



1
00:00:00,000 --> 00:00:05,960
>> GOOD AFTERNOON, EVERYONE,
WELCOME TO KENNEDY SPACE CENTER

2
00:00:05,960 --> 00:00:06,960
IN FLORIDA.
WE ARE GATHERED FOR THE ORBITAL

3
00:00:06,960 --> 00:00:16,070
PRE LAUNCH NEWS CONFERENCE.
>>> WE'RE VERY EXCITED BECAUSE

4
00:00:16,070 --> 00:00:48,890
IT PARKS THE CARGO SYSTEMS FROM
U.S. SOILS TO THE INTERNATIONAL

5
00:00:48,890 --> 00:01:18,729
SPACE STATION.
I A AM VERY PLEASED TO BE JOINED

6
00:01:18,729 --> 00:01:42,600
BY KURT SHIREMAN INTERNATIONAL
PROGRAM MANAGER FROM SPACE

7
00:01:42,600 --> 00:02:03,490
CENTER IN HOUSTON, PHOTOGRAPHIC
COLBERTSON, PRESIDENT SPACE

8
00:02:03,490 --> 00:02:09,648
SYSTEMS GROUP FOR ORBITAL A 2 K.
VERNE FORBES, PROGRAM MANAGER

9
00:02:09,648 --> 00:02:10,648
FOR NASA MISSIONS FROM UNITED
LAUNCH ALLIANCE AND TODD

10
00:02:10,648 --> 00:02:11,648
MacNAMARA LAUNCH WEATHER OFFICER
FROM THE 42nd WEATHER SQUADRON.

11
00:02:11,648 --> 00:02:12,648
WE WILL BEGIN WITH OPENING
STATEMENTS AND WE WILL BE HAPPY

12
00:02:12,648 --> 00:02:13,648
TO TAKE QUESTIONS FROM YOU.
WE WILL START OFF WITH KURT.

13
00:02:13,648 --> 00:02:14,648
>> GOOD AFTERNOON.
THANK YOU VERY MUCH, IT'S A

14
00:02:14,648 --> 00:02:15,648
PLEASURE TO BE HERE.
I'M REALLY EXCITED ABOUT BEING

15
00:02:15,648 --> 00:02:16,648
HERE FOR THE LAUNCH AND ALL THE
GREAT THINGS THAT ARE TO COME.

16
00:02:16,648 --> 00:02:17,648
I WANTED TO GIVE YOU A FEW WORDS
OF THE STATUS OF THE ISS

17
00:02:17,648 --> 00:02:18,648
READINESS FOR THIS OPERATION AND
REALLY WHAT IT MEANS TO IT.

18
00:02:18,648 --> 00:02:19,648
WE HAVE OUR READINESS REVIEW.
THIS IS THE READINESS OF THE ISS

19
00:02:19,648 --> 00:02:20,648
TO SUPPORT THIS MISSION.
WE HAD THAT ON NOVEMBER 9th.

20
00:02:20,648 --> 00:02:21,648
IT WAS SUCCESSFUL.
IN ADDITION, WE HAD A FLIGHT

21
00:02:21,648 --> 00:02:22,648
READINESS REVIEW ON NOVEMBER
16th.

22
00:02:22,648 --> 00:02:23,648
AGAIN, EVERYTHING WAS CONFIRMED
READY TO GO FROM AN ISS

23
00:02:23,648 --> 00:02:24,648
STANDPOINT.
SO WE'RE VERY PLEASED WITH THAT.

24
00:02:24,648 --> 00:02:25,648
AS YOU PROBABLY KNOW, THIS IS
ACTUALLY THE BEGINNING OF AN

25
00:02:25,648 --> 00:02:26,648
EXTREMELY BUSY TIME ON BOARD THE
INTERNATIONAL SPACE STATION.

26
00:02:26,648 --> 00:02:27,648
JUST TO GIVE YOU AN IDEA, OKAY,
WE HAVE THE LAUNCH TOMORROW

27
00:02:27,648 --> 00:02:28,648
NIGHT, THE BIRTHING THE EARLIEST
POSSIBLE BIRTHING DATE IN THE

28
00:02:28,648 --> 00:02:29,648
WINDOW IT MIGHT BE THE 17th.
BUT THE 6th.

29
00:02:29,648 --> 00:02:30,648
ON THE 11th WE HAVE 43 SOYUZ
LANDING.

30
00:02:30,648 --> 00:02:31,648
ON THE 15th OF DECEMBER WE HAVE
45 SOYUZ LAUNCHED AND ON THE

31
00:02:31,648 --> 00:02:32,648
18th OF DECEMBER, 60 PROGRESS IS
RETURNING.

32
00:02:32,648 --> 00:02:33,648
ON THE 21st OF DECEMBER, WE HAVE
62 PROGRESS LAUNCHING.

33
00:02:33,648 --> 00:02:34,648
IT ACTUALLY DOCKS A COUPLE DAYS
LATER ON THE 23rd.

34
00:02:34,648 --> 00:02:35,648
WE HAVE A BETA CUT OUT ALL
VEHICLES OUT FRONT.

35
00:02:35,648 --> 00:02:36,648
SO I DON'T KNOW HOW WE MANAGED
THAT, FROM DECEMBER 21st TO THE

36
00:02:36,648 --> 00:02:39,370
24th THROUGH JANUARY 2nd, YOU
WON'T BE SEEING ANY VEHICLE

37
00:02:39,370 --> 00:02:43,510
TRAFFIC OR SPACE WALKS.
IT WILL BE A TIME REALLY TO

38
00:02:43,510 --> 00:02:47,019
CATCH OUR BREATH.
SO AS YOU CAN SEE, EXTREMELY

39
00:02:47,019 --> 00:02:49,410
BUSY.
WE WON'T TALK ABOUT NEXT AREA.

40
00:02:49,410 --> 00:02:52,250
WE WILL HAVE ANOTHER OPPORTUNITY
IN THE NOT TOO DISTANCE TO TALK

41
00:02:52,250 --> 00:02:55,800
ABOUT ACTIVITIES AFTER THE 1st
OF THE YEAR.

42
00:02:55,800 --> 00:03:02,230
THE ROBOTIC ARM IS READY TO GO.
THE CREW IS READY AND TRAINED.

43
00:03:02,230 --> 00:03:09,069
OUR PRIME OPERATOR WILL GRAPPLE
WHEN IT COMES UP.

44
00:03:09,069 --> 00:03:14,019
SCOTT KELLY WILL BE THE BACKUP.
WE SUPPORT THAT OPERATION.

45
00:03:14,019 --> 00:03:16,989
THIS IS REALLY INTERESTING AND I
THINK YOU WILL SEE SOME VISUAL

46
00:03:16,989 --> 00:04:21,500
OF

47
00:04:21,500 --> 00:04:25,340
THIS IN A MINUTE.
BUT THEY WILL COME UP TO THE

48
00:04:25,340 --> 00:04:29,350
NOTE ONE, THIS IS THE FIRST ONE
IN QUITE SOME YEARS.

49
00:04:29,350 --> 00:04:32,750
SO WE'RE JUST RELOCATED THE
PRESSURIZED MODULE TO CMM AND

50
00:04:32,750 --> 00:06:25,610
WE'VE RESTORED THE POWER TO THAT
SIXTH REPORT IS READY TO SUPPORT

51

00:06:25,610 --> 00:06:28,400
THIS SIGNAL SUPPLIES.
SO WE'RE LOOKING FORWARD TO

52
00:06:28,400 --> 00:06:32,490
HAVING IT ON ANOTHER FORCE.
ANOTHER IMPORTANT THING FROM OUR

53
00:06:32,490 --> 00:06:35,830
STANDPOINT IS WEAR ACTUALLY
GOING TO BE CONTROLLING THE CREW

54
00:06:35,830 --> 00:06:38,830
ON BOARD WILL BE CONTROLLING
THE, MONITORING AND CONTROLLING

55
00:06:38,830 --> 00:06:43,139
THE SIGNALS OF TEAR LAPTOP
COMPUTER THAT CONTROLS THE ISS,

56
00:06:43,139 --> 00:06:45,690
THE PCS.
PREVIOUSLY, WE'VE USED AN HD TV

57
00:06:45,690 --> 00:06:48,169
CONTROL PANEL, THE SAME ONE NOR
CIGNA.

