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1
00:00:07,880 --> 00:00:10,459
AT NASA INNOVATION DRIVES
OUR JOURNEY.

2
00:00:10,469 --> 00:00:12,450
TO REACH NEW HEIGHTS.
AND REVEAL THE UNKNOWN WHICH WILL

3
00:00:12,450 --> 00:00:17,369
BENEFIT ALL OF HUMANITY.
THAT WORK IS PART OF A WORK OF A VITAL STRATEGY TO

4
00:00:17,369 --> 00:00:19,940
EQUIP OUR NATION WITH
TECHNOLOGIES FOR THE FUTURE.

5
00:00:19,940 --> 00:00:24,919
TO INSPIRE A NEW GENERATION OF EXPLORERS TO MAKE THE NEXT GIANT LEAP FOR HUMANITY
FOR HUMANITY.

6
00:00:24,919 --> 00:00:29,199
NASA INNOVATIONS SPURS
ECONOMIC GROWTH WHILE CONTINUING U.S.

7
00:00:29,200 --> 00:00:32,290
LEADERSHIP IN SPACE AND
BREAKTHROUGHS IN SCIENCE AND

8
00:00:32,290 --> 00:00:34,730
TECHNOLOGY. ITS
SUCH A THRILL WORKING FOR

9
00:00:34,730 --> 00:00:41,850
NASA AND EXPLORING THE UNIVERSE.
NASA IS ON A JOURNEY TO MARS. THIS AMBITIOUS GOAL INVOLVES

10
00:00:41,850 --> 00:00:45,020
EVERYTHING THAT WE DO.
IT WILL TRANSFORM TECHNOLOGY

11
00:00:45,020 --> 00:00:48,510
AND DEFINE OUR GENERATION.
ROBOTIC EXPLORERS ARE PAVING

12
00:00:48,510 --> 00:00:51,149
THE WAY TO MARS. WE'RE
LEARNING ENORMOUS AMOUNTS

13
00:00:51,149 --> 00:00:54,431
ABOUT THE SURFACE OF MARS DAILY.
IN THE COMING YEARS ANOTHER

14
00:00:54,440 --> 00:00:58,179
LANDER AND ROVER WILL DISCOVER
EVEN MORE.

15
00:00:58,179 --> 00:01:02,469
WE'RE WORKING HARD ON THE SOLVABLE CHALLENGES OF SENDING HUMANITY

16
00:01:02,469 --> 00:01:05,440
TO THE RED PLANET FOR THE FIRST
TIME.

17
00:01:05,440 --> 00:01:08,581
THAT INCLUDES INNOVATION IN PROPULSION.
RADIATION SHIELDING

18
00:01:08,581 --> 00:01:11,820
AND LANDING LARGE PAY LOADS.
THE ORION SPACE CRAFT WHICH WILL

19
00:01:11,830 --> 00:01:18,020
CARRY ASTRONAUTS DEEPER INTO
THE SOLAR SYSTEM THEN EVER BEFORE HAS ACHIEVED A

20
00:01:18,020 --> 00:01:21,320
MAJOR MILESTONE.
SOON IT WILL FLY ON THE MOST

21

00:01:21,320 --> 00:01:25,020
POWERFUL ROCKET EVER BUILT.
THE SPACE LAUNCH SYSTEM WHICH

22
00:01:25,020 --> 00:01:27,390
HAS MOVED FROM CONCEPT TO
DEVELOPMENT.

23
00:01:27,390 --> 00:01:32,630
WE'RE ADVANCING THE JOURNEY TO
MARS THROUGH PROGRESS ON THE ASTEROID REDIRECT MISSION

24
00:01:32,630 --> 00:01:38,209
TO SEND PEOPLE TO AN ASTEROID. USE WHAT WE LEARN FROM THAT
MISSION AND THEN SOME DAY SEND

25
00:01:38,219 --> 00:01:41,770
PEOPLE TO MARS.
NASA'S MISSION TO AN ASTEROID WILL TEST NEW

26
00:01:41,770 --> 00:01:45,130
CAPABILITIES IN THE PROVING
GROUND OF DEEP SPACE.

27
00:01:45,130 --> 00:01:48,399
OUR JOURNEY TO MARS IS ALSO
UNFOLDING RIGHT NOW.

28
00:01:48,400 --> 00:01:50,280
ABOARD THE INTERNATIONAL
SPACE STATION.

29
00:01:50,280 --> 00:01:53,650
THE STATION FACILITATES
GROWTH IN A ROBUST COMMERCIAL

30
00:01:53,659 --> 00:01:56,329
MARKET. AND LOW-EARTH ORBIT FOR

31
00:01:56,329 --> 00:01:59,479

SCIENTIFIC RESEARCH.
TECHNOLOGY DEVELOPMENT.

32
00:01:59,479 --> 00:02:02,700
AND TRANSPORTING BOTH PEOPLE
AND CARGO.

33
00:02:02,700 --> 00:02:05,780
TOGETHER WE'RE OPERATING
EXPERIMENTS OFF EARTH FOR EARTH

34
00:02:05,780 --> 00:02:10,160
THAT ARE HELPING US LEARN HOW TO IMPROVE LIFE FOR HUMANS LIVING

35
00:02:10,160 --> 00:02:14,560
BOTH OFF AND ON OUR PLANET.
THE STATION IS OUR OUTPOST ON

36
00:02:14,560 --> 00:02:17,970
THE EDGE OF DEEP SPACE WHERE WE ARE ADVANCING HUMAN AND ROBOTIC EXPLORATION OF F

37
00:02:17,980 --> 00:02:21,370
DESTINATIONS.
AMERICAN COMPANIES ARE DEVELOPING

38
00:02:21,370 --> 00:02:26,040
SYSTEMS IN WHICH ASTRONAUTS SOON WILL
TRAVEL FROM THE UNITED STATES TO

39
00:02:26,040 --> 00:02:28,430
LOW-EARTH ORBIT.
COMMERCIAL PARTNERSHIPS ARE

40
00:02:28,430 --> 00:02:30,580
HELPING US TAKE THE NEXT GIANT
LEAP.

41
00:02:30,580 --> 00:02:33,809
BY DEVELOPING NEW WAYS OF
REACHING SPACE.

42

00:02:33,819 --> 00:02:36,780

CREATING JOBS.

AND ENABLING NASA TO FOCUS ON THE CUTTING

43

00:02:36,780 --> 00:02:44,940

EDGE TECHNOLOGIES FOR FUTURE MISSIONS. TECHNOLOGY DRIVES EXPLORATION. AND AT NASA

44

00:02:44,940 --> 00:02:49,220

AND CUTTING EDGE TECHNOLOGY ARE BEING DEVELOPED,
TESTED AND FLOWN TODAY.

45

00:02:49,220 --> 00:02:54,540

OUR IMPRESSIVE SET OF
SCIENCE MISSIONS TAKES US ON A JOURNEY

46

00:02:54,540 --> 00:02:57,780

OF DISCOVERY TO UNDERSTAND OUR HOME PLANET AND ITS SUN.
SEARCH FOR LIFE BEYOND AND

47

00:02:57,780 --> 00:03:00,690

EXPLORE THE ORIGINS AND FUTURE
OF THE UNIVERSE.

48

00:03:00,690 --> 00:03:03,390

THE MOST IMPORTANT PLANET WE
STUDY IS THE ONE ON WHICH WE

49

00:03:03,390 --> 00:03:09,620

LIVE. AS A LEADER IN EARTH SCIENCE NASA'S CONSTANTLY EXPANDING VIEW OF OUR PLANET FR

50

00:03:09,620 --> 00:03:13,730

OUR HOME PLANET AND ITS CHANGES. AIR TRAVEL FUELS
OUR MODERN WORLD.

51

00:03:13,730 --> 00:03:17,370

AND NASA IS COMMITTED TO

52

00:03:17,370 --> 00:03:21,549

TRANSFORMING AVIATION.
WE'RE DRAMATICALLY REDUCING AIR TRAFFIC'S ENVIRONMENTAL IMPACT. MAINTAINING SAFETY I

53

00:03:21,549 --> 00:03:26,409
AND PAVING FOR THE WAY FOR
REVOLUTIONARY AIRCRAFT

54

00:03:26,409 --> 00:03:28,459
TECHNOLOGY.
NASA IS WITH YOU WHEN YOU

55

00:03:28,459 --> 00:03:29,970
FLY.
AND TAKING YOU ON A JOURNEY

56

00:03:29,970 --> 00:03:33,780
TO MARS. EVERYTHING NASA DOES IS IMPROVING LIFE ON EARTH.

57

00:03:33,780 --> 00:03:35,890
RAISES THE BAR OF HUMAN
ACHIEVEMENT.

58

00:03:35,890 --> 00:03:39,099
MAKING TOMORROW'S DISCOVERIES
TODAY.

59

00:03:39,099 --> 00:03:41,379
WE'RE AMERICA'S NATIONAL AERONAUTICS AND SPACE ADMINISTRATION.

60

00:03:41,379 --> 00:03:51,330
AND EVERYDAY WE'RE HELPING TO REACH NEW HEIGHTS REVEAL THE UNKNOWN AND BENEFIT A
[APPLAUSE]

61

00:03:51,330 --> 00:04:07,879
REALLY COOL STUFF, ISN'T IT?
WELL GOOD AFTERNOON.

