOVE THEM THROUGHOUT THEIR ADVENTURE.
"EAGLE, HOUSTON, ONE MINUTE AND YOU'RE LOOKING GOOD," SAID MISSION CONTROL.
"LITTLE BIT OF SLOW WOBBLING BACK AND FORTH," SAID ALDRIN.
APOLLO 11'S MOON CAB WAS ALMOST 36,000 FEET ABOVE THE SURFACE WITHIN FOUR MINUTES AFTER LAUNCH.
"GOING RIGHT DOWN U.S. 1" SAID ARMSTRONG. ASTRONAUTS ACHIEVE ORBIT.

21/1850Z JUL GSTS

GMD 111A
TRR ANRC DSDB DSDL DSSW LRID GWAB
DE GSTS 043
21/2012Z
FM JAMES S LACY PAO
TO ALL STADIR M&O/NASA SHIPS REP/STADAN AND SWITCHING CTR MGRS
INFO ANRC/SR M REP
LRID/DR BAUTISTE/NASA REP
GWAB

SPACE CENTER, HOUSTON (AP) - TENTATIVE PLANS CALL FOR THE APOLLO 12 MISSION TO INCLUDE TWO LUNAR WALK PERIODS TOTALING MORE THAN FIVE HOURS.
ASTRONAUTS CHARLES CONRAD JR., 38, AND ALAN L. BEAN, 37, ARE TO EXPLORE THE LUNAR SERVICE WHILE RICHARD F. GORDON JR., 39, REMAINS ABOARD APOLLO 12 IN MOON ORBIT.
A MID-NOVEMBER LAUNCH DATE IS INDICATED BUT THE EXACT TIME WILL NOT BE DETERMINED UNTIL ALL DATA FROM APOLLO 11 HAS BEEN STUDIED BY SPACE AGENCY OFFICIALS.
THE APOLLO 12 CREW WAS SELECTED APRIL 10.
WASHINGTON (AP)-THE VOICE OF AMERICA SAID TODAY RADIO REPORTS OF THE APOLLO MOON LANDING WERE SUCCESSFULLY BROADCAST INTO RED CHINA ON TWO FREQUENCIES DESPITE JAMMING ATTEMPTS.
NATIONALIST CHINESE RADIO FACILITIES ON FORMOSA, WHICH TIED INTO THE VOICE BROADCASTS, WERE CREDITED WITH CARRYING THE REPORTS TO THE MAINLAND.

21/2044Z JUL GSTS

GMD098A
RR ANRC DSDB DSDL DSSW LRID GWAB
DE GSTS 053

22/1822Z

FM JAMES S LACY PAO
TO ALL STADIR/M&O/NASA SHIPS REP/STADAN AND SWITCHING CTR MGRS
INFO ANRC/SR N REP
LRID/DR HAUTISTE
LRID/NASA REP
GWAB

(MOSCOW)--THE SOVIET PEOPLE LEARNED TODAY THAT THEIR LUNA 15
MOONSHIP FAILED AT A SPACE TRIUMPH WHILE THE US APOLLO ELEVEN
FLIGHT WAS RETURNING TO EARTH. NEWSPAPERS CARRIED THE ANNOUNCEMENT,
THAT LUNA 15 HAD CRASHED ON THE MOON, IN AN INCONSPICUOUS PLACE.
A SUCCESS WOULD HAVE BEEN SPLASHED ON THE FRONT PAGES.

22/1855Z JUL GSTS

GMD099A

RR ANRC DSOB DSDL DSSW LRID GWAB

DE GSTS 054

22/1823Z

FM JAMES S LACY PAO

TO ALL STADIR M&O/NASA SHIPS REP/STADAN AND SWITCHING CENTER MGRS

INFO ANRC/SR N REP

LRID/DR BAUTISTE

LRID/NASA REP

GWAB

THE FOLLOWING IS A LIST OF IMPORTANT TIMES AND FIGURES FOR
THE HISTORIC FLIGHT OF APOLLO 11. (ALL TIMES ARE E.D.T.)

LIFTOFF 9:32 A.M. (EDT) JULY 16, 1969

TRANSLUNAR INJECTION 12:16 P.M. JULY 16, 1969

LUNAR ORBIT INSERTION NBR 1 1:22 P.M. JULY 19, 1969

NBR 2 5:55 P.M. JULY 19, 1969

CSM-LM UNDOCKING 1:47 P.M. JULY 20, 1969

DESCENT ORBIT INSERTION 3:09 P.M. JULY 20, 1969

LM POWERED DESCENT INITIATION 4:06 P.M. JULY 20, 1969

LUNAR TOUCHDOWN 4:17:40 P.M. JULY 20, 1969

ARMSTRONG'S HEART RATE AT TOUCHDOWN - 156 BEATS/MIN.