58
00:06:48,169 --> 00:06:50,740
FOR THE HT VEHICLE.
IT HAS FOUR SPRA SEPARATE

59
00:06:50,740 --> 00:06:52,300
HATCHES.
IT POSES A RICK.

60
00:06:52,300 --> 00:06:55,430
THIS TIME WE'VE ELIMINATED THE
TRACK AND WE'LL BE COMMANDING

61

00:06:55,430 --> 00:06:58,250
VIA LAPTOP COMPUTERS.
SO WE'RE LOOKING FORWARD TO THAT

62
00:06:58,250 --> 00:07:00,509
OPERATION.
AND SO LIKE I SAID, THE VEHICLE,

63
00:07:00,509 --> 00:07:02,690
ISS ARMED VEHICLE IS READY TO
GO.

64
00:07:02,690 --> 00:07:04,860
CONSUMABLES.
SO, OF COURSE, CIGNA IS BRINGING

65
00:07:04,860 --> 00:07:08,150
UP THE CARGO, IN FACT, THE MOST
CARGO ON A CIGNA VEHICLE.

66
00:07:08,150 --> 00:07:41,710
WE'RE LOOKING FORWARD TO THAT.
SOME OF THE CONSUMABLES, AS YOU

67
00:07:41,710 --> 00:08:26,250
KNOW, 2015 HAS BEEN A DIFFICULT
YEAR FOR ISS.

68
00:08:26,250 --> 00:08:27,949
BUT WE'RE STILL IN GOOD SHAPE
WITH CONSUMABLES.

69
00:08:27,949 --> 00:08:28,949
WE HAVE BASICALLY TOILET
SUPPLIES THROUGH FEBRUARY OF

70
00:08:28,949 --> 00:08:30,340
NEXT YEAR AND FOOD TO GET OUR
BORING LINE IF YOU WILL FEBRUARY

71

00:08:30,340 --> 00:08:32,279

19th.

RIGHT NOW OUR PROJECTIONS ARE

72

00:08:32,279 --> 00:08:34,990

OUT OF FOOD APRIL 12th.

SO WE ARE LOOKING FORWARD TO

73

00:08:34,990 --> 00:08:35,990

HAVING THOSE SUPPLIES

REPLENISHED ON BOARD.

74

00:08:35,990 --> 00:08:37,380

ANOTHER INTERESTING PIECE OF

CARGO IS A NITROGEN OXYGEN

75

00:08:37,380 --> 00:08:39,110

RECHARGE TANKS, THEY CLEAN OUT

THE HIGH PRESSURE TANKS THAT

76

00:08:39,110 --> 00:08:41,000

ALLOW US TO RECHARGE THE TANKS

ON THE ISS.

77

00:08:41,000 --> 00:08:44,410

UP UNTIL THE ONLY WAY TO

RECHARGE THEM WAS WITH -- LET'S

78

00:08:44,410 --> 00:08:46,890

SEE THE MOST IMPORTANT CARGO IS

THE UTILIZATION.

79

00:08:46,890 --> 00:08:47,890

I THINK YOU GOT THE PAY LOADS ON

SIGNOUS.

80

00:08:47,890 --> 00:08:48,890

SO I WON'T TALK TOO MUCH MORE

ABOUT THAT.

81

00:08:48,890 --> 00:08:50,640
WHAT WE ARE LOOKING FORWARD TO
GETTING A COUPLE MORE FACILITIES

82
00:08:50,640 --> 00:08:52,800
AND NUMEROUS RESEARCH
INVESTIGATIONS, NEW RESEARCH

83
00:08:52,800 --> 00:08:55,100
INVESTIGATIONS UP THERE.
WE HAVE A TOTAL OF 324

84
00:08:55,100 --> 00:08:58,050
INVESTIGATIONS WE HAVE DONE AND
IT'S REALLY IMPORTANT WE GET

85
00:08:58,050 --> 00:09:02,260
THIS CARGO UP THERE AND CONTINUE
ON OUR UTILIZATION ACTIVITIES.

86
00:09:02,260 --> 00:09:06,470
FINALLY, I CAN'T EMPHASIZE
ENOUGH HOW IT'S IMPORTANT TO US

87
00:09:06,470 --> 00:09:10,269
ON BOARD ISS TO HAVE A REGULAR
RESUPPLY FLIGHTS.

88
00:09:10,269 --> 00:09:15,750
THERE IS SO MUCH LOOKING FORWARD
TO HAVING IT BACK ON AN STARTING

89
00:09:15,750 --> 00:09:19,800
A NEW ERA IN ISS AND BACK TO THE
REGULAR RESUPPLY FLIGHT.

90
00:09:19,800 --> 00:09:22,220
>> THAT WAY WE CAN UTILIZE IT
LIKE IT WAS INTEND.

91

00:09:22,220 --> 00:09:27,339
SO LET ME PASS THE BATON OVER TO
FRANK AND THAT YOU CAN A LITTLE

92
00:09:27,339 --> 00:09:30,110
BIT MORE.
>> THANK YOU VERY MUCH, KURT.

93
00:09:30,110 --> 00:09:33,850
THANK YOU, HAND OVER.
AND BY THE WAY, NO PRESSURE,

94
00:09:33,850 --> 00:09:36,399
RIGHT?
>> YOU HAVE BEEN IN THERE.

95
00:09:36,399 --> 00:09:40,000
YOU KNOW HOW TO DO IT.
>> WHEN I WAS THERE, ALL THERE

96
00:09:40,000 --> 00:09:53,980
WAS WAS ONE.
BUT WE ARE VERY PROUD TO BE BACK

97
00:09:53,980 --> 00:10:04,070
IN THIS POSITION OF GETTING
READY TO LAUNCH SUPPLIES AGAIN

98
00:10:04,070 --> 00:11:39,320
ON BEHALF OF DAVID THOMPSON AND

99
00:11:39,320 --> 00:11:48,820
THE REST OF THE COMPANY, I WANT
TO EXPRESS OUR EXCITEMENT IN

100
00:11:48,820 --> 00:11:55,470
BEING INVOLVED IN THIS AND
RESEARCH ON BOARD THE SPACE

101
00:11:55,470 --> 00:11:59,410

STATION.
WE HAVE OVER 3500 KILOGRAMS OF

102
00:11:59,410 --> 00:12:03,160
CARGO WE'RE TAKING UP ON THIS
MISSION, OVER A THIRD OF WHICH

103
00:12:03,160 --> 00:12:04,639
IS FOR UTILIZATION AND
EXPERIMENTS.

104
00:12:04,639 --> 00:12:07,899
OF COURSE, THAT ITSELF THE MAIN
MISSION OF THE ISS.

105
00:12:07,899 --> 00:12:12,700
THE REST ARE KURT MENTIONED THE
CREW NEEDS TO CONTINUE TO

106
00:12:12,700 --> 00:12:19,190
SURVIVE AND CONTINUE TEAR
PRESENCE ON THE STATION.

107
00:12:19,190 --> 00:12:49,880
WE SEE THEM AS OUR ULTIMATE
COMMERCE.

108
00:12:49,880 --> 00:13:24,950
WE WANT TO TAKE THEM WHAT THEY
NEED.

109
00:13:24,950 --> 00:13:55,639
I AM GUESSING SOMEWHERE INSIDE
THE SIGNOUS.

110
00:13:55,639 --> 00:14:35,100
THEY'RE PROBABLY EXCITED ABOUT
THE STOCK COMING UP TOO.

111
00:14:35,100 --> 00:15:10,180

THIS SPACECRAFT IS MADE IN DEEP
SLADEEN TWO.

112

00:15:10,180 --> 00:15:13,860
THE SAME NAME AS OUR FOUR
MISSION WAS GOING TO BE

113

00:15:13,860 --> 00:15:36,560
ORIGINALLY.
SO WHICH THOUGHT IT WAS

114

00:15:36,560 --> 00:16:42,860
IMPORTANT THAT WE CONTINUE THAT
MISSION AND GET BEACON THE SPACE

115

00:16:42,860 --> 00:16:48,850
TO HONOR HIS LEGACY AND HIS
NAME.