62

00:04:07,879 --> 00:04:10,200
IT'S MY PLEASURE TO WELCOME YOU
TO THE KENNEDY SPACE CENTER.

63

00:04:10,200 --> 00:04:13,189

I WOULD LIKE TO THANK
ADMINISTRATOR BOLDEN FOR

64

00:04:13,189 --> 00:04:17,660

SELECTING KSC TO DELIVER THE
STATE OF NASA ADDRESS.

65

00:04:17,660 --> 00:04:20,959

WE'RE HONORED TO HAVE THIS
UNIQUE EVENT HERE IN THE NEIL

66

00:04:20,959 --> 00:04:24,950

ARMSTRONG OPERATIONS AND CHECK OUT THE BUILDING HI-BAY.

67

00:04:24,950 --> 00:04:29,940

ONE OF THE MANY EXAMPLES OF THE
TRANSFORMATION THAT IS TAKING PLACE HERE

68

00:04:29,940 --> 00:04:34,350

AT KENNEDY SPACE CENTER.
FOR THE PAST FOUR YEARS WE HAVE

69

00:04:34,350 --> 00:04:39,040

BEEN HARD AT WORK REDEFINING AND
REPOSITIONING KENNEDY FOR THE

70

00:04:39,040 --> 00:04:41,630

FUTURE.
LOOK NO FURTHER THAN THE SPACE

71

00:04:41,630 --> 00:04:44,470

CRAFT BEHIND ME TO SEE OUR
PROGRESS.

72

00:04:44,470 --> 00:04:48,300

THESE VEHICLES REPRESENT THE
ESSENCE OF THE FUTURE OF HUMAN

73

00:04:48,300 --> 00:04:51,890

SPACE FLIGHT.

AND ALL THREE CREW SYSTEMS WILL

74

00:04:51,890 --> 00:04:57,530

BE PROCESSED AND LAUNCHED RIGHT HERE ALONG THE SPACE COAST.

75

00:04:57,530 --> 00:05:04,400

WE HAVE MADE THE INITIAL

TRANSITION TO BECOME A TRUE

76

00:05:04,400 --> 00:05:08,810

MULTIUSER LAUNCH COMPLEX FOR

BOTH GOVERNMENT AND COMMERCIAL

77

00:05:08,810 --> 00:05:13,060

CUSTOMERS WHILE EMBARKING ON

NASA'S NEW DEEP SPACE

78

00:05:13,060 --> 00:05:17,300

EXPLORATION PLANS.

WE'RE SOLIDIFYING OUR POSITION

79

00:05:17,300 --> 00:05:20,640

AS THE WORLD'S PREEMINENT

SPACEPORT AND A DYNAMIC

80

00:05:20,640 --> 00:05:24,390

INFRASTRUCTURE IS TAKING PLACE

HERE, ONE THAT WILL HOST MANY

81

00:05:24,390 --> 00:05:28,170

KINDS OF SPACE CRAFT AND

ROCKETS.

82

00:05:28,170 --> 00:05:32,440

OUR GROUND SYSTEMS DEVELOPMENT

AND OPERATIONS PROGRAM IS

83

00:05:32,440 --> 00:05:37,320
LEADING THIS MODERNIZATION
EFFORT TO TRANSFORM KSC INTO A

84

00:05:37,320 --> 00:05:41,940
21st CENTURY SPACEPORT.
WITH CAPABILITIES TO LAUNCH

85

00:05:41,940 --> 00:05:47,780
SPACECRAFT BUILT AND DESIGNED BY
BOTH NASA AND PRIVATE INDUSTRY.

86

00:05:47,780 --> 00:05:51,930
THE \$ 2 1/2 BILLION BUDGET
PROPOSAL FOR THE KENNEDY SPACE

87

00:05:51,930 --> 00:05:57,340
CENTER FURTHER CEMENTS OUR PATH FORWARD AND CONFIRMS THAT KENNEDY IS

88

00:05:57,340 --> 00:06:01,470
HEADED IN THE RIGHT DIRECTION.
IN SUPPORT OF NASA'S

89

00:06:01,470 --> 00:06:05,410
EXPLORATION, SCIENCE AND HUMAN
SPACE FLIGHT MISSIONS.

90

00:06:05,410 --> 00:06:09,440
AS WELL AS ENABLING FURTHER
COMMERCIAL SPACE OPERATIONS FROM

91

00:06:09,440 --> 00:06:14,250
HERE ON THE SPACE COAST.
THIS IS TRULY AN EXCITING TIME FOR THE

92

00:06:14,250 --> 00:06:17,490
KENNEDY SPACE CENTER FOR NASA
AND FOR OUR COUNTRY.

93

00:06:17,490 --> 00:06:22,600

AND IT GIVES ME GREAT HONOR AND
PLEASURE TO INTRODUCE OUR

94

00:06:22,600 --> 00:06:29,500

ADMINISTRATOR, CHARLIE BOLDEN.
[APPLAUSE]

95

00:06:29,500 --> 00:06:39,770

THANK YOU ALL VERY MUCH.
AND THANK YOU, BOB, VERY MUCH.

96

00:06:39,770 --> 00:06:42,070

YOU KNOW, IT'S GREAT TO BE BACK
HERE AT KSC.

97

00:06:42,070 --> 00:06:45,000

ALWAYS GOOD TO BE HERE,
PARTICULARLY THIS CLOSE TO THE

98

00:06:45,000 --> 00:06:52,280

CREW CORRIDORS AND IT'S
REMINISCENT FOR ME OF SOME PRETTY GOOD TIMES DOWN

99

00:06:52,280 --> 00:06:55,780

HERE.
IT IS HERE THAT SO MANY GIANT

100

00:06:55,780 --> 00:06:59,610

LEAPS HAVE BEEN MADE.
BUT WHAT'S REALLY IMPORTANT IS

101

00:06:59,610 --> 00:07:04,000

THAT IT IS HERE THAT MANY OF OUR
FUTURE DREAMS WILL BE MADE TO

102

00:07:04,000 --> 00:07:07,750

COME TRUE AND SO THAT IS SORT OF
THE REASON WE DECIDED THAT WE

103

00:07:07,750 --> 00:07:11,090

WANTED TO COME HERE TO THE
KENNEDY SPACE CENTER TO TALK TO

104

00:07:11,090 --> 00:07:16,140

OUR ENTIRE NASA FAMILY.
I THOUGHT ABOUT GLENDALE, THE

105

00:07:16,140 --> 00:07:20,730

STADIUM WHERE WE COULD PACK IN
ALL 18,000 EMPLOYEES BUT IT WAS

106

00:07:20,730 --> 00:07:23,470

BUSY.
AND WE COULDN'T GET ALL OF THIS

107

00:07:23,470 --> 00:07:26,400

SET UP IN TIME.
THEY HAD TO GET EVERYTHING OUT

108

00:07:26,400 --> 00:07:30,930

FROM EVERYTHING LAST NIGHT.
SO WE'RE HERE AND I'M TALKING TO

109

00:07:30,930 --> 00:07:34,500

THE MAJORITY OF OUR EMPLOYEES
VIA THE MARVEL OF TELEVISION AND

110

00:07:34,500 --> 00:07:38,400

EVERYTHING ELSE.
NONETHELESS, MY MESSAGE TODAY IS

111

00:07:38,400 --> 00:07:41,860

FOR ALL OF YOU IN THE NASA
FAMILY.

112

00:07:41,860 --> 00:07:45,430

AND SINCE I SEE SOME OF OUR
CONTRACTOR FRIENDS HERE, YOU'RE

113

00:07:45,430 --> 00:07:48,530

IN THE NASA FAMILY AND HOPEFULLY
THAT WILL BE OBVIOUS AS I GO

114

00:07:48,530 --> 00:07:52,840

THROUGH MY REMARKS.

IT WAS JUST A FEW YEARS AGO,

115

00:07:52,840 --> 00:07:56,160

2010 TO BE EXACT THAT PRESIDENT

OBAMA STOOD HERE IN THE

116

00:07:56,160 --> 00:07:58,660

ARMSTRONG OPERATIONS AND

CHECKOUT BUILDING AND COMMITTED

117

00:07:58,660 --> 00:08:03,620

US TO A JOURNEY TO MARS

BEGINNING WITH A MISSION TO SEND

118

00:08:03,620 --> 00:08:06,410

ASTRONAUTS TO AN ASTEROID AS

PART OF A STEPPING STONE

119

00:08:06,410 --> 00:08:10,080

APPROACH TO REACH THE RED

PLANET.

120

00:08:10,080 --> 00:08:16,830

THANKS TO THE WORK OF OUR NASA

TEAM AND CONTRACTOR AND ACADEMIC

121

00:08:16,830 --> 00:08:21,250

PARTNERS ALL ACROSS AMERICA WE

HAVE MADE A LOT OF PROGRESS ON

122

00:08:21,250 --> 00:08:24,580

THAT JOURNEY.

