

REMARKS BY
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SPACE: THE INTERNATIONAL APPROACH

LADIES AND GENTLEMEN:

NEARLY TWO HUNDRED AND FORTY-NINE YEARS
ELAPSED FROM THE FIRST VOYAGE OF COLUMBUS, IN 1492,
AND THE LAST GREAT VOYAGE OF DISCOVERY IN THE NEW
WORLD, VITUS BERING'S DISCOVERY OF ALASKA IN 1741.

IN THOSE TWO HUNDRED AND FORTY-NINE ACTION-
PACKED YEARS, EVERY GREAT LAND MASS WAS UNCOVERED AND
VIRTUALLY EVERY SHORE CHARTED, AND THE FOUNDATION WAS
LAID FOR THE DEVELOPMENT OF THE WORLD AS WE KNOW IT TODAY.

BY CONTRAST, IT HAS ONLY BEEN FOURTEEN MONTHS SINCE
MAN MADE HIS EPIC "FIRST SMALL STEPS" ON THE SURFACE OF
THE MOON. HOWEVER, NEIL ARMSTRONG, SPEAKING ON THE
ANNIVERSARY OF THIS GREAT FEAT, ALREADY HAS VOICED
HIS DISAPPOINTMENT AT THE AFTERMATH.

HIS WORDS WERE DIRECTED, NOT AT THE ABRUPT REDIRECTING OF NATIONAL PRIORITIES THAT HAS SLOWED THE THRUST INTO SPACE, BUT AT THE FAILURE OF THE MOON VOYAGE TO ACHIEVE THE PEACEFUL EFFECT SO GREATLY DESIRED AMONG MEN OF ALL NATIONS. "I HAD HOPED," ARMSTRONG SAID, "THAT THE (VOYAGE) MIGHT TAKE OUR MINDS AWAY FROM SOME OF THE MORE MUNDANE AND TEMPORAL PROBLEMS WHICH WE AS A SOCIETY FACE...."

IN THE DREAMS OF ARMSTRONG AND MANY OTHERS, SPACE CONQUEST WAS TO HAVE BEEN ONE OF THE COHESIVE FORCES THAT WOULD BRING MEN TOGETHER.

IN A WAY, WE ALL SHARE NEIL'S DISAPPOINTMENT. I BELIEVE EACH OF US WHO WATCHED THE SNOWY TV PICTURE, AS THAT FUTURISTIC FIGURE TOUCHED HESITANTLY ON THE LUNAR SURFACE, HAD THE SAME DEEP-ROOTED HOPE--PERHAPS THIS WAS THE TIME, PERHAPS THIS WAS THE ONE FEAT OF MAN THAT WOULD FINALLY BRING THE WORLD TOGETHER.

PRESIDENT NIXON EXPRESSED THAT HOPE IN THE CONGRATULATORY WORDS HE CONVEYED BY RADIO TELEPHONE TO THE TWO MEN ON THE MOON:

QUOTE. "FOR ONE PRICELESS MOMENT IN THE WHOLE HISTORY OF MAN, ALL THE PEOPLE OF THIS EARTH ARE TRULY ONE--"

YET, ONE YEAR LATER, ARMSTRONG WAS DISAPPOINTED.

ARMSTRONG IS 39 YEARS OLD, BUT I STILL THINK HE SHOWED A LITTLE OF THE IMPATIENCE OF YOUTH.

I THINK THE WORLD IS MOVING CLOSER TO THAT COOPERATION.

I THINK IT WILL BE THE FEATS OF ARMSTRONG AND ALDRIN, AND COLLINS AND CONRAD AND BEAN AND SHEPARD AND MITCHELL AND THE HUNDREDS WHO WILL FOLLOW IN THE SEAS OF SPACE, THAT WILL CONTINUE TO BE THE CORE OF ENDEAVOR WHICH EVENTUALLY WILL DRAW ALL NATIONS TOGETHER.

I HOPE THAT ON THE TENTH ANNIVERSARY OF NEIL ARMSTRONG'S JOURNEY HE WILL BE ABLE TO SPEAK WITHOUT DISAPPOINTMENT. I HOPE BY THAT TIME WE WILL HAVE REALIZED A GOAL THAT HAS SO LONG ELUDED US...UNIVERSAL PEACE.