116

00:16:48,850 --> 00:17:29,770
WE HAVE ALREADY TAKEN OVER 3600
KILOGRAMS OF CARTWO TO THE SPACE

117

00:17:29,770 --> 00:17:32,049
STATION, WE MOVED OVER 3100
KILOGRAMS.

118

00:17:32,049 --> 00:17:36,220
WE ARE LOOKING FORWARD TO
CONTINUING TO DO THAT FOR THE

119

00:17:36,220 --> 00:17:39,250
FORESEEABLE FUTURE.
IT'S BEEN A CHALLENGE TO GET

120

00:17:39,250 --> 00:17:43,799
BACK TO THIS POINT AFTER OUR
RESAT AT WALLACE, BUT RETURN TO

121

00:17:43,799 --> 00:17:47,210

FLIGHT BECAME THE COMPANY'S
VERY, VERY SHARP FOCUS AFTER

122

00:17:47,210 --> 00:17:53,940

THAT AND WITHIN A FEW DAY,
ACTUALLY, WE HAD A PLAN AND WITH

123

00:17:53,940 --> 00:18:00,190

THE HELP OF OUR PRESIDENT OUCLA
STEPPED FORWARD AND OFFERED US A

124

00:18:00,190 --> 00:18:07,480

RIDE IN A VERY SHORT PERIOD OF
TIME, WE REACHED THIS POINTCH IT

125

00:18:07,480 --> 00:18:14,789

WAS LESS THAN 12 MONTHS, SO WE
GOT TO THE POINT WHERE WE ARE

126

00:18:14,789 --> 00:18:18,600

READY TO GO.
THAT'S QUITE AN ACCOMPLISHMENT

127

00:18:18,600 --> 00:18:22,400

FOR COMMERCIAL SPACE INDUSTRY IN
MY OPINION.

128

00:18:22,400 --> 00:18:30,559

I THINK IT SAYS A LOT ABOUT WHAT
WE CAN DO TO SUPPORT NASA AND

129

00:18:30,559 --> 00:18:33,820

ALL OF THE EXPLORATION INTO
SPACE.

130

00:18:33,820 --> 00:18:38,410

I DO HAVE A COUPLE OF SHORT
VIDEOS I'D LIKE TO SHOW T. FIRST

131

00:18:38,410 --> 00:19:30,559

ONE, IF WE CAN ROLL THAT, SHOWS
PROCESSING OF THE SIGNOUS

132

00:19:30,559 --> 00:20:09,140
BEGINNING AT OUR FACILITY IN
DULLES.

133

00:20:09,140 --> 00:20:18,080
WHERE THE SERVICE MODULE WAS
ASSEMBLED AND TESTED.

134

00:20:18,080 --> 00:20:23,039
THESE ARE OUR NEW SOLAR ARRAYS
THAT COME FROM ORBITAL STK.

135

00:20:23,039 --> 00:20:47,370
THE FACILITY BUILDS THESE.
IT'S A NOW ACCELERATOR.

136

00:20:47,370 --> 00:22:23,530
IT'S LIGHTER AND MORE POWERFUL.
WE THINK IT WILL BE UTILIZED BY

137

00:22:23,530 --> 00:22:26,700
A LOT OF SPACE CRAFT IN THE
FUTURE.

138

00:22:26,700 --> 00:22:29,580
WE SHIP THE SERVICE MODULE DOWN
HERE TO KENNEDY SPACE CENTER,

139

00:22:29,580 --> 00:22:31,960
WHERE IT CAME TO THE SPACE
STATION BROADCASTING FACILITY

140

00:22:31,960 --> 00:22:33,150
WITH THE PRESSURIZED CARGO
MOODULES THAT ARRIVED EARLIER.

141

00:22:33,150 --> 00:22:36,929

CAN YOU SEE WE PUT IT INTO
VERTICAL IN ORDER TO MAKE IT TO

142

00:22:36,929 --> 00:22:39,630

THE VEHICLE.

PRIOR TO THAT, WE LOADED THE

143

00:22:39,630 --> 00:22:42,590

INITIAL LOAD OF CARGO ON BOARD
THE DESLADEEN AND PACKED IT AS

144

00:22:42,590 --> 00:22:45,240

TIGHT AS WE COULD.

LEFT ROOM FOR LIGHT LOADS, WHICH

145

00:22:45,240 --> 00:22:46,820

WE ACCOMPLISHED A COUPLE WEEKS
AGO.

146

00:22:46,820 --> 00:22:48,409

THE PROCESS HAS GONE VERY
SMOOTHLY.

147

00:22:48,409 --> 00:22:51,909

IT'S GREAT TO BE DOWN HERE AT
THE CAPE WORKING WITH PEOPLE WHO

148

00:22:51,909 --> 00:22:55,590

KNOW HOW TO MANAGE HARDWARE AND
HOW TO PROCEEDS SAYS IT AND GET

149

00:22:55,590 --> 00:22:59,360

IT READY FOR FLIGHT.
ONCE WE PUT THE TWO PART OF THE

150

00:22:59,360 --> 00:23:02,340

VEHICLE TOGETHER, IT WAS TAKEN
OVER TO THE CAPE SIDE AND

151

00:23:02,340 --> 00:23:06,740

INTEGRATED WITH THE UPPER STAGE
OF THE ATLAS INCAPSULATED IN THE

152

00:23:06,740 --> 00:23:10,870

FERRY AFTER WE DID THE FINAL
LOAD OF THE CARGO THAT YOU SEE

153

00:23:10,870 --> 00:23:13,340

GOING ON HERE.
THE PROCESSING BOTH AT KSC AND

154

00:23:13,340 --> 00:23:15,000

THE ULA FACILITY HAS BEEN
SUPERB.

155

00:23:15,000 --> 00:23:17,760

THE TEAM HAS WORKED REALLY WELL
TOGETHER AND IT'S QUITE

156

00:23:17,760 --> 00:23:19,340

IMPRESSIVE TO SEE WHAT THEY'RE
WILLING TO DO TO KEEP THIS

157

00:23:19,340 --> 00:23:21,360

PROGRAM GOING AND WE CERTAINLY
APPRECIATE THE PEOPLE LEANING

158

00:23:21,360 --> 00:23:24,010

FORWARD AND WORKING SO HARD TO
MAKE THIS HAPPEN.

159

00:23:24,010 --> 00:23:27,850

WE DID MANAGE TO ACCOMPANY THE
VEHICLE OUT TO THE PAD THIS

160

00:23:27,850 --> 00:23:30,520

MORNING.
THAT WAS QUITE A SIGHT, TOO, TO

161

00:23:30,520 --> 00:23:34,960

SEE THE ATLAS ROLL OUT AND
EXHIBIT THE WAY TO THE KRAUSSWAY

162

00:23:34,960 --> 00:23:38,270
THERE, TO THE LAUNCH SITE AT A
COUPLE MILES AN HOUR.

163

00:23:38,270 --> 00:23:41,679
AND IT'S PRETTY IMPRESSIVE.
WE WERE LOOKING FORWARD TO THE

164

00:23:41,679 --> 00:23:44,630
LAUNCH.
I HAVE ONE OTHER SHORTED 1R

165

00:23:44,630 --> 00:23:47,880
WHICH DESCRIBES WHAT KURT IS
TALKING ABOUT, THE BIRTHING

166

00:23:47,880 --> 00:24:07,909
PROCESS.
IF WE CAN ROLL THAT ONE.