THIS INCLUDES PROGRESS IN

123

00:08:24,580 --> 00:08:29,140

INTEGRATING ALL OF OUR WORK IN A
STRUCTURED ROAD MAP THAT IS LEADING US

124

00:08:29,140 --> 00:08:32,519

TO BREAKTHROUGHS IN NEW ADVANCED TECHNOLOGIES.

125

00:08:32,519 --> 00:08:36,580

DRIVING US TO NEW DESTINATIONS
AND GENERATING THE INSPIRATION ON

126

00:08:36,580 --> 00:08:40,080

WHICH FUTURE GENERATIONS WILL
THRIVE.

127

00:08:40,080 --> 00:08:44,190

JUST BEHIND ME AND BOB HAS
ALREADY POINTED THEM OUT ARE

128

00:08:44,190 --> 00:08:47,680

SOME TANGIBLE EXAMPLES OF OUR
PROGRESS.

129

00:08:47,680 --> 00:08:51,110

FOR THOSE SITTING HERE, I THINK
YOU CAN FEEL IT.

130

00:08:51,110 --> 00:08:54,670

FOR THOSE LOOKING ON, HOPEFULLY
THE CAMERAS ARE GOOD ENOUGH THAT

131

00:08:54,670 --> 00:08:58,290

YOU CAN SENSE IT BECAUSE IT'S
REALLY IMPORTANT THAT YOU

132

00:08:58,290 --> 00:09:02,850

RECOGNIZE THAT THESE VEHICLES,
THEY'RE NOT THINGS ON PAPER

133

00:09:02,850 --> 00:09:06,900

ANYMORE.

THIS IS TANGIBLE EVIDENCE OF ALL

134

00:09:06,900 --> 00:09:16,670

THE WORK THAT YOU ALL HAVE BEEN
DOING FOR A NUMBER OF YEARS NOW.

135

00:09:16,670 --> 00:09:24,590

[APPLAUSE]

THE ORION SPACE CRAFT WHICH

136

00:09:24,590 --> 00:09:28,310

RECENTLY PERFORMED A NEAR
FLAWLESS FLIGHT TASK ON A

137

00:09:28,310 --> 00:09:31,880

JOURNEY TO SPACE IS BEING TAKEN
APART RIGHT NOW SO IT CAN

138

00:09:31,880 --> 00:09:34,350

REVEAL ITS SECRETS ABOUT THAT
AMAZING FLIGHT.

139

00:09:34,350 --> 00:09:40,110

I AM THANKFUL TO THE CREW WORKING ORION ALL THE LOCKHEED MARTIN FOLK AND EVERYBODY

140

00:09:40,110 --> 00:09:44,060

WHO MANAGED TO STICK ENOUGH OF
IT BACK TOGETHER SO WE COULD HAVE IT HERE WITH US

141

00:09:44,060 --> 00:09:49,250

BUT FOR PEOPLE WHO MAY NOT WORK
DOWN HERE, I RECOGNIZE THE FACT

142

00:09:49,250 --> 00:09:52,970

THAT IT WAS REALLY TAKEN APART
AND THEN PUT BACK TOGETHER SO WE

143

00:09:52,970 --> 00:09:55,990

COULD HAVE IT HERE.
THAT'S REALLY IMPORTANT.

144

00:09:55,990 --> 00:09:58,990

WHAT WE LEARN WILL PREPARE US
FOR ITS NEXT LAUNCH ABOARD OUR

145

00:09:58,990 --> 00:10:03,870

SPACE LAUNCH SYSTEM ROCKET OR THE SLS AND ITS FUTURE WITH ASTRONAUTS ABOARD

146

00:10:03,870 --> 00:10:07,930

EXPLORING FARTHER INTO OUR SOLAR
SYSTEM THAN EVER BEFORE.

147

00:10:07,930 --> 00:10:10,590

THANKS TO THE GRIT,
DETERMINATION AND AMERICAN INGENUITY

148

00:10:10,590 --> 00:10:16,750

WE'VE RETURNED CARGO RESUPPLY MISSIONS TO THE UNITED STATES IN-SOURCING THESE JOBS

149

00:10:16,750 --> 00:10:20,820

CREATING A PRIVATE MARKET IN
LOW EARTH ORBIT.

150

00:10:20,820 --> 00:10:26,890

NOW U.S. COMPANIES LARGE AND SMALL ARE DEVELOPING THE NEW SYSTEMS IN WHICH OUR

151

00:10:26,890 --> 00:10:34,990

ASTRONAUTS SOON WILL TRAVEL FROM RIGHT HERE ON THE SPACE COAST IN FLORIDA TO LOW-EARTH

152

00:10:34,990 --> 00:10:41,320

THIS INITIATIVE WHERE WE HAND OFF LOW EARTH TRANSPORTATION TO THE PRIVATE SECTOR IS

153

00:10:41,320 --> 00:10:45,670

OUR JOURNEY TO MARS.
ABSOLUTELY CRITICAL TO THE

154

00:10:45,670 --> 00:10:50,870

JOURNEY TO MARS.
THE BOEING CST 100 MOCKUP BEHIND ME

155

00:10:50,870 --> 00:10:55,560

IS REPRESENTATIVE OF THE FLIGHT
VEHICLE THAT IS A PRIME EXAMPLE

156

00:10:55,560 --> 00:10:59,290

OF HOW AMERICAN AEROSPACE
INDUSTRY IS RISING TO THE

157

00:10:59,290 --> 00:11:04,220

CHALLENGE OF INCREASING CREW SAFETY WHILE
BRINGING DOWN THE COST OF SPACE

158

00:11:04,220 --> 00:11:09,420

TRAVEL.
THE CST-100'S WELD-LESS STRUCTURE IS

159

00:11:09,420 --> 00:11:13,550

INNOVATIVE ENGINEERING THAT
MAKES THE SPACECRAFT REUSABLE UP

160

00:11:13,550 --> 00:11:20,120

TO TEN TIMES. THIS PRESSURE DOME
HAS NO WELDS WHICH ALLOWS FOR A SHORT TURN AROUND

161

00:11:20,120 --> 00:11:23,350

TIME BETWEEN FLIGHTS.
INCREASES SIMPLICITY OF

162

00:11:23,350 --> 00:11:28,480

PRODUCTION AND DRIVES DOWN
COSTS.

163

00:11:28,480 --> 00:11:32,580

SPACEX ALSO IS WORKING ON A CREW
DRAGON TO COMPLIMENT THE

164

00:11:32,580 --> 00:11:36,540

SUCCESSFUL CARGO CAPSULE THAT
HAS NOW BEEN REGULARLY DELIVERING

165

00:11:36,540 --> 00:11:40,440

CARGO AND SCIENCE EXPERIMENTS TO
THE INTERNATIONAL SPACE STATION

166

00:11:40,440 --> 00:11:44,830

FOR MORE THAN TWO YEARS.
THE DRAGON CARGO MODULE BEHIND

167

00:11:44,830 --> 00:11:51,220

ME FLEW SPACEX'S FIRST MISSION
TO THE ISS.

168

00:11:51,220 --> 00:11:56,910

BECOMING THE FIRST, THE FIRST
SPACE CRAFT PRODUCED BY A

169

00:11:56,910 --> 00:12:03,600

PRIVATE ENTITY TO BE LAUNCHED
INTO SPACE, RENDEZVOUS WITH AND

170

00:12:03,600 --> 00:12:07,440

BE BIRTHED TO AN ORBITING
OUTPOST AND MOST IMPORTANTLY TO

171

00:12:07,440 --> 00:12:11,920

DEORBIT AND LAND INTACT BACK
HERE ON EARTH. THAT SPACECRAFT

172

00:12:11,920 --> 00:12:19,120

A VERSION OF THE CREW DRAGON IS
BEING PREPPED FOR SHIPMENT AND IS SET TO ARRIVE JUST DOWN THE ROAD

173

00:12:19,120 --> 00:12:22,279

AT CAPE CANAVERAL AIR FORCE
STATION IN THE NEXT COUPLE OF

174

00:12:22,279 --> 00:12:28,620

WEEKS FOR AN UPCOMING PAD ABORT TEST FLIGHT.
BOTH SPACEX AND BOEING HAVE SETUP

175

00:12:28,620 --> 00:12:32,930

OPERATIONS HERE ON THE SPACE
COAST BRINGING JOBS, ENERGY AND

176

00:12:32,930 --> 00:12:36,930

EXCITEMENT ABOUT THE FUTURE WITH THEM.

177

00:12:36,930 --> 00:12:41,660

TO FURTHER ADVANCE THESE PLANS
AND KEEP US MOVING ON FORWARD IN

178

00:12:41,660 --> 00:12:46,290

OUR JOURNEY TO MARS, PRESIDENT
OBAMA TODAY IS PROPOSING AN

179

00:12:46,290 --> 00:13:03,850

FY-2016 BUDGET OF \$18.5 BILLION
FOR NASA.[APPLAUSE]

180

00:13:03,850 --> 00:13:06,510

\$18.5 BILLION FOR US BUILDING

181

00:13:06,660 --> 00:13:11,400

ON THE SIGNIFICANT INVESTMENTS
THE ADMINISTRATION HAS MADE IN

182

00:13:11,440 --> 00:13:14,890

AMERICA'S SPACE PROGRAM OVER THE LAST SIX YEARS.