FIRST WORDS FROM THE MOON: "TRANQUILITY BASE HERE.

THE EAGLE HAS LANDED."

ARMSTRONG'S FIRST STEP ON THE MOON 10:56:20 P.M. JULY 20, 1969

MAN'S FIRST WORDS ON THE SURFACE OF THE MOON:

"THAT'S ONE SMALL STEP FOR MAN, A GIANT LEAP FOR MANKIND."

ALDRIN'S FIRST STEP ON THE MOON 11:15 P.M. JULY 20, 1969

LM ASCENT FROM THE MOON 1:54 P.M. JULY 21, 1969

LM-CSM DOCKING 5:55 P.M. JULY 21, 1969

TRANSEARTH INJECTION 12:57 A.M. JULY 22, 1969

SCHEDULED SPLASHDOWN 12:51 P.M. JULY 24, 1969

22/1842Z JUL GSTS

GMD066A

RR ANRC DSDB DSDL DSSW LRID GWAB

DE GSTS 026

23/1425Z

FM JAMES S LACY PAO

TO ALL STADIR M&O/NASA SHIPS REP/STADAN AND SWITCHING CTR MGRS

INFO ANRC/SR M REP

LRID/DR BAUTISTE/NASA REP

GWAB

ASTRONAUTS ARMSTRONG, COLLINS AND ALDRIN ALL ARE REPORTED SLEEPING AS THEIR APOLLO ELEVEN SPACESHIP SPEEDS TOWARD EARTH FROM THEIR HISTORIC MISSION TO THE MOON. THEY ARE NOW ABOUT 150,000 MILES FROM EARTH AND ARE TRAVELING AT MORE THAN 3,200 MPH.

ALL SYSTEMS ABOARD THE SPACECRAFT ARE REPORTED GOOD BY MISSION CONTROL. THE ASTRONAUTS ARE SCHEDULED TO BE AWAKENED ABOUT 11:30 A.M. (EDT), AND ABOUT TWO HOURS LATER THE MAIN SPACESHIP ENGINE WILL BE FIRED TO BRING THE SPACECRAFT ONTO A MORE PERFECT COURSE TOWARD EARTH.

SPACE OFFICIALS SAY LASER BEAMS SHOT FROM EARTH HAVE NOT HIT A REFLECTOR LEFT ON THE MOON BY THE ASTRONAUTS. THEY ALSO REPORT THAT A SEISMIC EXPERIMENT LEFT HAS PICKED UP UNEXPLAINED TREMORS. IT DETECTED POSSIBLE SURFACE MOVEMENT WHICH MAY HAVE COME FROM NATURAL SOURCES.

23/1448Z JUL GSTS

GMD050A

RR ANRC DSDB DSDL DSSW LRID GWAB

DE GSTS 012

24/1255Z

FM JAMES S LACY PAO

TO ALL STADIR M&O/NASA SHIPS REP/STADAN AND SWITCHING CTR MGRS
INFO ANRC/SR M REP

LRID/DR BAUTISTE/NASA REP

GWAB

PAGE ONE OF TWO

(HOUSTON, SPACE CENTER)--HERE ARE THE HIGHLIGHTS OF THE APOLLO ELEVEN FLIGHTS FINAL TWO DAYS, (ALL TIMES EASTERN DAYLIGHT):
THE DAY AHEAD (TODAY).

AFTER SEVEN HOURS REST, NEIL ARMSTRONG, ED ALDRIN AND MIKE COLLINS ARE AWAKENED AT 7:30 A.M.

IF NEEDED TO CORRECT THEIR HOMEWARD COURSE, THE MAIN ROCKET ENGINE WAS TO BE FIRED AT 9:37 A.M.

THE SERVICE MODULE THAT BROUGHT THEM TO THE VICINITY OF THE MOON AND BACK IS JETTISONED AT 12:22 P.M. , DOOMED TO BURN UP IN THE EARTHS ATMOSPHERE.

AT 12:36 P.M., RADIO COMMUNICATIONS BLACK OUT.

THE BELL-SHAPED CAPSULE, APOLLO ELEVEN, MAKES A FLAMING ENTRY INTO THE EARTHS ATMOSPHERE AT 12:37 P.M., AIMING FOR A PACIFIC OCEAN SPLASHDOWN 250 MILES SOUTHWEST OF HONOLULU.