I DON'T MINIMIZE THE OBSTACLES IN THE WAY, HOWEVER.

IN THE UNITED STATES, AS YOU KNOW, THERE HAS BEEN A CONTINUING CUT BACK IN THE SPACE EFFORT, THE RESULT OF NEW, AND SURELY DESIRABLE REASSESSMENTS OF NATIONAL PRIORITIES. TODAY THE BUDGET FOR AMERICAN SPACE EFFORT REPRESENTS JUST 1.7 PERCENT OF THE TOTAL NATIONAL BUDGET AS COMPARED WITH 41 PERCENT FOR HUMAN RESOURCES.

LET ME ASSURE YOU, DESPITE THIS SMALL PERCENTAGE ALLOTTED TO THE SPACE EFFORT, THESE PROGRAMS WILL CONTINUE. I AM AN OPTIMIST.

ACCORDING TO THE CHRISTIAN SCIENCE MONITOR, THE MONEY SPENT ON TOBACCO AND COSMETICS IN THE UNITED STATES EQUALS THAT SPENT ON THE SPACE PROGRAM!

AND THE SPACE EFFORT RECEIVES ONLY HALF OF WHAT IS SPENT IN NEW YORK CITY ALONE ON LEGAL GAMBLING!

THE SPACE EFFORT MUST CONTINUE. TO DO OTHERWISE, TO HALT THE VOYAGES OF THE NEW MAGELLANS COULD, IN EFFECT, SHUT THE DOOR ON THE HOPES AND ASPIRATIONS OF UNTOLD BILLIONS.

TO ERODE THE U. S. SPACE PROGRAM, AS THE CUTBACKS IN THE BUDGET ARE DOING, THREATENS THE TECHNOLOGICAL FUTURE OF THE UNITED STATES AND ITS CAPABILITIES TO COPE WITH ENVIRONMENTAL PROBLEMS.

EVENTS HAPPEN SO QUICKLY IN THIS HYPER-TENSE WORLD OF OURS THAT IT'S SOMETIMES DIFFICULT TO GRASP THE ENORMITY OF FEATS ACCOMPLISHED IN SUCH A SHORT SPAN OF TIME. IT'S DIFFICULT TO GRASP THAT THE ENTIRE THOUGHT, VISION, AND HORIZON OF THE WORLD HAS BEEN CHANGED WITHIN OUR LIFETIME, ESPECIALLY IN THE LAST TEN YEARS.

IT IS WITHIN THE LIFETIME OF MANY IN THIS ROOM THAT ALL THIS DRAMA HAS TAKEN PLACE. MOST OF YOU WERE UNAWARE OF THE BEGINNING LESS THAN FIFTY YEARS AGO. I KNOW I WAS A BOY IN PITTSBURGH WHEN DOCTOR ROBERT GODDARD IN MARCH 1926 LAUNCHED THE FIRST LIQUID PROPELLANT ROCKET ON A FARM NEAR WORCESTER, MASSACHUSETTS.

GODDARD WORKED IN OBSCURITY. BUT ON THAT DAY HE UNLOCKED THE UNIVERSE WHEN HE PROVED THAT ROCKET VELOCITIES GREATER THAN THE SPEED OF SOUND COULD BE ATTAINED.

HE PROVED THAT ESCAPE FROM EARTH, BIZARRE THOUGH IT SEEMED, WAS JUST A QUESTION OF MORE PROPELLANTS, AND OF A MORE DEPENDABLE ROCKET CHAMBER. HE PROVED THAT A ROCKET COULD ACT IN A VACUUM, THAT IT WAS THE PERFECT ENGINE TO LEAP BEYOND THE ATMOSPHERE INTO THE UNKNOWN SEAS OF SPACE.

GODDARD, HOWEVER, COULD NOT CONTROL THE DESTINY OF THE LIQUID PROPELLANT ROCKET ENGINE. FOR BETTER OR WORSE IT LED TO THE GERMAN V-2 ROCKET, AND TO THE INTER-CONTINENTAL BALLISTIC MISSILES, BUT IT LED ALSO TO SATURN V, THE VEHICLE THAT LIFTED MEN ON THE VOYAGE TO THE MOON.