183

00:13:14,890 --> 00:13:19,190

THAT'S A HALF A BILLION DOLLAR
INCREASED OVER LAST YEAR'S

184

00:13:19,220 --> 00:13:25,420

ENACTED BUDGET. THE ENACTED BUDGET. HALF BILLION DOLLARS. OVER LAST YEAR'S ENACTED

185

00:13:25,450 --> 00:13:30,740

CONFIDENCE TO YOU, THE EMPLOYEES

OF NASA, AND THE AMBITIOUS

186

00:13:30,740 --> 00:13:33,520

EXPLORATION PROGRAM YOU'RE
EXECUTING.

187

00:13:33,520 --> 00:13:38,190

YOUR WORK IS VITAL TO THE
STRATEGY TO EQUIP OUR NATION

188

00:13:38,190 --> 00:13:40,380

WITH THE NEW ADVANCED
MANUFACTURING AND SPACE

189

00:13:40,380 --> 00:13:44,670

TECHNOLOGIES FOR THE FUTURE.
AND TO INSPIRE A NEW GENERATION

190

00:13:44,670 --> 00:13:49,870

OF EXPLORERS TO MAKE THE NEXT
GIANT LEAPS IN HUMAN EXPERIENCE.

191

00:13:49,870 --> 00:13:52,600

NASA IS FIRMLY ON A JOURNEY TO
MARS.

192

00:13:52,600 --> 00:13:57,810

MAKE NO MISTAKE, THIS JOURNEY
WILL HELP GUIDE AND DEFINE OUR

193

00:13:57,810 --> 00:14:01,160

GENERATION.
THIS YEAR WE CELEBRATE 50 YEARS

194

00:14:01,160 --> 00:14:04,810

SINCE EDWARD WHITE LEFT HIS GEMINI CAPSULE TO BECOME AMERICA'S

195

00:14:04,810 --> 00:14:08,510

FIRST SPACE WALKER.
IT WAS ONLY A FEW YEARS LATER WE

196

00:14:08,510 --> 00:14:13,690

LANDED HUMANS ON THE MOON.
AND NOT TOO LONG AFTER THAT, THE

197

00:14:13,690 --> 00:14:21,100

UNITED STATES BECAME THE FIRST
AND STILL THE ONLY NATION TO

198

00:14:21,100 --> 00:14:24,900

SUCCESSFULLY LAND A SPACECRAFT
ON MARS.

199

00:14:24,900 --> 00:14:28,580

OUR INCREDIBLE 30-YEAR SPACE
SHUTTLE ERA FOLLOWED FROM THE

200

00:14:28,580 --> 00:14:32,870

EARLY '80s THROUGH JULY 2011
DURING WHICH THE SCIENCE

201

00:14:32,870 --> 00:14:37,650

COMMUNITY SAW THE DEPLOYMENT OF THREE OF THE FOUR GREAT OBSERVATORIES DEPLOYED

202

00:14:37,650 --> 00:14:43,810

FROM THE SHUTTLE DURING THE DECADE OF THE 90S
THE HUBBLE SPACE TELESCOPE IN APRIL OF 1990.

203

00:14:43,900 --> 00:14:49,600

THE COMPTON GAMMA-RAY OBSERVATORY IN APRIL
OF '91 AND THE CHANDRA X-RAY OBSERVATORY IN

204

00:14:49,630 --> 00:14:57,210

JULY OF 1999.

CONTRIBUTING TO A GOLDEN AGE OF PLANETARY AND ASTROPHYSICS EXPLORATION AND DISCO

205

00:14:57,210 --> 00:15:00,089

IT WAS THROUGH THE SPACE SHUTTLE

206

00:15:00,089 --> 00:15:05,470
PROGRAM THAT NASA OPENED SPACE
FLIGHT TO MANY LIKE ME.

207
00:15:05,470 --> 00:15:10,240
WHO HAD PREVIOUSLY HAD NO CHANCE
OF FLYING.

208
00:15:10,240 --> 00:15:16,470
BRINGING DIVERSITY IN OUR CREWS
TO WOMEN, MINORITIES AND

209
00:15:16,470 --> 00:15:19,770
ASTRONAUTS OF ANY OTHER PARTNER
NATIONS.

210
00:15:19,770 --> 00:15:36,050
TO ME, THAT'S PERHAPS ITS
GREATEST LEGACY. [APPLAUSE]

211
00:15:36,140 --> 00:15:37,120
USING SHUTTLE AS OUR

212
00:15:37,120 --> 00:15:40,779
TRANSPORTATION FOR OUR ASTRONAUT CONSTRUCTION CREWS WE THEN

213
00:15:40,779 --> 00:15:44,250
SPEAR-HEADED ASSEMBLY OF THE
INTERNATIONAL SPACE STATION IN

214
00:15:44,250 --> 00:15:48,440
WHICH HUMANS HAVE NOW LIVED
CONTINUOUSLY FOR MORE THAN 14

215
00:15:48,440 --> 00:15:50,920
YEARS.
FOR SOME OF YOU WHO USED TO WORK

216
00:15:50,920 --> 00:15:56,440
DOWN THERE IN THE ISS PRODUCTION

FACILITY, REMEMBER IN THE DAYS

217

00:15:56,440 --> 00:15:58,899

WHEN -- BECAUSE WE COULDN'T PUT
IT ALL TOGETHER WE SAID THIS

218

00:15:58,899 --> 00:16:03,210

WILL NEVER WORK OR FOR THOSE OF
YOU AT JSC WHO WERE AROUND THE CREW

219

00:16:03,210 --> 00:16:08,060

OFFICE IN ENGINEERING LIKE ME SAYING WE'LL NEVER BE ABLE TO DO THIS, ITS TOO

220

00:16:08,060 --> 00:16:12,380

MANY EVA'S, TOO THIS, TOO THAT,
TOO EVERYTHING. I'M LOOKING AT

221

00:16:12,380 --> 00:16:17,300

MIKE, YOU WERE THERE.
EXAMPLES OF WHERE WE HAVE BEEN

222

00:16:17,300 --> 00:16:21,860

BUT EXAMPLES OF YOUR RESILIENCE
AND YOUR BELIEF IN THE FUTURE THAT

223

00:16:21,860 --> 00:16:26,020

SHOWS WHAT WE CAN DO.
OVER THE PAST SIX YEARS WE HAVE

224

00:16:26,020 --> 00:16:29,740

TAKEN THE MOST CONCRETE STEPS
EVER TO ADVANCE A HUMAN MISSION

225

00:16:29,740 --> 00:16:32,940

TO MARS.
THIS JOURNEY TO MARS INDEED OUR

226

00:16:32,940 --> 00:16:40,250

ENTIRE PATH TO THE FUTURE STARTS
RIGHT NOW, RIGHT HERE ON EARTH.

227

00:16:40,250 --> 00:16:43,540

OUR COMMERCIAL CREW WORK FOR
EXAMPLE IS HEAD QUARTERED HERE

228

00:16:43,540 --> 00:16:48,750

AT KENNEDY BUT ENCOMPASSES
EFFORTS IN 37 STATES FROM NEVADA

229

00:16:48,750 --> 00:16:55,100

TO MONTANA, TO KANSAS, WISCONSIN, NEW JERSEY AND NORTH CAROLINA.

230

00:16:55,100 --> 00:17:01,970

WHETHER YOU'RE WORKING IN A FAMILY RUN COMPOSITES FACTORY MILL
IN PENNSYLVANIA AS THOSE WHO ARE

231

00:17:01,970 --> 00:17:06,270

WORKING IN A PLACE CALLED BALLY
MILLS, IN BALLY, PENNSYLVANIA WHERE I

232

00:17:06,270 --> 00:17:09,339

WAS PRIVILEGED TO VISIT BEFORE
THE CHRISTMAS HOLIDAYS.

233

00:17:09,339 --> 00:17:14,150

YOU'RE FROM BALLY? PENNSYLVANIA? ANYBODY ELSE FROM PENNSYLVANIA

234

00:17:14,150 --> 00:17:17,230

HERE?
I KNOW THERE ARE PEOPLE ON THE

235

00:17:17,230 --> 00:17:23,280

NET FROM PENNSYLVANIA.
BUT BALLY MILLS, A SMALL COMPANY

236

00:17:23,280 --> 00:17:28,920

A SMALL COMPANY OF 300 EMPLOYEES, MOSTLY WOMEN,
STARTED OUT MAKING RIBBONS FOR

237

00:17:28,920 --> 00:17:33,410
MILITARY UNIFORMS AND TODAY
MAKING SPACE-AGE TEXTILES AND

238

00:17:33,410 --> 00:17:39,500
THE LIKE THAT ARE ON OUR SPACE CRAFT. YOU KNOW, IT'S WHETHER YOU'RE

239

00:17:39,500 --> 00:17:44,800
WORKING IN THAT TYPE OF BUSINESS
DEVELOPING THE NEXT GENERATION

240

00:17:44,800 --> 00:17:49,540
MARS ROVER IN CALIFORNIA, FROM
THE OHIO SPACE CORRIDOR TO THE MID-ATLANTIC REGIONAL SPACE

241

00:17:49,540 --> 00:17:56,150
PORT IN VIRGINIA, YOU'RE ALL A PART OF THE JOURNEY.