167

00:24:07,909 --> 00:26:27,250
WHEN WE APPROACHED THE STATION
WE ARE BASIC ALILY IN AWE ON THE

168

00:26:27,250 --> 00:28:27,590
AUTO MUS.
IF IT ALL GOES WELL, WE STOP 10

169

00:28:27,590 --> 00:28:30,890
NEERTS BELOW THE STATION.
THE GARAPOLAS, THE CANADIAN ARM,

170

00:28:30,890 --> 00:28:36,179
MOVE IT OVER TO WHERE IT WILL BE
BER LED FOR THE FIRST TIME FOR A

171

00:28:36,179 --> 00:28:37,179

SIGNOUS VEHICLE.
THIS REQUIRES MODIFICATION OF

172
00:28:37,179 --> 00:28:38,909
PROCEDURES AND SOFTWARE AND THE
OPERATIONS, BUT WE ARE

173
00:28:38,909 --> 00:28:43,490
OPTIMISTIC IT GOES VERY WELL AND
GIVE THE CREW THE FLEXIBILITY TO

174
00:28:43,490 --> 00:28:45,860
HAVE ACTUALLY TWO CARGO VEHICLES
AT THE STATION AT THE SAME TIME.

175
00:28:45,860 --> 00:28:49,279
ONCITATIVE EMPTIED IT AND LOADED
IT WITH CARGO, WE CAN ROLL IT.

176
00:28:49,279 --> 00:28:51,149
I'LL SHOW YOU THE UNBERTHING.
YOU CAN SEE ANOTHER CARGO NAMED

177
00:28:51,149 --> 00:29:21,159
VEHICLE ON LOAD TWO THAT IS
PLANNED TO BE THERE.

178
00:29:21,159 --> 00:30:37,440
WE'LL STAY AWAY FROM THAT WE'LL
DEPART WITH OUR LOAD OF THE

179
00:30:37,440 --> 00:30:40,270
CARGO WAFER THEY'RE READY TO GO
IF ALL GOES THROUGH.

180
00:30:40,270 --> 00:30:42,279
WE'LL DO ORBIT A COUPLE DAYS
LATER.

181
00:30:42,279 --> 00:30:45,299

EVERYTHING WILL BURN UT WE HOPE
AND LAND SOMEWHERE.

182
00:30:45,299 --> 00:30:47,309
OKAY.
WE CAN STOP RIGHT NOW.

183
00:30:47,309 --> 00:31:04,840
SO AS I SAID, WE'RE VERY PROUD
TO BE DOWN HERE AND

184
00:31:04,840 --> 00:33:42,990
DEMONSTRATING THE FLEXIBILITY OF
BEING ABLE TO LAUNCH FROM TWO

185
00:33:42,990 --> 00:33:45,370
DIFFERENT SITES.
OUR NEXT MISSION AFTER THIS ONE

186
00:33:45,370 --> 00:33:48,659
IS PLANNED FOR EARLY NEXT SPRING
ALSO ON AN ATLAS, VIRTUALLY

187
00:33:48,659 --> 00:33:51,340
IDENTICAL.
IT WILL BE NAMED OA 6 AND THAT'S

188
00:33:51,340 --> 00:33:54,029
MY FAULT.
BUT WE DIDN'T WANT TO CHANGE IT

189
00:33:54,029 --> 00:33:56,519
AFTER IT WAS SET IN STONE.
THE NEXT ONE IN OA 5 WILL GO UP

190
00:33:56,519 --> 00:33:58,769
ON ROCKET.
WE ARE CURRENTLY FINISHING UP

191
00:33:58,769 --> 00:34:01,340

THE INTEGRATION OF THE FIRST
SHIP SET OF ENGINES WITH THE

192

00:34:01,340 --> 00:34:06,919

CORE AND WE'LL ROLL IT OUT TO
THE PAD IN EARLY SPRING TO DO A

193

00:34:06,919 --> 00:34:19,849

HOT FIRE AND ROLL THE FIRST
FLIGHT OUT TO THE PAD IF LATE

194

00:34:19,849 --> 00:34:50,659

SPRING FOR A LAUNCH ON A DATE TO
NASA.

195

00:34:50,659 --> 00:35:24,890

SO WE'LL FLY THREE MISSIONS IN
LESS THAN SIX MONTHS.

196

00:35:24,890 --> 00:35:47,320

I LOOK FORWARD TO YOUR QUESTIONS
AND I KNOW YOU PROBABLY HAVE

197

00:35:47,320 --> 00:35:50,320

SOME AND I'LL PASS IT OVER TO
VERNE THIS TIME.

198

00:35:50,320 --> 00:35:54,530

THANK YOU VERY MUCH FOR ALL YOUR
TEAM HAS GONE TO GET US THIS

199

00:35:54,530 --> 00:35:56,930

REPORT.
WE LOOK FORWARD TO A GREAT RIDE.

200

00:35:56,930 --> 00:35:58,130

>> THANKS.
WE APPRECIATE THAT.

201

00:35:58,130 --> 00:35:59,767

SO I'D LIKE TO SAY THE UNITED
LAUNCH ALLIANCE IS HONORED TO BE

202

00:35:59,767 --> 00:36:00,767
HERE TODAY, ONE LAUNCH BEFORE
THE OA 4 SIG FUSS CARBON

203

00:36:00,767 --> 00:36:01,767
MISSION.
THIS WILL BE THE FIRST ISS CARGO

204

00:36:01,767 --> 00:36:02,767
MISSION.
WE'RE VERY EXCITED AND PROUD TO

205

00:36:02,767 --> 00:36:03,767
SUPPORT THIS CRITICAL MISSION
REGARDING SUPPLIES AND SPEERLTS

206

00:36:03,767 --> 00:36:04,767
AND OTHER EQUIPMENT TO THE ISS
CREW.

207

00:36:04,767 --> 00:36:05,767
IT WAS ACTUALLY ONE YEAR AGO
TODAY THAT I FIRST MET THE

208

00:36:05,767 --> 00:36:06,767
ENGINEERING AND THE MANAGEMENT
TEAM FROM ORBITAL THAT WE WOULD

209

00:36:06,767 --> 00:36:07,767
BE WORKING WITH ON THIS MISSION.
THAT WAS THE SAME WEEK WE

210

00:36:07,767 --> 00:36:08,767
LAUNCHED THE EFT MISSION FOR
NASA.

211

00:36:08,767 --> 00:36:09,767

AND DURING THAT WEEK, WE MET
WITH SOME OF THE ORBITAL FOLKS,

212

00:36:09,767 --> 00:36:10,767

WE GAVE THEM A TOUR OF OUR
FACILITY.

213

00:36:10,767 --> 00:36:11,767

THAT WAS PREPARATION FOR
NORMALLY KICKING OFF THE

214

00:36:11,767 --> 00:36:12,767

INTEGRATION ACTIVITY.
WE KICKED OFF THE FORM AM I WANT

215

00:36:12,767 --> 00:36:13,767

GRAGS WORK ON DECEMBER 9th OF
LAST YEAR.

216

00:36:13,767 --> 00:36:14,767

A WEEK FROM NEXT TUESDAY.
WHICH MEANS AS FRANK SAID, IT

217

00:36:14,767 --> 00:36:15,767

TOOK LESS THAN A YEAR TO LAUNCH
FOR THIS MISSION.

218

00:36:15,767 --> 00:36:16,767

WHEN WE FIRST STARTED WORKING
WITHSH ITTAL AND THE NASA

219

00:36:16,767 --> 00:36:17,767

JOHNSON FOLKS AS WELL, IT WAS
OBVIOUS FROM THE START ALL THE

220

00:36:17,767 --> 00:36:18,767

PARTIES INVOLVED WITH THIS
MISSION HAD A TREMENDOUS AMOUNT

221

00:36:18,767 --> 00:36:19,767

OF OPTIMAL EXPERIENCE TO THE
TABLE.

222

00:36:19,767 --> 00:36:20,767

AS A RESULT THE TECHNICAL
INTEGRATION ACTIVITY IS DONE

223

00:36:20,767 --> 00:36:21,767

VERY SMOOTHLY.
IT'S AN ABSOLUTE PLEASURE

224

00:36:21,767 --> 00:36:22,767

WORKING WITH THE FOLKS ON THIS
PROGRAM.