IT OPENED A MAJOR NEW ERA OF INTENSE SCIENTIFIC ACTIVITY.

AS EARLY AS 1955 WORLD SCIENTISTS WERE TALKING OPENLY OF THE POSSIBILITY OF ORBITING MAN-MADE SATELLITES ABOUT THE EARTH. BUT IT WAS NOT UNTIL THREE YEARS LATER AND A NATIONAL HUMILIATION THAT AMERICA PLACED ITS FIRST BASKETBALL-SIZED SATELLITE, -- EXPLORER 1, IN ORBIT IN JANUARY 1958.

THESE WERE CAUTIOUS STEPS, HESITANT STEPS. THESE WERE THE FIRST MOVES TOWARD THE DEVELOPMENT OF MERCURY, THE ONE-MAN SPACECRAFT DEVELOPED TO ORBIT THE EARTH AND TO INTRODUCE THE NAME JOHN GLENN TO THE HALL OF FAME. BUT UNDERSTANDABLY THE NATION, AND TO A CERTAIN EXTENT, THE SCIENTIFIC WORLD, WERE CONFUSED.

WHAT WAS IT AMERICA WANTED? WHAT WERE THE GOALS? WHAT WERE THE PURPOSES OF THESE EXPENDITURES THAT WERE ALREADY BEGINNING TO MOUNT IN COST FROM \$145 MILLION IN 1959 TO \$400 MILLION THE FOLLOWING YEAR, AND \$744 MILLION IN 1961? FOR SEVERAL YEARS WE WERE THE VICTIMS OF A FORM OF RUSSIAN YO-YO, ACTING AND REACTING TO SOVIET ADVANCES IN SPACE. WE DID KNOW THAT THE PRIZE HAD TO BE MORE THAN JUST BEATING THE RUSSIANS.

ONE REASON FOR THE HESITANCY WAS THAT WE LACKED THE BRUTE ROCKET POWER TO GET MAJOR PAYLOADS INTO SPACE.

THE ROCKET ENGINE DILEMMA, THE NEED FOR POWER, WAS SOLVED WITH THE CONTRACTS AWARDED TO NORTH AMERICAN ROCKWELL FOR THE DEVELOPMENT OF THE F-1 ROCKET ENGINE, AND LATER FOR THE J-2 LIQUID HYDROGEN ENGINE.

WITH THE PLANNED DEVELOPMENT OF THE ENGINES, WE HAD THE POTENTIAL POWER. WHAT WE STILL LACKED WAS A PURPOSE.

IT WAS THEN THAT JOHN F. KENNEDY STOOD BEFORE THE CONGRESS OF THE UNITED STATES AND ELECTRIFIED HIS AUDIENCE AND THE WORLD ON MAY 25, 1961 WITH A RINGING STATEMENT: "NOW IS THE TIME TO TAKE LONGER STRIDES, TIME FOR A GREAT NEW AMERICAN ENTERPRISE, TIME FOR THIS NATION TO TAKE A CLEARLY LEADING ROLE IN SPACE ACHIEVEMENT, WHICH IN MANY WAYS MAY HOLD THE KEY TO OUR FUTURE ON EARTH.

"I BELIEVE THIS NATION," THE PRESIDENT CONTINUED, "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.

"NO SINGLE SPACE PROJECT IN THIS PERIOD WILL BE MORE IMPRESSIVE TO MANKIND, OR MORE IMPORTANT FOR THE LONG-RANGE EXPLORATION OF SPACE; AND NONE WILL BE SO DIFFICULT OR EXPENSIVE TO ACCOMPLISH." END QUOTE.

THAT WAS THE START.

EIGHT YEARS AND TWENTY ONE BILLION DOLLARS
LATER, MAN STOOD ON THE MOON.

ONE OF THE MOST AWESOME ASPECTS OF THE APOLLO
EFFORT WAS THE COOPERATION NEEDED, WITHIN THE
COUNTRY ITSELF, AND ON A WORLD-WIDE BASIS TO SUPPORT THE
SPACE VEHICLE TRACKING NETWORK.