242

00:17:56,150 --> 00:18:00,330
RIGHT NOW IN MISSISSIPPI AT OUR
STENNIS SPACE CENTER. FOLK DOWN AT STENNIS...

243

00:18:00,330 --> 00:18:04,740
I KNOW WHAT YOU'RE SAYING.
HOPE YOU'LL SAY NOTHING GOES TO

244

00:18:04,740 --> 00:18:07,660
SPACE UNTIL IT GOES THROUGH
MISSISSIPPI.

245

00:18:07,660 --> 00:18:11,130
SO IF YOU'RE WAITING FOR ME TO
SAY THAT, I SAID IT.

246

00:18:11,130 --> 00:18:12,809
AND PEOPLE DOWN IN MISSISSIPPI
UNDERSTAND THAT.

247

00:18:12,809 --> 00:18:17,990
YOU ALL THAT ARE HERE, YOU MAY NOT. BUT BOB CABANA WILL TELL YOU, IF IT'S GOT AN ENGINE

248

00:18:17,990 --> 00:18:21,660

NOTHING GOES TO SPACE WITHOUT
GOING THROUGH MISSISSIPPI.

249

00:18:21,660 --> 00:18:25,540

WE JUST TESTED THE RS-25 ENGINES
FROM THE SPACE SHUTTLE, FOUR OF

250

00:18:25,540 --> 00:18:30,420

WHICH WILLPOWER OR NEW SPACE
LAUNCH SYSTEM TO CARRY ORION ON

251

00:18:30,420 --> 00:18:35,340

FUTURE MISSIONS TO DEEP SPACE.
IN JUST A FEW WEEKS THE SOLID

252

00:18:35,340 --> 00:18:40,080

ROCKET BOOSTER WILL BE FIRED UP
IN UTAH.

253

00:18:40,080 --> 00:18:43,490

STUDENTS FROM THE GOVERNOR
SCHOOL OF SCIENCE AND TECHNOLOGY

254

00:18:43,490 --> 00:18:47,910

IN HAMPTON, VIRGINIA, WINNERS OF
OUR LOCKHEED MARTIN NASA EXPLORATION DESIGN

255

00:18:47,910 --> 00:18:52,000

CHALLENGE, FLEW RADIATION
SHIELDING EXPERIMENTS ON

256

00:18:52,000 --> 00:18:56,330

ORION AND CONTINUED TO USE OUR
COMMERCIAL PARTNERS TO SEND

257

00:18:56,330 --> 00:18:59,600

EXPERIMENTS TO THE STATION.
NURTURING NOT ONLY NEW

258

00:18:59,600 --> 00:19:04,410

DISCOVERIES BUT THE HANDS ON
EXPERIENCE OF A NEW GENERATION

259

00:19:04,410 --> 00:19:10,250

HUNGRY TO MAKE SPACE THEIR OWN.
THIS SUMMER NASA PLANS TO ONCE

260

00:19:10,250 --> 00:19:13,700

AGAIN TEST OUR LOW DENSITY SUPER
SONIC DECELERATOR OFF THE COAST

261

00:19:13,700 --> 00:19:18,290

OF HAWAII TO CONTINUE PROVING
INFLIGHT, THE NEW TECHNOLOGIES

262

00:19:18,290 --> 00:19:21,929

CRITICAL FOR LANDING LARGER PAY
LOADS ON THE SURFACE OF THE RED

263

00:19:21,929 --> 00:19:26,059

PLANET.
WE KNOW THAT TECHNOLOGY DRIVES

264

00:19:26,059 --> 00:19:29,960

EXPLORATION.
AND OUR JOURNEY TO MARS.

265

00:19:29,960 --> 00:19:32,700

WE ALSO WILL CONTINUE TO DEVELOP
ADVANCED SOLAR ELECTRIC

266

00:19:32,700 --> 00:19:36,850

PROPULSION SYSTEMS NEEDED FOR
THE ASTEROID REDIRECT MISSION AND OTHER

267

00:19:36,850 --> 00:19:42,730

DEEP SPACE MISSIONS AND TO MAKE
ADVANCES IN THE ATOMIC CLOCKS AND GREEN PROPELLANTS

268

00:19:42,730 --> 00:19:47,130

THAT WILL GUIDE AND POWER OUR
FUTURE MISSIONS.

269

00:19:47,130 --> 00:19:49,640

LANDING ON AN ASTEROID,
TRAVELING THROUGH SPACE OR

270

00:19:49,640 --> 00:19:54,679

RETRIEVING A PIECE OF IT
REQUIRES ADVANCED AUTONOMOUS ROBOTICS AND

271

00:19:54,679 --> 00:19:57,610

GUIDANCE AND CONTROL
TECHNOLOGIES.

272

00:19:57,610 --> 00:20:00,620

THESE NASA-DEVELOPED
TECHNOLOGIES WILL BE APPLICABLE

273

00:20:00,620 --> 00:20:03,290

TO COMMERCIAL SATELLITE
SERVICING.

274

00:20:03,290 --> 00:20:09,309

FUTURE EXPLORATION,
RESOURCE EXTRACTING, MINING, IN SITU RESOURCE UTILIZATION AND

275

00:20:09,309 --> 00:20:14,460

PLANETARY SAMPLE RETURN.
THE ASTEROID MISSION WILL ALSO DEMONSTRATE ADVANCED HIGH

276

00:20:14,460 --> 00:20:18,929

POWER SOLAR ELECTRIC PROPULSION
OR SEP.

277

00:20:18,929 --> 00:20:23,610

CRITICAL FOR FUTURE NASA AND COMMERCIAL USES.
THE MISSION WILL TEST ASTEROID DEFLECTION

278

00:20:23,610 --> 00:20:27,480

TECHNIQUES AND MAY PROVIDE
INFORMATION TO INFORM FUTURE

279

00:20:27,480 --> 00:20:31,580

WORK TO HELP US PROTECT OUR OWN HOME PLANET.

280

00:20:31,580 --> 00:20:34,400

WE HAVE IDENTIFIED SEVERAL
ASTEROIDS THAT COULD BE GOOD

281

00:20:34,400 --> 00:20:37,679

CANDIDATES AND WILL MAKE A
DECISION SOON ON A CAPTURE

282

00:20:37,679 --> 00:20:40,910

OPTION.
AS WE ADVANCE OUR JOURNEY TO

283

00:20:40,910 --> 00:20:45,920

MARS, WE'RE ALSO FOCUSING HERE
ON EARTH ON MAKING AVIATION

284

00:20:45,920 --> 00:20:50,179

GREENER, QUIETER, AND MORE
EFFICIENT.

285

00:20:50,179 --> 00:20:54,740

EVERY U.S. AIRCRAFT, EVERY U.S.
AIRCRAFT AND U.S. AIR TRAFFIC

286

00:20:54,740 --> 00:20:59,150

CONTROL TOWER HAS NASA DEVELOPED TECHNOLOGY ON BOARD.

287

00:20:59,150 --> 00:21:02,920

NASA SCIENTISTS AND ENGINEERS
ARE WORKING ON NEW COMPOSITE

288

00:21:02,920 --> 00:21:07,320
MATERIALS THAT WILL MAKE FUTURE
AIR AND SPACECRAFT LIGHTER AND

289
00:21:07,320 --> 00:21:12,660
MORE DURABLE.
NASA IS WITH YOU WHEN YOU FLY.

290
00:21:12,660 --> 00:21:15,429
AND WE'RE COMMITTED TO
TRANSFORMING AVIATION BY

291
00:21:15,429 --> 00:21:19,100
DRAMATICALLY REDUCING ITS
ENVIRONMENTAL IMPACT MAINTAINING

292
00:21:19,100 --> 00:21:23,030
SAFETY AND MORE CROWDED SKIES
AND PAVING THE WAY TOWARD

293
00:21:23,030 --> 00:21:27,650
REVOLUTIONARY AIRCRAFT SHAPES AND PROPULSION SYSTEMS.

294
00:21:27,650 --> 00:21:32,840
AS WE ALL KNOW THE MOST
IMPORTANT PLANET WE STUDY IS THE

295
00:21:32,840 --> 00:21:38,110
ONE ON WHICH WE LIVE, EARTH.
THE REALITY IS OUR PLANET IS

296
00:21:38,110 --> 00:21:41,670
CHANGING.
AND THE DATA CONTINUES TO PROVE

297
00:21:41,670 --> 00:21:44,530
THIS.
BUT WE'RE ON IT.

298
00:21:44,530 --> 00:21:48,650

NASA IS A LEADER IN EARTH AND
CLIMATE SCIENCE AND OUR CONSTANTLY

299

00:21:48,650 --> 00:21:52,220
EXPANDING VIEW OF OUR PLANET
FROM SPACE IS HELPING US

300

00:21:52,220 --> 00:21:55,620
UNDERSTAND EARTH AND ITS
CHANGES.

301

00:21:55,620 --> 00:21:59,870
WHEN NATURAL DISASTERS IMPACT
US, THE SPACE STATION AND NASA

302

00:21:59,870 --> 00:22:04,750
SATELLITES ARE THERE TO HELP
MAKE TIME CRITICAL BSERVATIONS

303

00:22:04,750 --> 00:22:09,490
AND AID AND RECOVERY.
IN THE LAST 12 MONTHS WE HAVE

304

00:22:09,490 --> 00:22:12,210
LAUNCHED FIVE EARTH SCIENCE
MISSIONS.