225

00:36:22,767 --> 00:36:23,767

I'LL I'M AT IT, I WOULD ALSO
LIKE THE THANK THE U.S. AIR

226

00:36:23,767 --> 00:36:24,767

FORCE THE LOCAL FOLKS, THEY VIEW
US AS THEIR CUSTOMER FOR THIS

227

00:36:24,767 --> 00:36:25,767

MISSION AND AS USUAL THEY'VE
PROVIDED AN OUTSTANDING LEVEL OF

228

00:36:25,767 --> 00:36:26,767

SERVICE TO HELP US GET TO THIS
POINT.

229

00:36:26,767 --> 00:36:27,767

AND I'D ALSO LIKE TO THANK THE
FAA AS WELL.

230

00:36:27,767 --> 00:36:28,767

THIS IS ONE OF THE FIRST
LAUNCHES FOR WHICH ULA HAS TO

231

00:36:28,767 --> 00:36:29,767

GET AN FAA LICENSE TO LAUNCHCH
THE FIRST WAS ABOUT A YEAR AGO

232

00:36:29,767 --> 00:36:30,767

AND WE WORKED VERY CLOSELY WITH
THE FAA TO ENSURE ALL OF OUR

233

00:36:30,767 --> 00:36:31,767

PROCESSES MEET THEIR
REQUIREMENTS AND THAT WE'RE

234

00:36:31,767 --> 00:36:32,767

COMPLIANT WITH EVERYTHING AND
THEY HAVE BEEN WITH US EVERY

235

00:36:32,767 --> 00:36:33,767

STEP OF THE WAY AS YOU PREPARE
FOR THE LAUNCH.

236

00:36:33,767 --> 00:36:34,767

AS ALWAYS, IT'S TAKEN A
TREMENDOUS TEAM EFFORT TO GET TO

237

00:36:34,767 --> 00:36:35,767

THIS POINT WE LOOK FORWARD TO A
GREAT LAUNCH TOMORROW EVENING.

238

00:36:35,767 --> 00:36:36,767

I CAN GIVE YOU A YOU INTO FACT
FOR THE VEHICLES YOU ARE USING.

239

00:36:36,767 --> 00:36:37,767

THE 12th AND FINAL LAUNCH OF THE
2015.

240

00:36:37,767 --> 00:36:38,767

THE WILL BE THE 103rd LAUNCH THE
ULA HAS PERFORMED SINCE THEY

241

00:36:38,767 --> 00:36:39,767

FORMED IN DECEMBER OF 2006.
IN FACT, YESTERDAY WAS ULA'S 9th

242

00:36:39,767 --> 00:36:40,767

ANNIVERSARY.

THIS WILL ALSO BE THE 60th ATLAS

243

00:36:40,767 --> 00:36:41,767

5 ROCKET THAT HAS LAUNCHEDLE.

AND WE WILL BE USING THE ATLAS

244

00:36:41,767 --> 00:36:42,767

401 CONFIGURATION MANY OF YOU

ARE FAMILIAR WITH.

245

00:36:42,767 --> 00:36:43,767

WE WILL USE THE LARGEST PAY LOAD

LENGTHS FOR THIS MISSION.

246

00:36:43,767 --> 00:36:44,767

WE WON'T HAVE ANY SOLID ROCK.

IN FACT THE MODEL IN FRONT OF ME

247

00:36:44,767 --> 00:36:45,767

IS THE CONFIGURATION WE WILL BE

FLYING TOMORROW AND WE STARTED

248

00:36:45,767 --> 00:36:46,767

BUILDING THE ACTUAL HARDWARE FOR

THIS VEHICLE ABOUT TWO YEARS AGO

249

00:36:46,767 --> 00:36:47,767

IN OUR DECATUR, ALABAMA PLANT.

AND I WOULD NOW LIKE TO SHOW YOU

250

00:36:47,767 --> 00:36:48,767

A PREVIEW OF WHAT WE WILL SEE

TOMORROW EVENING.

251

00:36:48,767 --> 00:36:49,767

CAN YOU QUEUE THAT UP?
>> THE FOLLOWING PROFILE DETAILS

252
00:36:49,767 --> 00:36:50,767
THE IMPORTANT EVENTS OF THE THIS
MISSION USING APPROXIMATE TIMES.

253
00:36:50,767 --> 00:36:51,767
5, 4, 3, WE HAVE ATLAS IGNITION,
2, 1, 0 AND LIFTOFF.

254
00:36:51,767 --> 00:36:52,767
WE HAVE LIFTOFF OF THE ATLAS 5
ROCKET.

255
00:36:52,767 --> 00:36:53,767
>> THE ATLAS RD 180 ENGINE
IGNITES TO LIFT THE VEHICLE AWAY

256
00:36:53,767 --> 00:36:54,767
FROM THE PATH.
SHORTLY AFTER LIFTOFF, ATLAS

257
00:36:54,767 --> 00:36:55,767
BEGINS THE INITIAL PITCH, ROLL
MANEUVERS TO MAINTAIN THE PROPER

258
00:36:55,767 --> 00:36:56,767
PROFILES AN MINIMIZE AERODYNAMIC
LOAD.

259
00:36:56,767 --> 00:36:57,767
THE ATLAS 5 REACHES MACH-1.
THE SPEED OF SOUND AT 83

260
00:36:57,767 --> 00:36:58,767
SECONDS.
AT 94 SECONDS, THE VEHICLE

261
00:36:58,767 --> 00:36:59,767

EXPERIENCES MAXIMUM DYNAMIC
PRESSURE.

262

00:36:59,767 --> 00:37:00,767

APPROACHING BOOSTER ENGINE
CUTOFF, THE ATLAS 5 IS

263

00:37:00,767 --> 00:37:01,767

PROPELLING AT THE RATE OF 1,350
POUNDS PER SECOND.

264

00:37:01,767 --> 00:37:02,767

TRAVELING AT APPROXIMATELY
10,000 MILES PER HOUR, LOCATED

265

00:37:02,767 --> 00:37:03,767

79 MILES IN ALTITUDE, 1 TOO
MILES DOWN RANGE.

266

00:37:03,767 --> 00:37:04,767

BOOSTER ENGINE CUTOFF OCCURS
FOUR MINUTES AND 15 SECONDS

267

00:37:04,767 --> 00:37:05,767

AFTER LIFTOFF.
6 SECONDS AFTER BOOSTER ENGINE

268

00:37:05,767 --> 00:37:06,767

CUTOFF THE BOOSTER STAGE IS
JETTISONED.

269

00:37:06,767 --> 00:37:07,767

THE FIRST MAIN CENTAUR TAKES SEN
E TEN SECONDS AFTER BOOSTER

270

00:37:07,767 --> 00:37:08,767

SEPARATION.
THE PAY LOAD FERRING IS

271

00:37:08,767 --> 00:37:09,767

JETTISONED FOUR MINUTES 40
SECONDS INTO THE FLIGHT.

272

00:37:09,767 --> 00:37:10,767
CUTOFF OF THE CENTAUR ENGINE
FOLLOWS A NEARLY FOUR MINUTE

273

00:37:10,767 --> 00:37:11,767
BURN.
IT NOW ENTERS A SPORT COAST FOR

274

00:37:11,767 --> 00:37:12,767
SPACECRAFT EXPLORATION.
AT JUST OVER 21 MINUTES, CENTAUR

275

00:37:12,767 --> 00:37:13,767
RELEASES THE SIGNOUS SPACE KWAFT
FOR ORBITAL ATK AND NASA.

276

00:37:13,767 --> 00:37:14,767
>> THANKS.
YOU PAY HAVE NOTICED THIS IS A

277

00:37:14,767 --> 00:37:15,767
VERY SHORT PROFILE, FLIGHT
PROFILE.

278

00:37:15,767 --> 00:37:16,767
WE WILL BE SEPARATING THE
SIGNOUS MODULE INTO THE REQUIRED

279

00:37:16,767 --> 00:37:17,767
ORBIT 21 MINUTES AFTER T-ZERO.
SO IF YOU ORDER A PIZZA RIGHT AT

280

00:37:17,767 --> 00:37:18,767
T-ZERO, WE'RE PROBABLY GOING TO
HAVE THE MODULE IN ORBIT WHERE

281

00:37:18,767 --> 00:37:19,767

EVERY THE PIZZA ARRIVES.
THAT DOESN'T COUNT IF YOU ARE

282
00:37:19,767 --> 00:37:20,767
RIGHT NEXT DOOR.
AFTER WE SEPARATE SIG US NOW

283
00:37:20,767 --> 00:37:21,767
SICKNOUS, WE WILL DO A SECOND
BURN.