AT NO TIME IN HISTORY HAD SO MANY COMPANIES--
20,000--BEEN MOBILIZED FOR A SINGLE UNDERTAKING.
NEVER BEFORE HAD THERE BEEN AN UNDERTAKING THAT
EQUALLED IT IN SIZE. IT WAS COMPARABLE IN SCOPE
TO THE MANHATTAN PROJECT THAT DEVELOPED THE ATOM
BOMB.

IT WAS AN EPIC IN MANAGEMENT, AND IT WAS AN EPIC
IN COOPERATION.

THE JOB WAS SO IMMENSE THAT AMERICAN INDUSTRY
FOUND, IN THE WORDS OF HOMER, THAT, QUOTE "NO MAN IS
ABLE OF HIMSELF TO DO ALL THINGS." UNQUOTE.

IT WAS A TIME OF THE MOST STRIKING DEMONSTRATION
OF INTERNATIONAL INTERDEPENDENCE. THE VERY NATURE OF
THE PROJECT DEMANDED SPECIALIZATION. AND THE THOUSANDS
OF SCIENTISTS AND ENGINEERS INVOLVED LEARNED TO DEPEND
ON OTHERS FOR SUCCESS IN AREAS BEYOND THEIR OWN
SPECIALTIES.

APOLLO, FOR THE MOST PART, WAS AN AMERICAN VENTURE. HOWEVER, MOST HEARTENING IS THE PRESENT INDICATION THAT FUTURE EFFORTS WILL NOT INVOLVE ONE NATION ALONE, NOR TWO NATIONS, BUT A FAMILY OF NATIONS.

WE WILL SEE AFFIRMATION OF THE FACT THAT SPACE DOES NOT BELONG TO THE UNITED STATES ALONE, NOR TO RUSSIA ALONE, NOR TO THE UNITED STATES AND RUSSIA COMBINED. SPACE IS UNIVERSAL AND IT MUST BE EXPLORED IN THAT FASHION.

FROM ITS INCEPTION IN OCTOBER 1958 THE NATIONAL AERONAUTICS AND SPACE ADMINISTRATION, NASA, HAS BEEN MANDATED BY CONGRESS "...TO COOPERATE WITH OTHER NATIONS AND GROUPS OF NATIONS IN WORK DONE PURSUANT TO THE AIMS OF NASA AND IN THE PEACEFUL APPLICATIONS OF THE RESULTS THEREOF."

NASA, ACCORDING TO CONGRESSIONAL GUIDELINES, SHOULD COOPERATE WITH OTHER NATIONS IN PROJECTS DIRECTED TO USEFUL SCIENTIFIC OBJECTIVES WHICH CONTRIBUTE TO THE INTERESTS ON BOTH SIDES. THE EFFORT SHOULD BENEFIT FROM CONTRIBUTIONS FROM BOTH SIDES, AND EACH SIDE SHOULD BEAR ITS OWN COSTS.

AS EARLY AS SEPTEMBER 1963 PRESIDENT KENNEDY, SPEAKING BEFORE THE UNITED NATIONS, URGED THAT THE UNITED STATES AND RUSSIA INVESTIGATE THE POSSIBILITY OF JOINT EXPLORATION OF THE MOON.

EVIDENTLY THAT SUGGESTION NEVER MADE MUCH HEADWAY. HOWEVER, I DON'T WANT TO LEAVE YOU WITH A NEGATIVE THOUGHT. THERE HAS BEEN CLOSE AND CONTINUING COOPERATION WITH OTHER COUNTRIES.

ALL TOLD, NASA HAS JOINED WITH SOME SEVENTY-FOUR COUNTRIES IN ACTIVITIES WHICH HAVE RANGED FROM GROUND-BASED STUDIES TO ACTUAL FLIGHT OF SATELLITES DESIGNED AND BUILT ABROAD.

TWELVE FOREIGN SATELLITES HAVE BEEN LAUNCHED WITH CANADA AND TEN EUROPEAN COUNTRIES.

MORE THAN FIVE HUNDRED SOUNDING ROCKETS HAVE BEEN LAUNCHED IN PROGRAMS INVOLVING SCIENTISTS IN NINETEEN COUNTRIES.