305

00:22:12,210 --> 00:22:14,660
FIVE.
[APPLAUSE]

306

00:22:14,660 --> 00:22:23,760
IN THE LAST 12 MONTHS.
[APPLAUSE]

307

00:22:23,760 --> 00:22:27,950
THE LATEST OF WHICH, SOIL
MOISTURE, ACTIVE PASSIVE OR SMAP

308

00:22:27,950 --> 00:22:32,420

WAS LAUNCHED THIS PAST SATURDAY.
THESE MISSIONS ARE STUDYING SUCH DIVERSE THINGS AS

309
00:22:32,420 --> 00:22:39,540
OCEAN WINDS, COMPONENTS OF OUR
ATMOSPHERE SUCH AS CLOUDS AND AEROSOLS AND

310
00:22:39,540 --> 00:22:44,250
PRECIPITATION ON A GLOBAL SCALE.
SMAP WILL GIVE US FOR THE FIRST

311
00:22:44,250 --> 00:22:51,230
TIME EVER A PICTURE OF SOIL
MOISTURE ON A GLOBAL LEVEL.

312
00:22:51,230 --> 00:22:54,830
THE MISSION WILL HELP IMPROVE
CLIMATE AND WEATHER FORECASTS

313
00:22:54,830 --> 00:22:58,950
AND ALLOW SCIENTISTS TO MONITOR
DROUGHTS AND BETTER PREDICT

314
00:22:58,950 --> 00:23:03,010
FLOODING CAUSED BY SEVERE
RAINFALL AND SNOW MELT.

315
00:23:03,010 --> 00:23:06,850
SMAP DATA WILL ALLOW NATIONS TO
BETTER FORECAST CROP YIELDS AND

316
00:23:06,850 --> 00:23:11,830
BOLSTER EARLY WARNING SYSTEMS.
THE AIRBORNE SNOW OBSERVATORY

317
00:23:11,830 --> 00:23:17,610
USES INSTRUMENTS ABOARD AIRCRAFT TO TELL AGAIN
FOR THE FIRST TIME EVER HOW MUCH

318
00:23:17,610 --> 00:23:22,080

WATER IS STORED IN THE MOUNTAIN
SNOW PACK AND HOW THAT CHANGES

319

00:23:22,080 --> 00:23:25,760

FROM WEEK TO WEEK.

THIS IS CRITICAL TO HELPING

320

00:23:25,760 --> 00:23:29,780

EVALUATE AND PLAN STRATEGIES TO

COMBAT THE INTENSE DROUGHT

321

00:23:29,780 --> 00:23:33,080

PLAGUING CALIFORNIA, COLORADO

AND MANY OTHER SOUTHWESTERN

322

00:23:33,080 --> 00:23:38,200

STATES AND HELP PROTECT THEIR

BUSINESSES AND COMMUNITIES.

323

00:23:38,200 --> 00:23:43,390

NASA IS LEADING THE WAY IN

UNDERSTANDING LOCAL, REGIONAL

324

00:23:43,390 --> 00:23:46,880

AND GLOBAL WATER CYCLES.

INFORMATION CRITICAL TO

325

00:23:46,880 --> 00:23:50,669

UNDERSTANDING OUR ENVIRONMENT

AND SUPPORTING OUR ECONOMY AND

326

00:23:50,669 --> 00:23:54,440

NATIONAL SECURITY.

THE TECHNOLOGIES WE DEVELOP TO

327

00:23:54,440 --> 00:23:57,830

EXPLORE SPACE HAVE PRACTICAL

APPLICATIONS RIGHT HERE ON

328

00:23:57,830 --> 00:24:00,740

EARTH.
ONE EXAMPLE IS THE SHOCK

329
00:24:00,740 --> 00:24:05,309
ABSORBERS USED DURING SPACE SHUTTLE LAUNCHES
THAT ARE NOW BEING USED TO BRACE

330
00:24:05,309 --> 00:24:09,290
BRACE BUILDINGS DURING EARTHQUAKES,
PREVENTING DAMAGE AND SAVING

331
00:24:09,290 --> 00:24:14,020
LIVES.
OR A NASA SIMPLIFIED BACTERIA

332
00:24:14,020 --> 00:24:19,370
TEST BEING USED TO MONITOR WATER
QUALITY IN RURAL COMMUNITIES

333
00:24:19,370 --> 00:24:22,309
AROUND THE WORLD.
AND CABIN PRESSURE MONITORS

334
00:24:22,309 --> 00:24:26,110
ALERTING PILOTS WHEN OXYGEN
LEVELS ARE APPROACHING DANGEROUSLY

335
00:24:26,110 --> 00:24:30,570
LOW LEVELS IN THEIR AIRCRAFT.
AS WE STRIVE TO ACHIEVE THE

336
00:24:30,570 --> 00:24:35,350
DREAM OF SENDING HUMANS TO MARS,
IT'S IMPORTANT TO REMEMBER WE'RE

337
00:24:35,350 --> 00:24:40,059
ALREADY THERE.
FOR 40 YEARS INCREASINGLY

338
00:24:40,059 --> 00:24:43,970

ADVANCED ROBOTIC EXPLORERS HAVE
STUDIED THE RED PLANET.

339

00:24:43,970 --> 00:24:47,740

THIS HAS DRAMATICALLY INCREASED
OUR SCIENTIFIC KNOWLEDGE AND

340

00:24:47,740 --> 00:24:51,780

HELPED PAVED THE WAY FOR
ASTRONAUTS TO TRAVEL THERE.

341

00:24:51,780 --> 00:24:56,190

OUR LATEST MARS SPACE CRAFT
MAVEN ARRIVED LAST SEPTEMBER TO STUDY

342

00:24:56,190 --> 00:25:00,309

THE UPPER ATMOSPHERE AND JOIN
THE FLEET OF ORBITERS AND ROVERS

343

00:25:00,309 --> 00:25:04,460

ON THE SURFACE.
NEXT YEAR WE'LL SEND THE INSIGHT

344

00:25:04,460 --> 00:25:07,070

LANDER TO STUDY THE PLANET'S
CORE.

345

00:25:07,070 --> 00:25:13,080

IN 2020 A NEW ROVER BUILDING ON
THE INCREDIBLE SUCCESS OF CURIOSITY WILL

346

00:25:13,080 --> 00:25:18,480

HELP US PREPARE FOR ARRIVAL AT
MARS AND FOR THE FIRST TIME EVER

347

00:25:18,480 --> 00:25:22,950

WILL CACHE A SAMPLE FOR LATER
RETURN TO EARTH.

348

00:25:22,950 --> 00:25:27,510

MARS IS A KEY DESTINATION.
BUT IT'S ONLY ONE POINT ON OUR

349

00:25:27,510 --> 00:25:32,110
JOURNEY OF DISCOVERY.
IT'S A JOURNEY ACROSS AND OUT OF

350

00:25:32,110 --> 00:25:36,590
OUR SOLAR SYSTEM TO THE FARTHEST
REACHES OF THE UNIVERSE AND THE

351

00:25:36,590 --> 00:25:41,190
FRONTIER OF THE HUMAN CAPACITY
TO EXPLORE.

352

00:25:41,190 --> 00:25:45,500
I WAS PRIVILEGED 25 YEARS AGO
THIS APRIL TO PILOT THE SPACE

353

00:25:45,500 --> 00:25:51,880
SHUTTLE DISCOVERIES STS-31
MISSION DURING WHICH WE DEPLOYED HUBBLE SPACE TELESCOPE.

354

00:25:51,880 --> 00:25:57,600
HUBBLE IS STILL DOING ABSOLUTELY
AMAZING SCIENCE.

355

00:25:57,610 --> 00:26:02,400
AND THE LAST TEXTBOOK THAT WILL
HAVE TO BE REWRITTEN BECAUSE OF

356

00:26:02,400 --> 00:26:07,260
ITS DISCOVERIES, IT HASN'T EVEN
BEEN DRAFTED YET.

357

00:26:07,260 --> 00:26:13,350
IN JUST THREE YEARS WE'LL LAUNCH
THE JAMES WEBB SPACE TELESCOPE HUBBLE'S SUCCESSOR

358

00:26:13,350 --> 00:26:15,940

AND CONTINUE TO REVEAL THE
UNKNOWN WITH THE LARGEST

359

00:26:15,940 --> 00:26:20,580

OBSERVATORY EVER PUT IN SPACE.
THAT AMAZING TELESCOPE IS TAKING

360

00:26:20,580 --> 00:26:24,400

SHAPE RIGHT NOW IN SUBURBAN
MARYLAND WHERE THE MIRRORS HAVE

361

00:26:24,400 --> 00:26:27,160

ARRIVED AND THE HEART OF THE
TELESCOPE THAT HOLDS ITS

362

00:26:27,160 --> 00:26:30,460

INSTRUMENTS SUCCESSFULLY
COMPLETED A NEARLY FOUR-MONTH

363

00:26:30,460 --> 00:26:35,309

TEST IN A CRYOGENIC THERMAL
VACUUM CHAMBER.