THE RADIO BLACKOUT ENDS AT 12:39 P.M. WHERE DROGUE CHUTES ARE DEPLOYED TO SLOW THE CRAFT.

THEY DROP AWAY BEFORE THE THREE MAIN PARACHUTES OPEN AT A HEIGHT OF 10,000 FEET AT 12:45 P.M.

THE CARGO OF MEN AND MOON TREASURE SPLASHES DOWN AT 12:50 P.M. ENDING A 780,000-MILE TRIP.

THE DAY PAST (WEDNESDAY):

THE CREW AWOKE AFTER AN EXTRA HOUR OF SLEEP AT 12:30 P.M.

AT 3:36 P.M., APOLLO ELEVEN PASSED THE HALFWAY POINT--118,321 MILES FROM BOTH THE EARTH AND THE MOON.

THE CRAFT WAS ON SUCH A TRUE HOMEWARD COURSE THAT A CORRECTIVE ROCKET ENGINE FIRING WAS CANCELED.

PRAISING THE BEHIND-THE-SCENES MEN AND WOMEN WHOSE WORK PUT THEM ON THE MOON, THE ASTRONAUTS BEAMED A 12-AND-ONE-HALF-MINUTE COLOR TELECAST HOME AT 7:04 P.M.

A SEVEN-HOUR REST PERIOD BEGAN AT 11:30 P.M.

24/1330Z JUL GSTS

GMD032A
RR ANRC DSDB DSDL DSSW LRID GWAB
DE GSTS 014
24/1256Z
FM JAMES S LACY PAO
TO ALL STADIR M&O/NASA SHIPS REP/STADAN AND SWITCHING CTR MGRS
INFO ANRC/SR M REP
LRID/DR BAUTISTE/NASA REP
GWAB

SPACE CENTER, HOUSTON (AP)--THE APOLLO 11 MOON EXPLORERS RACED THROUGH THE FINAL HOURS OF THEIR HISTORIC VOYAGE TODAY, HEADING FOR A FIREY DASH THROUGH THE ATMOSPHERE AND THE STRANGEST WELCOME ANY NATION EVER HAS ACCORDED RETURNING HEROES. NEIL A. ARMSTRONG, EDWIN E. ALDRIN JR. AND MICHAEL COLLINS WERE ON A PERFECT COURSE THAT WOULD SLAM THEM INTO THE ATMOSPHERE HIGH ABOVE THE PACIFIC OCEAN AT 24,700 MILES AN HOUR. SPLASHDOWN WAS SET FOR 12:49 P.M. ABOUT 950 MILES SOUTHWEST OF HAWAII. THE LANDING SPOT WAS SHIFTED 250 MILES TO THE EAST WEDNESDAY NIGHT WHEN WEATHERMEN FORCAST THUNDERSTORMS FOR THE ORIGINAL TOUCHDOWN POINT. THE ASTRONAUTS WILL STEER TO THE NEW SITE BY CHANGING THE ANGLE OF THE SPACESHIP AS THEY DIP INTO THE ATMOSPHERE. THE LANDING IN WARM POLYNESIAN WATERS WILL CLIMAX A MAGNIFICENT ODYSSEY IN WHICH TWO AMERICANS WALKED ON THE MOON AND OPENED THE BOUNDLESS FRONTIER OF SPACE. BUT ON THEIR RETURN, THEYLL BE TREATED MORE LIKE LEPERS THAN CONQUERORS OF THE MOON. PRESIDENT NIXON WILL BE ON THE RECOVERY SHIP, THE AIRCRAFT CARRIER HORNET. BUT HE WONT SHAKE THEIR HANDS. A STRANGELY GARBED FROGMAN WILL GREET THEM, NOT WITH A CHERRY "WELL DONE," BUT WITH A SET OF THREE BIOLOGICAL SUITS AND A CAN OF DISINFECTANT, WITH WHICH HE'LL SPRAY THEM.

24/1335Z JUL GSTS

GMD044A
SS DSDC HAMC HSRA HNET HPSR HFOS
DE HMSC 044
24/1543Z
SUSDUPE
TO ALL NETWORK PERSONNEL

CONGRATULATIONS AND THANKS FOR YOUR OUTSTANDING SUPPORT DURING APOLLO 11. THE ACHIEVEMENT OF OUR GOAL OF LANDING MEN ON THE MOON AND SAFELY RETURNING THEM COULD NOT HAVE BEEN ACCOMPLISHED EXCEPT FOR YOUR EFFORTS. EACH OF YOU SHARE IN THIS ACCOMPLISHMENT. THANKS AGAIN FOR A JOB WELL DONE.