NASA HAS BEEN WORKING CLOSELY WITH YOUR CANADIAN SPACE SCIENTISTS FOR EIGHT YEARS, AND OTHER PROJECTS NOW UNDER CONSIDERATION WILL CONTINUE THAT EFFORT FOR AT LEAST TWO MORE YEARS. CANADA, IN CONJUNCTION WITH THE UNITED KINGDOM, GERMANY AND ITALY, HAS BEEN OUR MOST ACTIVE SPACE PARTNER.

I AM HAPPY TO SAY THAT SEVENTEEN FOREIGN EXPERIMENTS ALREADY HAVE BEEN FLOWN; FOUR MORE HAVE BEEN SELECTED FOR FLIGHT; AND THIRTY-FIVE OTHERS ARE BEING CONSIDERED.

UP TO THIS TIME THE COOPERATION HAS INVOLVED SMALLER SOUNDING ROCKETS; COOPERATIVE INFORMATION EXCHANGE WITH THE EUROPEAN SPACE RESEARCH ORGANIZATION, ESRO; NASA ASSISTANCE IN DEVELOPING THE SATELLITE LAUNCH CAPABILITIES OF OTHER COUNTRIES; COMMUNICATION SATELLITES, AND THE PLACEMENT OF COMPLETE EXPERIMENTAL PACKAGES ABOARD SPACE VEHICLES SUCH AS THE APOLLO.

A TEAM OF FRENCH SCIENTISTS, FOR EXAMPLE, CAME TO THE NASA FACILITY IN WALLOPS ISLAND, VIRGINIA, AND LAUNCHED A SERIES OF SMALL ROCKETS THAT PROBED THE UPPER ATMOSPHERE. INDIA'S SCIENTISTS TRAINED AT WALLOPS ISLAND IN PREPARATION FOR OPENING THEIR OWN LAUNCH FACILITIES AT THUMBA IN INDIA. AMERICAN SCIENTISTS HAVE USED THE CANADIAN FACILITIES AT CHURCHILL.

IT HAS BEEN AN EXCELLENT APPLICATION OF INTERNATIONAL SCIENTIFIC COOPERATION. NORWAY AND SWEDEN, FOR EXAMPLE, CONCENTRATED ON THE PHENOMENA OF THE AURORAL ZONE; INDIA AND PAKISTAN ON THE ATMOSPHERIC CIRCULATION IN THE INDIAN OCEAN BASIN.

ARGENTINA'S PARTICIPATION OPENED AN ENTIRELY NEW APPROACH TO SCIENTIFIC SPACE STUDY IN THE SOUTHERN HEMISPHERE. BRAZIL'S NEW SPACE CENTER NEAR NATAL HAS BEEN A VALUABLE SCIENTIFIC AID IN RESEARCH.

THE SUCCESS OF APOLLO HAS OPENED THE UNIVERSE FOR SCIENTIFIC EXPLORATION NEVER BEFORE POSSIBLE.

WHY SHOULDN'T THE FAMILY OF NATIONS COOPERATE NOT ONLY IN THE EXPERIMENTS, BUT ALSO IN THE BUILDING OF THE VEHICLES THAT WILL BE MAKING THOSE JOURNEYS?

THAT QUESTION IS NOW BEING ANSWERED.

A NEW PHASE OF COOPERATIVE INTERNATIONAL SPACE EFFORT HAS STARTED, AND I BELIEVE IT IS OF THE GREATEST SIGNIFICANCE.

THERE ARE PRESENTLY THREE MAJOR SPACE EFFORTS UNDERWAY. ONE IS THE CONTINUING EXPLORATION OF THE SURFACE OF THE MOON, A TASK THAT WAS STARTED BY THE APOLLO 11 CREW UNDER NEIL ARMSTRONG, AND APOLLO 12 UNDER PETE CONRAD, AND WILL BE CONTINUED ON THE NEXT FLIGHT UNDER THE COMMAND OF ALAN SHEPARD, JR.