364

00:26:35,309 --> 00:26:39,809

AFTER NEARLY NINE YEARS AND THREE BILLION MILES OF TRAVEL, NEW

365

00:26:39,809 --> 00:26:44,179

HORIZON SPACE CRAFT WAS AWAKENED
LAST MONTH IN PREPARATION FOR

366

00:26:44,179 --> 00:26:47,919

ITS ARRIVAL IN THE PLUTO SYSTEM
THIS COMING JULY.

367

00:26:47,919 --> 00:26:52,980

RIGHT NOW DAWN IS APPROACHING
THE DWARF PLANET CERES.

368

00:26:52,980 --> 00:26:57,200

JUNO IS SPEEDING TOWARD JUPITER

WHERE IT WILL NOT ONLY SEND BACK

369

00:26:57,200 --> 00:27:03,559

UNPRECEDENTED DATA FROM A

FIRST EVER POLAR ORBIT OF OUR GIANT NEIGHBOR IT WILL DEMONSTRATE

370

00:27:03,559 --> 00:27:08,799

HOW SOLAR POWER CAN WORK AT

GREAT DISTANCES FROM THE SUN.

371

00:27:08,799 --> 00:27:11,760

LOOKING TO THE FUTURE, WE'RE

PLANNING A MISSION TO EXPLORE

372

00:27:11,760 --> 00:27:15,280

JUPITER'S FASCINATING MOON

EUROPA.

373

00:27:15,280 --> 00:27:18,350

SELECTING INSTRUMENTS THIS

SPRING AND MOVING TOWARD THE

374

00:27:18,350 --> 00:27:22,970

NEXT PHASE OF OUR WORK.

THE KEPLER MISSION CONTINUES TO

375

00:27:22,970 --> 00:27:27,970

DISCOVER NEW PLANETS OUTSIDE OUR OWN SOLAR SYSTEM. IT HAS CONFIRMED MORE

376

00:27:27,970 --> 00:27:32,549

THAN 1,000 PLANETS SOME WHICH

COULD BE ROCKY LIKE OUR OWN EARTH.

377

00:27:32,580 --> 00:27:36,150

AND THE SOLAR DYNAMICS OBSERVATORY TOOK ITS ONE HUNDRED

378

00:27:36,150 --> 00:27:47,929

MILLIONTH IMAGE OF

THE SUN. AND IN DOZENS OF OTHER ASTROPHYSICS AND HELIOPHYSICS MISSIONS THE DATA STR

379

00:27:47,929 --> 00:27:52,539

THROUGH WHICH SCIENTISTS WILL
SORT, DECIPHER AND MAKE

380

00:27:52,539 --> 00:27:56,870

DISCOVERIES FOR YEARS TO COME.
OUR JOURNEY OF DISCOVERY HAS

381

00:27:56,870 --> 00:28:01,600

ONLY JUST BEGUN.
TOGETHER HUMANS AND ROBOTS WILL

382

00:28:01,600 --> 00:28:04,600

PIONEER MARS AND THE SOLAR
SYSTEM.

383

00:28:04,600 --> 00:28:08,530

IN FACT, THEY ALREADY WORK
CLOSELY TOGETHER ONBOARD THE

384

00:28:08,530 --> 00:28:11,480

SPACE STATION.
AS THE PRESIDENT SAID IN HIS

385

00:28:11,480 --> 00:28:15,610

STATE OF THE UNION SPEECH JUST
TWO WEEKS AGO, AND I QUOTE, "WE'RE PUSHING OUT

386

00:28:15,610 --> 00:28:20,310

INTO THE SOLAR SYSTEM, NOT JUST
TO VISIT, BUT TO STAY."

387

00:28:20,310 --> 00:28:32,300

UNQUOTE.
[APPLAUSE]

388

00:28:32,309 --> 00:28:36,169

NEXT MONTH WE LAUNCH ASTRONAUT SCOTT KELLY AND HIS RUSSIAN

389

00:28:36,169 --> 00:28:41,730

COUNTER MIKHAIL KORNIENKO ON A ONE-YEAR MISSION ABOARD THE STATION TO

390

00:28:41,730 --> 00:28:46,760

LEARN MORE ABOUT HOW TO LIVE AND
WORK IN SPACE FOR THE LONG TERM.

391

00:28:46,760 --> 00:28:50,130

WE'LL COMPARE HIS VITAL SIGNS TO
THOSE OF HIS TWIN BROTHER MARK

392

00:28:50,130 --> 00:28:53,809

BACK HERE ON EARTH IN A FIRST
EVER EXPERIMENT USING IDENTICAL

393

00:28:53,809 --> 00:28:57,890

TWINS TO LEARN MORE ABOUT THE
EFFECTS OF LIVING IN SPACE.

394

00:28:57,890 --> 00:29:03,120

SO AS I STAND BEFORE YOU TODAY
IN FRONT OF THESE VERY, VERY

395

00:29:03,120 --> 00:29:07,740

TANGIBLE EXAMPLES OF OUR
PROGRESS AND OUR FUTURE, I CAN

396

00:29:07,740 --> 00:29:26,760

UNEQUIVOCALLY SAY THAT THE STATE OF NASA IS STRONG. [APPLAUSE]

397

00:29:26,820 --> 00:29:28,340

OUR NEWEST ROCKET, THE SPACE

398

00:29:28,440 --> 00:29:32,220

LAUNCH SYSTEM HAS MOVED FROM
FORMULATION TO DEVELOPMENT.

399

00:29:32,230 --> 00:29:35,980

SOMETHING NO OTHER EXPLORATION
CLASS VEHICLE HAS ACHIEVED SINCE

400

00:29:35,980 --> 00:29:37,950

THE AGENCY BUILT THE SPACE
SHUTTLE.

401

00:29:37,950 --> 00:29:41,630

AND RIGHT HERE AT THE KENNEDY
SPACE CENTER, THE GROUND SYSTEMS

402

00:29:41,630 --> 00:29:46,110

TEAM HAS ALSO MOVED FROM
FORMULATION TO DEVELOPMENT

403

00:29:46,110 --> 00:29:49,990

MAKING STEADY PROGRESS TOWARD
MODERNIZING AND ADVANCING OUR

404

00:29:49,990 --> 00:29:54,080

GROUND SYSTEMS TO BE READY TO
LAUNCH THE SLS.

405

00:29:54,080 --> 00:29:57,990

WE HAVE TWO COMMERCIAL PROVIDERS
BRINGING CARGO AND RESEARCH TO

406

00:29:57,990 --> 00:30:01,600

THE SPACE STATION.
SOMETHING THAT WOULD HAVE BEEN

407

00:30:01,600 --> 00:30:07,179

SCIENCE FICTION JUST A FEW YEARS
AGO IS NOW FACT.

408

00:30:07,179 --> 00:30:10,919

THIS SUCCESS AND RAPID PROGRESS
OUR COMMERCIAL CREW PROVIDERS

409

00:30:10,919 --> 00:30:15,480

ARE MAKING VALIDATE OUR FAITH
AND INVESTMENT IN COMMERCIAL

410

00:30:15,480 --> 00:30:20,750

SPACE AND AMERICAN INDUSTRY.
SCIENCE MAINTAINS ITS INTENSE

411

00:30:20,750 --> 00:30:24,980

GRIP ON THE WORLD'S IMAGINATION
IN THE HANDFUL OF EXAMPLES I

412

00:30:24,980 --> 00:30:29,360

MENTIONED AND THOSE ARE JUST A
FEW.

413

00:30:29,360 --> 00:30:32,820

THERE ARE DOZENS MORE.
NONE OF THIS HAPPENS BY

414

00:30:32,820 --> 00:30:37,169

ACCIDENT.
WE OUTLINED A VISION.

415

00:30:37,169 --> 00:30:39,960

WE GOT BIPARTISAN SUPPORT FOR
IT.

416

00:30:39,960 --> 00:30:46,910

AND THEN YOU, THE MOST TALENTED
WORK FORCE ON OR OFF THE PLANET

417

00:30:46,910 --> 00:31:03,190

GO EXECUTE THE PLAN.
THAT'S HOW WE DID IT. [APPLAUSE]

418

00:31:03,220 --> 00:31:06,100

SOME HAVE SAID THAT NASA IS ADRIFT

419

00:31:06,100 --> 00:31:09,270

WELL, IF YOU LOOK AT EVERYTHING

420

00:31:09,270 --> 00:31:11,940

I HAVE TALKED ABOUT TODAY, AT
THE SPACE CRAFT OF THE FUTURE

421

00:31:11,940 --> 00:31:15,820

BEHIND ME AND THE CONCRETE PLANS
AND DEVELOPMENT FOR HUMAN AND

422

00:31:15,820 --> 00:31:23,340

ROBOTIC EXPLORATION IN CISLUNAR SPACE AND BEYOND,
IF YOU VISIT OUR VARIOUS NASA

423

00:31:23,340 --> 00:31:28,030

FACILITIES WHERE WORK IS ONGOING
FOR THE FUTURE SUCH AS MICHOU, HERE AT

424

00:31:28,030 --> 00:31:33,960

KSC, IN UTAH, TEXAS, CALIFORNIA,
COUNTLESS OTHER PLACES, IF YOU

425

00:31:33,960 --> 00:31:39,480

TRAVEL THE WORLD AS I REGULARLY
DO AND YOU SEE THE ENTHUSIASM I

426

00:31:39,480 --> 00:31:48,380

SEE FOR NASA EVERY SINGLE PLACE
I GO, OR YOU INTERACT AS I DO

427

00:31:48,380 --> 00:31:53,020

REGULARLY WITH THE TENS OF
THOUSANDS OF STUDENTS AROUND THE

428

00:31:53,020 --> 00:31:57,280

WORLD FROM ELEMENTARY THROUGH GRADUATE SCHOOL WHO ARE EXCITED ABOUT

429

00:31:57,280 --> 00:32:03,530

THE DREAM OF ONE DAY TRAVELING
TO SPACE AND VISITING MARS, I

430

00:32:03,530 --> 00:32:06,980

THINK YOU'LL COME TO A TOTALLY
DIFFERENT CONCLUSION.