284
00:37:21,767 --> 00:37:22,767
IT WILL OCCUR ABOUT 48 MINUTES
AFTER LIFTOFF.

285
00:37:22,767 --> 00:37:23,767
I WILL LAST FOR 11 SECONDS.
I WILL OCCUR OVER THE INDIAN

286
00:37:23,767 --> 00:37:24,767
OCEAN.
IT WILL ALLOW US TO EXECUTE A

287
00:37:24,767 --> 00:37:25,767
CONTROLLED RE-ENTRY INTO THE
CENTAUR UPPER STAGE.

288
00:37:25,767 --> 00:37:26,767
WE ARE PREDICTING UNDER NOM NAM
CONDITIONS ANYTHING THAT

289
00:37:26,767 --> 00:37:27,767
SURVIVES REENTRY WILL IMPACT IN
AUSTRALIA IN A PRE-DETERMINED

290
00:37:27,767 --> 00:37:28,767
AREA ABOUT AN HOUR AN NINE
MINUTES AFTER LIFTOFF.

291
00:37:28,767 --> 00:37:29,767

AFTER WE LAUNCH OA 4 AS I
MENTIONED BEFORE, WE ARE DONE

292

00:37:29,767 --> 00:37:30,767

FOR THE YEAR.

WE HAVE A BUSY MANIFEST PLANNED

293

00:37:30,767 --> 00:37:31,767

FOR 2016.

WE ACTUALLY HAVE 16 LAUNCHES

294

00:37:31,767 --> 00:37:32,767

PLANNED, 12 WILL BE FROM THE
CAPES HERE IN FLORIDA.

295

00:37:32,767 --> 00:37:33,767

ONE WILL BE OA 6 MISSIONS FOR
ORBITAL, A DUPLICATE OF THIS

296

00:37:33,767 --> 00:37:34,767

MISSION IN MARCH OF NEXT YEAR.
AND AS ALWAYS, IT'S AN HONOR TO

297

00:37:34,767 --> 00:37:35,767

DELIVER THESE MISSIONS TO BOTH
OUR GOVERNMENT SAND OUR

298

00:37:35,767 --> 00:37:36,767

COMMERCIAL COMMERCE.
I'D LIKE TO SAY THANKS AGAIN TO

299

00:37:36,767 --> 00:37:37,767

ALL OF THE PARTNERS WHO WE
WORKED WITH TO HELP GET US HERE.

300

00:37:37,767 --> 00:37:38,767

WE WILL CONTINUE AT ULA TO FOCUS
ON MISSION SUCCESS, AS WE

301

00:37:38,767 --> 00:37:39,767

DELIVER OUR NATION'S MOST
CRITICAL PAY LOADS IN CRITICAL

302

00:37:39,767 --> 00:37:40,767

CAPABILITIES TO ORBIT.

WE ARE ALL LOOKING FORWARD TO A

303

00:37:40,767 --> 00:37:41,767

GREAT LAUNCH TOMORROW EVENING.

WE HOPE THE WEATHER COOPERATES

304

00:37:41,767 --> 00:37:42,767

AND I'LL PASS IT OVER TO TODD SO

HE CAN TELL YOU ABOUT THAT.

305

00:37:42,767 --> 00:37:43,767

>> GOOD AFTERNOON, EVERYONE.

SO FAR THE WEATHER IS LOOKING

306

00:37:43,767 --> 00:37:44,767

PRETTY FAVORABLE.

RIGHT NOW WE'RE IN A 40% OF

307

00:37:44,767 --> 00:37:45,767

LAUNCH WEATHER CONSTRAINTS TO

KIND OF MAINTAIN THAT THE LAST

308

00:37:45,767 --> 00:37:46,767

THREE OR FOUR DAYS IN THE

FORECAST.

309

00:37:46,767 --> 00:37:47,767

AND IT WOULD HAVE BEEN IFIES BUS

IT'S A LITTLE EARLY, WE'VE HAD

310

00:37:47,767 --> 00:37:48,767

PRETTY FAVORABLE WEATHER THE

LAST BASICALLY WEEK.

311

00:37:48,767 --> 00:37:49,767

BUT WE WILL SEE A LITTLE CHANGE.
WE TAKE A LOOK AT THE SATELLITE

312

00:37:49,767 --> 00:37:50,767

RIGHT NOW, YOU CAN SEE ON THE
SATELLITE ROOF, WE HAVE AN

313

00:37:50,767 --> 00:37:51,767

OMINOUS WEATHER FRONT COMING OUR
WAY.

314

00:37:51,767 --> 00:37:52,767

IT HAS A LOT OF SNOW, WINDY
CONDITIONS, FREEZING RAIN

315

00:37:52,767 --> 00:37:53,767

THROUGHOUT THE GREAT PLAINS NOW
MOVING INTO THE OHIO VALLEY

316

00:37:53,767 --> 00:37:54,767

REGION.
IT EXTENDS NOW THROUGH THE OHIO

317

00:37:54,767 --> 00:37:55,767

VALLEY REGION THROUGH TO TEXAS.
TODAY WE HAD PRETTY GOOD

318

00:37:55,767 --> 00:37:56,767

CONDITIONS HERE, NO WEATHER
AFFECTS TOWARDS ROLLOUT FOR THE

319

00:37:56,767 --> 00:37:57,767

PAD.
BUT AS WE GO THROUGH THE NIGHT,

320

00:37:57,767 --> 00:37:58,767

WE WILL ACTUALLY SEE THE FRONTAL
BOUNDARY MOVE OUR WAY.

321

00:37:58,767 --> 00:37:59,767

WE START OUT GOOD WEATHER
CONDITIONS, WE SEE DECREASING

322

00:37:59,767 --> 00:38:00,767

DETERIORATING WEATHER CONDITIONS
THROUGHOUT THE NIGHT T. FRONT,

323

00:38:00,767 --> 00:38:01,767

ITSELF, WILL PASS THROUGH US
SOMEWHERE IN THE EARLY MORNING

324

00:38:01,767 --> 00:38:02,767

HOURS BEFORE SUNRISE.
AS IT DOES, WE WILL SEE CLOUDS

325

00:38:02,767 --> 00:38:03,767

CONTINUE TO INCREASE THROUGHOUT
THE DAY AND EVENING.

326

00:38:03,767 --> 00:38:04,767

WE WILL SEE SHOWERS KIND OF MOVE
THROUGH THE AREA.

327

00:38:04,767 --> 00:38:05,767

THE GOOD NEWS IS ONCE THE
FRONTAL BOUNDARY PUSHES THROUGH

328

00:38:05,767 --> 00:38:06,767

US IN THE EARLY MORNING HOURS,
EXPECTING US TO CONTINUE TO MOVE

329

00:38:06,767 --> 00:38:07,767

TO THE SOUTH.
SO BY THE TIME WE GET TO LAUNCH

330

00:38:07,767 --> 00:38:08,767

TIME THE FRONTAL BOUNDARY SHOULD
BE TO THE SOUTH.

331

00:38:08,767 --> 00:38:09,767

MAYBE THE LAKE OKEECHOBEE
REGION.

332

00:38:09,767 --> 00:38:10,767

WE WILL BE LOOKING AT LIGHT RAIN
SHOWERS WITH THAT CLOUDINESS.

333

00:38:10,767 --> 00:38:11,767

AS A RESULT OF THOSE CLOUDS AND
SHOWERS AROUND, WE ARE LOOKING

334

00:38:11,767 --> 00:38:12,767

AT THE DISTURBED WEATHER RULE,
CUMULUS CLOUD RULE AND THICK

335

00:38:12,767 --> 00:38:13,767

CLOUD RULE TO BE OUR MAIN
WEATHER CONCERNS.