THESE EXPLORATORY FLIGHTS, AS YOU KNOW, HAVE BEEN SEVERELY CURTAILED. HOWEVER, OUR SPACE DIVISION IS STILL PREPARING SPACECRAFT FOR THE FOUR FLIGHTS THAT YET REMAIN, JUST AS THEY HAVE FOR THE ENTIRE SERIES OF APOLLO LAUNCHES.

THE SECOND MAJOR SPACE EFFORT NOW IN DESIGN STAGE IS THE DEVELOPMENT OF A SECOND-GENERATION SPACE STATION, WHICH SHOULD BE IN PROLONGED ORBIT ABOUT THE EARTH LATE IN THE 1970s. IT WILL STAY IN EARTH ORBIT PERHAPS FOR TEN YEARS, ALMOST AS A PERMANENT SPACE LABORATORY. THERE WILL BE TWELVE SCIENTISTS, ON A ROTATING BASIS, ALWAYS IN THE STATION, AND THE ENTIRE UNIVERSE WILL BE THEIR LABORATORY.

OUR SPACE DIVISION IS COMPETING FOR THIS CONTRACT.

FINALLY, WE COME TO WHAT MAY BE THE MOST CHALLENGING PROJECT UNDERTAKEN IN SPACE TO DATE-- THE DEVELOPMENT OF A RE-USABLE SPACE SHUTTLE.

IT WILL BE AS BIG AS A 707 JET LINER. IT'LL BE BOOSTED INTO SPACE ON A RE-USABLE CRAFT THAT IN ITSELF WILL BE AS BIG AS A 747 JUMBO JET.

THE SPACE SHUTTLE WILL TRANSPORT CREWS AND CARGO FROM EARTH TO THE SPACE STATION AND THEN RETURN TO EARTH.

CHRISTOPHER KRAFT, JR., DEPUTY DIRECTOR OF THE NASA'S MANNED SPACECRAFT CENTER AT HOUSTON, SAID, "WHAT WE'RE TRYING TO BUILD IN THE SHUTTLE IS A HYPERSONIC TRANSPORT THAT WILL FLY INTO AND OUT OF SPACE."

"WE ARE ATTEMPTING TO PROVIDE SOMETHING WHICH IS GOING TO REVOLUTIONIZE THE SPACE PROGRAM."

I MIGHT ADD THAT THE TECHNOLOGY FROM THE SHUTTLE COULD LEAD TO A GLOBAL TRANSPORTATION SYSTEM. FOR EXAMPLE, VEHICLES WILL TAKE OFF FROM THE EASTERN PART OF CANADA AND FLY TO AUSTRALIA IN LESS THAN AN HOUR.

THE REQUIREMENT FOR THE SHUTTLE THAT MAKES IT A CHALLENGING TASK IS THAT IT MUST BE CAPABLE OF 100 MISSIONS CARRYING IT THROUGH THE FURNACE OF RE-ENTRY ON EACH RETURN TO EARTH, AND THAT IT MUST HAVE A FAST TWO-WEEK TURNAROUND BETWEEN EACH MISSION.

THIS MEANS OF COURSE, THE END OF THESE EXTRA-ORDINARILY EXPENSIVE ONE-SHOT LAUNCHES THAT WE HAVE HAD TO DATE. IT MEANS A STARTLING REDUCTION IN COST-PER-POUND PLACED IN ORBIT. BUT IT ALSO MEANS AN ENGINEERING AND SCIENTIFIC TASK WHOSE CHALLENGE IS AS GREAT AS THAT WE FACED WHEN WE UNDERTOOK APOLLO IN THE EARLY 1960'S.

WHAT BETTER PLACE TO CALL FOR INTERNATIONAL COOPERATION?

NORTH AMERICAN ROCKWELL'S SPACE DIVISION HAS LAUNCHED SUCH A COOPERATIVE EFFORT, ONE THAT COULD OPEN SPACE TO EVERY NATION IN THE WORLD BY VIRTUE OF ITS LOW COST.

A SHORT TIME AGO WE ANNOUNCED THAT THE BRITISH AIRCRAFT CORPORATION AND MESSERSCHMITT-BOELKOW-BLOHM HAD BEEN SELECTED FOR NEGOTIATION AS THE UNITED KINGDOM AND GERMAN FIRMS WHO WILL WORK WITH US ON THE SPACE SHUTTLE PROGRAM. WE EXPECT A FRENCH PARTNER TO JOIN US IN THE NEAR FUTURE.