SIGNED: DR. R. GILRUTH	DIRECTOR MSC
G. M. LOW	APOLLO PROGRAM MANAGER
C. C. KRAFT	DIRECTOR FLIGHT OPERATIONS
C. E. CHARLESWORTH	APOLLO 11 FLIGHT DIRECTOR

24/1547Z JUL HMSC

GMD041A

NN AHSK ACRO GACN GANG GBDA GCAL GETC GGYM GGBM GMIL GTEX GUPA
HNET LCYI LMAD LTAN MVAN MRED MMER MHTV PHAW PGWM

DE GCEN 001C

24/1630Z

FM NOM

TO ALL/STADIR SHIP REP M&O SOM M&O PERSONNEL

OPN NCG-725

THERE CAN BE NO DOUBT IN ANYONES' MIND THAT ALL OF YOU COMPRISE
"THE GREATEST TRACKING NETWORK IN THE WORLD". YOUR PERFORMANCE
WAS MAGNIFICENT. WE HERE IN THE MSFNOC, AND I AM SURE THE ENTIRE
NASA ORGANIZATION, WISH TO EXPRESS OUR THANKS AND CONGRATULATIONS
FOR A JOB EXPERTLY DONE. YOUR "CAN DO" ATTITUDE IS REFLECTED IN
THE OVERALL SUCCESS OF THE FIRST MANNED LUNAR LANDING MISSION.
WE ARE PROUD TO HAVE BEEN A SMALL PART OF YOUR OUTSTANDING
EFFORT AND OUR ATTITUDE HERE IS "BRING ON THE PLANETS: THE MSFN
CAN SUPPORT".

24/1631Z JUL GCEN

GMD007A
RR DSDB HOPS
DE GCEN 008A
03/1222Z
FM ALSEP NOM
TO ALL/STADIR M&O
INFO HOPS/ALSEP NC



OPN NCG-785
AT 03/11:58:48Z EASEP WAS COMMANDED TO A STANDBY MODE FOR THE
LUNAR NIGHT PERIOD. IT IS NOW TIME FOR A WELL DESERVED REST.
SEE YOU AT LUNAR SUNRISE.

03/1224Z AUG GCEN

000025A

RR ANRC DSDB DSDL DSSW LRID

DE GSTS 036

19/2059Z

FM GEORGE COLETTE PAO

INFO A RC/SR NASA REP

LRID/D: BAUTISTE/NASA REP

ALL STAFF R/M&O/NASA SHIPS REP/STADAN AND SWITCHING CENTER MANAGERS

THE WHITE HOUSE ANNOUNCED FRIDAY, SEPTEMBER 19, THE ITINERARY FOR THE GRAND TOUR TO BE TAKEN BY THE HISTORIC APOLLO 11 CREW. DURING THE TOUR THEY WILL VISIT 23 FOREIGN COUNTRIES, GUAM, AND HAWAII. THEIR ITINERARY IS AS FOLLOWS:

SEPT. 1 MEXICO CITY, MEXICO

SEPT. 2 BOGOTA, COLOMBIA

OCT. 1 BUENOS AIRES, ARGENTINA

2-3 RIO DE JANEIRO, BRAZIL

4-5 LA PALMAS, CANARY ISLAND

6-7 MADRID, SPAIN

8 PARIS, FRANCE

9 AMSTERDAM, HOLLAND & BRUSSELS, BELGIUM

OCT. 15-16 ROME, ITALY

OCT. 18-19 BELGRADE, YUGOSLAVIA

20-21 ANKARA, TURKEY

22-23 KINSHASA, CONGO

24-25 TEHRAN, IRAN

26 BOMBAY, INDIA

27 KARACHI, PAKISTAN

28-30 BANGKOK, THAILAND

OCT. 31-NOV. 1 DARWIN & SYDNEY, AUSTRALIA

NOV. 2 GUAM

3 SEOUL, KOREA

4 TOKYO, JAPAN

5 HONOLULU, HAWAII

(CROSS THE INTERNATIONAL DATELINE)

NOV 5 RETURN TO HOUSTON, TEXAS

FOR LOCAL INFORMATION RE VISITS, SUGGEST ALL STADIERS CONCERNED CONTACT THEIR EMBASSY REPS ASAP.

19/2220Z SEP GSTS