336

00:38:13,767 --> 00:38:14,767

SO ESPECIALLY THE THICK CLOUD
RULE, THE CLOUDS KIND OF

337

00:38:14,767 --> 00:38:15,767

LINGERING AROUND.
WE WILL BE WATCHING FOR CLOUDS

338

00:38:15,767 --> 00:38:16,767

CLOUDS AT ROUGHLY 35,000 FEET IN
THE ATMOSPHERE.

339

00:38:16,767 --> 00:38:17,767

>> THAT WILL BE OUR MAIN
CONCERN.

340

00:38:17,767 --> 00:38:18,767

I MENTIONED, WE'RE AT A 40% ON
OF VIOLATING LAUNCH CONSTRAINTS.

341

00:38:18,767 --> 00:38:19,767

IF WE SLIP INTO FRIDAY, WE SEE
THAT FRONTAL BOUNDARY STAY IN

342

00:38:19,767 --> 00:38:20,767

SOUTHERN FLORIDA.

WE WILL HAVE DISTURBANCE MOVE

343

00:38:20,767 --> 00:38:21,767

OVER FLORIDA.

>> THAT WILL MOVE PACK IN OVER

344

00:38:21,767 --> 00:38:22,767

THE TOP OF US.

WE WILL SEE AN INCREASE IN

345

00:38:22,767 --> 00:38:23,767

SHOWERS POSSIBLY ON FRIDAY.

WE WILL INCREASE OUR PROBABILITY

346

00:38:23,767 --> 00:38:24,767

OF VIOLATING WEATHER CONSTRAINTS

60% ON FRIDAY AND STILL DUE TO

347

00:38:24,767 --> 00:38:25,767

THE CUMULUS CLOUD RULE AND THE

WEATHER RULE.

348

00:38:25,767 --> 00:38:26,767

ON STRID FRIDAY, WE WILL SEE OUR

WIND START TO PICK UP.

349

00:38:26,767 --> 00:38:27,767

I THINK WE WILL SEE 18 TO 22

KNOTS, WINDS OUT OF THE PADS AT

350

00:38:27,767 --> 00:38:28,767

330 FEET FOR LAUNCHCH MAYBE A

FEW KNOTS MORE ON FRIDAY.

351

00:38:28,767 --> 00:38:29,767

>> THAT NORTHERN WIND FLOWS BACK
BEHIND THE FRONTAL BOUNDARY,

352

00:38:29,767 --> 00:38:30,767

ITSELF.

SO, OVERALL, WE'RE LOOKING AT

353

00:38:30,767 --> 00:38:31,767

FAIRLY FAVORABLE CONDITIONS.

STILL LOOKS BAD AS WE GET INTO

354

00:38:31,767 --> 00:38:32,767

EARLY MORNING TIMES, THAT FRONT

COMES THROUGH WE HAVE THOSE

355

00:38:32,767 --> 00:38:33,767

SHOWERS.

BUT WE'RE PRETTY SURE THAT MOST

356

00:38:33,767 --> 00:38:34,767

OF THE THUNDERSTORM ACTIVITY

WILL BE WELL UP TO THE NORTH.

357

00:38:34,767 --> 00:38:35,767

WE'RE NOT EXPECTING ANY

THUNDERSTORMS IN THE AREA.

358

00:38:35,767 --> 00:38:36,767

MAYBE SHOWERS AND LINGERING

CLOUDS AS WE GET INTO THE

359

00:38:36,767 --> 00:38:37,767

AFTERNOON TIMES TOMORROW.

SO OVERALL, ALL PROBABILITY OF

360

00:38:37,767 --> 00:38:38,767

VIOLATING WEATHER CONSTRAINTS IS

40%.

361

00:38:38,767 --> 00:38:39,767

THAT'S ALL YOU HAVE TO WORRY
ABOUT, MIKE.

362

00:38:39,767 --> 00:38:40,767

>> ALL RIGHT.

THANK YOU.

363

00:38:40,767 --> 00:38:41,767

WE'LL TAKE QUESTIONS.

PLEASE REMEMBER TO WAIT FOR THE

364

00:38:41,767 --> 00:38:42,767

MICROPHONE AND STATE YOUR NAME
AND AFFILIATION.

365

00:38:42,767 --> 00:38:43,767

IT WILL HELP IF YOU ADDRESS YOUR
QUESTION TO THE APPROPRIATE

366

00:38:43,767 --> 00:38:44,767

PERSON.

WE START OFF WITH MARSHA DUNN.

367

00:38:44,767 --> 00:38:45,767

>> MARSHA DUNN, ASSOCIATED
PRESS.

368

00:38:45,767 --> 00:38:46,767

HOW MANY DAYS CAN YOU TRY?
CAN YOU WAIT AROUND IN ORBIT

369

00:38:46,767 --> 00:38:47,767

WAITING FOR TRAFFIC TO GO OR IS
THAT NOT IN YOUR PLANS?

370

00:38:47,767 --> 00:38:48,767

AND FOR KURT, YOU KNOW, YOUR
APRIL THRESHOLD FOR FOOD, WILL

371

00:38:48,767 --> 00:38:49,767

THAT BE -- WILL THE PROGRESS
COMING UP LATER THIS MONTH HELP

372

00:38:49,767 --> 00:38:50,767

THAT THERE?

>> BASICALLY, WE GOT ABOUT THREE

373

00:38:50,767 --> 00:38:51,767

DAYS IN WHICH WE CAN LAUNCH AND
GO THROUGH THE STATION ON A TWO,

374

00:38:51,767 --> 00:38:52,767

THREE OR FOUR-DAY TIME LINE.
BUT IT'S REALLY BETWEEN ULA AND

375

00:38:52,767 --> 00:38:53,767

OURSELVES AS TO HOW LONG WE KEEP
TRYINGB AND WE KEEP GOING.

376

00:38:53,767 --> 00:38:54,767

THEORETICALLY, EVEN IF WE LAUNCH
AFTER THE OPTIMUM TIME FOR A

377

00:38:54,767 --> 00:38:55,767

RENDEZVOUS WITH THE STATION, WE
COULDLIGHTER FOR QUITE A WHILE

378

00:38:55,767 --> 00:38:56,767

IN ORBIT UNTIL THEY OPENED UP A
WINDOW FOR YOURSELF.

379

00:38:56,767 --> 00:38:57,767

WE'VE DISCUSSED THAT WITH NASA.
WE'RE READY TO HAVE THAT

380

00:38:57,767 --> 00:38:58,767

DISCUSSION, IF NECESSARY.
BUT IT LOOKS PRETTY GOOD FOR

381

00:38:58,767 --> 00:38:59,767

TOMORROW.

>> AND RELATIVE TO 62 PROGRESS,

382

00:38:59,767 --> 00:39:00,767

YES, IT IS BRINGING IN THE
NUMBERS.

383

00:39:00,767 --> 00:39:01,767

I JUST DON'T HAVE THEM WITH ME.
IF YOU LIKE AFTER YOU'RE DONE, I

384

00:39:01,767 --> 00:39:02,767

WILL BE HAPPY TO LOOK IT UP.
IT WILL A LITTLE BIT.

385

00:39:02,767 --> 00:39:03,767

YES.
ABSOLUTELY.

386

00:39:03,767 --> 00:39:04,767

SO THERE ARE OTHER METHODS OF
GETTING FOOD UP THERE, BUT WE

387

00:39:04,767 --> 00:39:05,767

PLAN ON CARRYING SOME FOOD.
WE TYPICALLY CARRY A FEW DAYS OF

388

00:39:05,767 --> 00:39:06,767

FOOD ON THE SOYUZ.
WE HAVE SOME PROGRESS.

389

00:39:06,767 --> 00:39:07,767

WE ARE PLANNING ON A DRAG ON
FLIGHT EARLY NEXT YEAR AS WELL.

390

00:39:07,767 --> 00:39:08,767

THERE ARE OTHER METHODS.
IT'S NOT A CRITICAL SITUATION.

391

00:39:08,767 --> 00:39:09,767

I WAS GIVING YOU AN IDEA.
WE'RE NOT WHERE WE REALLY LIKE

392
00:39:09,767 --> 00:39:10,767
TO BE RELATIVE TO A SITUATION AT
HOME.