THESE WILL BE WORKING AGREEMENTS. THESE COMPANIES WILL HAVE THEIR ENGINEERS STATIONED AT OUR DOWNEY, CALIFORNIA PLANT, AND THEY WILL HAVE COUNTERPART OPERATIONS IN THEIR OWN PLANTS IN BRITAIN, GERMANY AND FRANCE.

LET ME EMPHASIZE THAT THESE COMPANIES ARE PAYING THEIR OWN WAY. THEIR GOVERNMENTS ARE FUNDING THEIR EFFORTS, AND THEY HAVE WELCOMED THE OPPORTUNITY TO PARTICIPATE IN THIS EXCITING ENGINEERING FEAT.

THEY CAN SEE TANGIBLE BENEFITS FOR BOTH THEIR NATIONAL AND BUSINESS INTERESTS. IN THE UNITED STATES WE ESTIMATE THAT OUR WINDFALL OF TECHNOLOGY FROM THE SPACE PROGRAM IS ALREADY RETURNING FOUR DOLLARS OF VALUE FOR EVERY DOLLAR INVESTED.

OUR FOREIGN PARTNERS WANT TO SHARE IN THAT KIND OF RETURN--THEY WANT THE FLOW OF SPACE TECHNOLOGY TO BE APPLIED TO A HOST OF OTHER EARTH-BOUND ENDEAVORS IN THEIR COUNTRIES.

FOR A DECADE CANADIAN INDUSTRY HAS BEEN A VALUABLE PARTNER IN THE SCIENTIFIC SPACE PROJECTS OF THE UNITED STATES. YOU HAVE A GREAT DEAL OF VALUED EXPERTISE TO OFFER ON INTERNATIONAL PROJECTS.

FOR THAT REASON, AFTER THE NECESSARY GOVERNMENT-TO-GOVERNMENT NEGOTIATIONS, WE WOULD LIKE TO SEE CANADA NUMBERED AMONG THE PARTICIPANTS. WE'D WELCOME QUERIES FROM YOUR INDUSTRIES.

GENTLEMEN, NINE YEARS AGO JOHN KENNEDY SAID, "SPACE ACHIEVEMENT MAY HOLD THE KEY TO OUR FUTURE ON EARTH."

THAT FUTURE IS HERE.

SPACE ACHIEVEMENT DOES HOLD THE KEY.

SPACE ACTIVITIES, ALREADY IN DAILY USE, ARE UNLOCKING NEW RESOURCES IN THE SEAS, EXTENDING THE LIFE OF VALUABLE FORESTS, AND BRINGING A NEW SCIENCE OF CONTROL TO AGRICULTURE. BILLION-DOLLAR BENEFITS ARE ALREADY BEING REALIZED FROM RESOURCE AND COMMUNICATION SATELLITES, ALREADY IN USE, OR ABOUT TO BE LAUNCHED.

DR. WERNER^H VON BRAUN OF NASA HAS SAID, "THE REAL PAYOFF FROM SPACE FLIGHT (WILL BE) IN ENRICHING OUR ECONOMY, AND OUR SCIENCE IN NEW METHODS, DEVISING NEW PROCEDURES, UNCOVERING NEW KNOWLEDGE, AND ADVANCING TECHNOLOGY IN GENERAL."

GENTLEMEN, WITH THAT TYPE OF ENRICHMENT AWAITING EVERY NATION ON THE GLOBE, I FEEL I CANNOT TOO STRONGLY EMPHASIZE THIS FACT:

WE MUST HAVE A CONTINUING HIGH LEVEL OF SPACE ACTIVITY, NOT FOR THE BENEFIT OF ANY ONE COUNTRY ALONE, BUT FOR THE BENEFIT OF THE ENTIRE WORLD.

TO DO OTHERWISE WOULD BE TO IGNORE OUR RESPONSIBILITIES TO OUR CHILDREN AND TO THE FUTURE OF MANKIND.

THANK YOU.