431

00:32:06,980 --> 00:32:11,630
THAT THE IDEA WERE ADRIFT IS AN
EMPTY HOOK TRYING TO CATCH

432

00:32:11,630 --> 00:32:16,400
YESTERDAY'S FISH, I COULDN'T BE
MORE -- THEY TOLD ME YOU GUYS

433

00:32:16,400 --> 00:32:19,870
WOULD UNDERSTAND THAT DOWN HERE AT THE CAPE.

434

00:32:19,870 --> 00:32:25,070
NONE OF YOU ARE FISHERMEN.
I SEE SOME HEADS GOING LIKE SOME

435

00:32:25,070 --> 00:32:26,789
OF YOU ARE.
YOU UNDERSTAND IT.

436

00:32:26,789 --> 00:32:29,940
ALL RIGHT.
I'M GOING TO SKIP OVER THAT.

437

00:32:29,940 --> 00:32:32,600
ALL RIGHT.
I COULDN'T BE MORE EXCITED ABOUT

438

00:32:32,600 --> 00:32:34,200
THE FUTURE.
I HOPE YOU REALIZE THAT.

439

00:32:34,200 --> 00:32:36,309
I SAY THIS OVER AND OVER AND
OVER AGAIN.

440

00:32:36,309 --> 00:32:40,909
I COULD NOT BE MORE EXCITED

ABOUT OUR FUTURE.

441

00:32:40,909 --> 00:32:43,780

WE'RE MAKING STEADY PROGRESS AND
CONTINUING TO REACH FOR NEW

442

00:32:43,780 --> 00:32:47,270

HEIGHTS.

WE'RE MAKING OUR MARK ON HISTORY

443

00:32:47,270 --> 00:32:50,840

AND ALONG THE WAY WE'RE
INSPIRING A WHOLE NEW GENERATION

444

00:32:50,840 --> 00:32:54,330

OF SCIENTISTS, ENGINEERS AND
ASTRONAUTS.

445

00:32:54,330 --> 00:32:57,900

THAT'S WHY WE'RE DEDICATED TO
STEM EDUCATION AND BROADENING

446

00:32:57,900 --> 00:33:01,740

THE PIPELINE TO DEVELOP THE
LEADERS OF THE FUTURE.

447

00:33:01,960 --> 00:33:06,720

THAT'S WHY WE HAVE BEEN INVITING
SCIENTISTS, MAKERS AND

448

00:33:06,720 --> 00:33:10,210

INNOVATORS FROM ACROSS AMERICA
AND SOMETIMES AROUND THE WORLD

449

00:33:10,210 --> 00:33:14,700

TO SHARE THEIR BEST IDEAS
THROUGH PRIZES AND CHALLENGES.

450

00:33:14,700 --> 00:33:20,980

I WANT EVERY SINGLE AMERICAN TO

FEEL THE PRIDE THAT ALL OF US

451

00:33:20,980 --> 00:33:24,250

WHO WORK AT NASA HAVE FOR OUR
SPACE PROGRAM.

452

00:33:24,250 --> 00:33:26,770

SO WHAT DO I TELL YOU EVERY TIME
I GET TOGETHER WITH YOU.

453

00:33:26,770 --> 00:33:30,070

STICK YOUR CHEST OUT.
WHEN SOMEBODY ASKS YOU WHERE YOU

454

00:33:30,070 --> 00:33:33,169

WORK, I WORK FOR NASA.
I WORK AT THE KENNEDY SPACE

455

00:33:33,169 --> 00:33:38,640

CENTER, STENNIS OR ARMSTRONG OR MICHOUD OR GODDARD OR GLENN.

456

00:33:38,640 --> 00:33:43,030

I'LL STOP BECAUSE I GET IN
TROUBLE IF I FORGET ONE BUT I

457

00:33:43,030 --> 00:33:46,980

WANT EVERY AMERICAN TO FEEL THAT SAME SENSE OF PRIDE THAT YOU AND I

458

00:33:46,980 --> 00:33:52,830

FEEL WHENEVER WE TALK ABOUT THE
WORK WE DO DAY IN AND DAY OUT.

459

00:33:52,830 --> 00:33:55,970

WHAT WE HAVE ACCOMPLISHED IN THE
PAST SIX YEARS AND WHAT WE'RE

460

00:33:55,970 --> 00:34:01,030

GOING TO DO IN THE YEARS AHEAD.
THAT'S SURELY -- THAT'S THE BEST

461

00:34:01,030 --> 00:34:04,270

WAY I KNOW TO ACHIEVE OUR
DREAMS.

462

00:34:04,270 --> 00:34:05,650

TELL PEOPLE WHAT WE'RE GOING TO
DO.

463

00:34:05,650 --> 00:34:09,349

PLAN IT AND THEN GO DO IT.
YOU ALL HAVE DONE THAT

464

00:34:09,349 --> 00:34:12,280

INCREDIBLY WELL OVER THE PAST
SIX YEARS.

465

00:34:12,280 --> 00:34:15,750

JUST STOP AND THINK ABOUT IT.
I MEAN, THINK ABOUT WHERE WE ARE

466

00:34:15,750 --> 00:34:20,419

TODAY COMPARED TO WHERE WE WERE
SIX YEARS AGO.

467

00:34:20,419 --> 00:34:24,239

THAT'S REALLY, REALLY, REALLY
IMPORTANT AND WE NEED TO SHARE

468

00:34:24,239 --> 00:34:27,710

THAT WITH THE AMERICAN TAXPAYER
SO THAT THEY, TOO, CAN STICK

469

00:34:27,710 --> 00:34:31,519

THEIR CHEST OUT THE SAME WAY WE
DO WHEN WE BRAG ABOUT OUR

470

00:34:31,519 --> 00:34:43,489

SYSTEMS.

[APPLAUSE]

471

00:34:43,489 --> 00:34:47,089

NASA IS AN INCREDIBLE INVESTMENT
TO OUR NATION BECAUSE WHAT WE

472

00:34:47,089 --> 00:34:51,659

DO, NOT ONLY UNCOVERS NEW
KNOWLEDGE, IT RAISES THE BAR OF

473

00:34:51,659 --> 00:34:56,489

HUMAN ACHIEVEMENT.
PEOPLE EVERYWHERE ARE ATTRACTED

474

00:34:56,489 --> 00:35:00,440

TO WHAT WE DO.
BECAUSE EXPLORATION EMBODIES OUR

475

00:35:00,440 --> 00:35:06,759

VALUES AS A NATION, RESILIENCE,
HOPE, OVERCOMING THE CHALLENGES FACED

476

00:35:06,759 --> 00:35:10,460

AS THE BEST PLACE TO WORK IN

477

00:35:10,460 --> 00:35:14,099

GOVERNMENT, AND DON'T FORGET
THAT, THREE YEARS RUNNING NOW,

478

00:35:14,099 --> 00:35:25,339

AS THE BEST PLACE TO WORK IN
GOVERNMENT. [APPLAUSE]

479

00:35:25,480 --> 00:35:27,320

WE ALL SHARE A WILLINGNESS TO

480

00:35:27,329 --> 00:35:31,710

LEARN FROM OUR MISTAKES.
SO THAT WE CAN TRANSFORM THE

481

00:35:31,710 --> 00:35:37,170

IMPOSSIBLE INTO THE POSSIBLE.
THAT'S WHAT WE DO.

482

00:35:37,170 --> 00:35:40,799

BECAUSE OF THE DEDICATION AND
DETERMINATION OF EACH AND EVERY

483

00:35:40,799 --> 00:35:45,269

ONE OF YOU IN OUR NASA FAMILY,
AMERICA'S SPACE PROGRAM IS NOT

484

00:35:45,269 --> 00:35:49,519

JUST ALIVE, IT'S THRIVING.
TOGETHER WITH OUR COMMERCIAL AND

485

00:35:49,519 --> 00:35:54,390

INTERNATIONAL PARTNERS, ACADEMIA
AND ENTREPRENEURS WE'RE

486

00:35:54,390 --> 00:35:57,920

LAUNCHING THE FUTURE.
WITH THE CONTINUED SUPPORT OF

487

00:35:57,920 --> 00:36:03,769

ADMINISTRATION, THE CONGRESS AND
THE AMERICAN PEOPLE, WE'LL ALL