393
00:39:10,767 --> 00:39:11,767
>> TWO QUESTIONS TO KURT.
ONE IS, WHERE ARE YOU NOW ON

394
00:39:11,767 --> 00:39:12,767
PERCENTAGES WISE OF CONSUMABLES,
GIVEN WHERE YOU WERE BEFORE THE

395
00:39:12,767 --> 00:39:13,767
PRE FAILURE AN LAST YEAR AND THE
TWO SUBSEQUENT FAILURES.

396
00:39:13,767 --> 00:39:14,767
WHEN WILL YOU GET BACK TO THAT
PRE MISHAP LEVEL, WHICH IS

397
00:39:14,767 --> 00:39:15,767
NUMBER ONE?
>> OKAY.

398
00:39:15,767 --> 00:39:16,767
SO THE WAY I LOOK AT IT, BILL,
IS WE HAD FIVE CARGO SUPPLY

399
00:39:16,767 --> 00:39:17,767
CHAINS A LITTLE OVER A YEAR AGO.
AND FOUR OF THOSE SUPPLY CHAINS

400
00:39:17,767 --> 00:39:18,767
WERE DISRUPTED THIS YEAR.
WE HAD THE LAST ATV.

401
00:39:18,767 --> 00:39:19,767

IT'S GONE.
WE HAD AN ORBITAL ACCIDENT.

402
00:39:19,767 --> 00:39:20,767
A DRAGON SUDDEN.
THE PROGRESS ACCIDENT.

403
00:39:20,767 --> 00:39:21,767
SO QUITE A DISRUPTION IN OUR
SUPPLY CHAIN.

404
00:39:21,767 --> 00:39:22,767
WE DID HAVE CONSUMABLES THAT
PEOPLE TRADITIONALLY THINK ABOUT

405
00:39:22,767 --> 00:39:23,767
FOOD, WATER, THE TOILET SUPPLIES
ALL THOSE THINGS THAT ARE

406
00:39:23,767 --> 00:39:24,767
REQUIRED.
WE HAD MORE, I COULD GIVE YOU AN

407
00:39:24,767 --> 00:39:25,767
EXACT DATE OF WHERE THEY ARE.
THE THING I REALLY WANTED TO

408
00:39:25,767 --> 00:39:26,767
CONVEY, IT'S MORE THAN JUST
THOSE THINGS.

409
00:39:26,767 --> 00:39:27,767
WE HAVE CONSUMED OF SPARES.
WE CALL THEM CRITIC AT ON ORBIT

410
00:39:27,767 --> 00:39:28,767
SPARES FOR OUR WATER PROCESSOR,
OUR SOLAR RAYS, ALL THESE

411
00:39:28,767 --> 00:39:29,767

THINGS.
WE CONSUME THOSE THINGS.

412
00:39:29,767 --> 00:39:30,767
SO IT'S NOT A CRISP ANSWER.
THE BOOTH DATE WE'LL BE BACK

413
00:39:30,767 --> 00:39:31,767
WHERE WE WERE.
THE OPPORTUNITIES WE HAVE HAD,

414
00:39:31,767 --> 00:39:32,767
WE 'UT THE MOST CRITICAL AND
TIME CRITICAL SUPPLIES ON BOARD.

415
00:39:32,767 --> 00:39:33,767
SO THE FOOD AND THOSE KIND OF
THINGS THAT YOU PUT ON.

416
00:39:33,767 --> 00:39:34,767
BUT WE HAVE BEEN CONSUMING SOME
OF OUR CRITICAL SPARES.

417
00:39:34,767 --> 00:39:35,767
SO WE ARE BELOW WHERE WE WOULD
LIKE TO BE RELATIVE TO OUR

418
00:39:35,767 --> 00:39:36,767
HARDWARE STARES.
WE PRIORITIZED SCIENCE AT A MUCH

419
00:39:36,767 --> 00:39:37,767
HIGHER LEVEL.
FOOD AND SCIENCE HAVE BEEN OUR

420
00:39:37,767 --> 00:39:38,767
NUMBER ONE PRIORITIES IN
CONSUMING THESE SPARES.

421
00:39:38,767 --> 00:39:39,767

I CAN FIND SOME TODAY FOR YOU.
I TELL YOU, IT WILL NOT BE A

422

00:39:39,767 --> 00:39:40,767

CRISP ANSWER.

I EXPECT BY THE END OF THE NEXT

423

00:39:40,767 --> 00:39:41,767

CALENDAR YEAR, A YEAR FROM NOW,
WE'LL BE BACK IN A VERY RO BUST

424

00:39:41,767 --> 00:39:42,767

CONFIGURATION.

BUT IT WILL BE HARD TO GIVE YOU

425

00:39:42,767 --> 00:39:43,767

A CRISPER ANSWER.

>> OKAY.

426

00:39:43,767 --> 00:39:44,767

WELL, I STILL WOULD LIKE TO
HEAR.

427

00:39:44,767 --> 00:39:45,767

BUT, YEAH, THE SECOND QUESTION,
YOU GOT A BUSY GERMANY COMING

428

00:39:45,767 --> 00:39:46,767

UP, TOO, WITHOUT BOTHERING TO
ASK YOU WHEN SpaceX MIGHT FLY

429

00:39:46,767 --> 00:39:47,767

BECAUSE WHO KNOWS, YOU GUYS ARE
LOOKING AT AN EASY A TO REPLACE

430

00:39:47,767 --> 00:39:48,767

THIS ON P 6?

I'M WONDERING HOW THAT MIGHT FIT

431

00:39:48,767 --> 00:39:49,767

INTO THE GREAT ANGLE ISSUE COMES
UP IN JANUARY, HOW SpaceX MIGHT

432

00:39:49,767 --> 00:39:50,767

FIGURE INTO THAT AND YOUR
PRIORITY FOR DOING THAT EASY A

433

00:39:50,767 --> 00:39:51,767

TO GET THAT POWER CHANGE BACK?
>> VERY GOOD.

434

00:39:51,767 --> 00:39:52,767

YES, WE HAVE A GOOD SHUT UNIT
FAILURE WHICH ACTUALLY IS

435

00:39:52,767 --> 00:39:53,767

MOUNTED ON THE SOLAR RAY, ONE OF
THE EIGHT SOL LA RAY RIVENLGS

436

00:39:53,767 --> 00:39:54,767

IT'S MOUNTED ON THE STARBOARD
SIDE OUT TO THE END OF THE

437

00:39:54,767 --> 00:39:55,767

TRUSS.
>> THAT WE BELIEVE WHAT HAS

438

00:39:55,767 --> 00:39:56,767

HAPPENED IS THAT WE SENT ABOUT
2,000 AFTERNOONS, OVER THE LAST

439

00:39:56,767 --> 00:39:57,767

PIECE TODAY WE HAD ABOUT THAT
GUY.

440

00:39:57,767 --> 00:39:58,767

I THINK HE IS DONE AND SO IT
DOESN'T TAKE VERY LONG FOR 2,000

441

00:39:58,767 --> 00:39:59,767

AMPS TO DO SOME DAMAGE.
WE HAD ONE PREVIOUS SHOT FAILURE

442
00:39:59,767 --> 00:40:00,767
IN ORBIT.
WE HAVE THAT ACTUALLY ON THE

443
00:40:00,767 --> 00:40:01,767
GROUND AND IF REPAIRS AT THIS
POINT IN TIME.

444
00:40:01,767 --> 00:40:02,767
WE HAVE A SPARE SEQUENTIAL SHOT
UNIT ON ORBIT.

445
00:40:02,767 --> 00:40:03,767
WE KNOW EXACTLY WHERE IT IS.
WE ACTUALLY WILL FLY CABLES UP

446
00:40:03,767 --> 00:40:04,767
ON THE SOYUZ HERE, A LITTLE OVER
A WEEK AND A HALF TO TEST THAT

447
00:40:04,767 --> 00:40:05,767
GUY OUT TO MAKE SURE IT'S IN A
GOOD CONFIGURATION.

448
00:40:05,767 --> 00:40:06,767
WE ACTUALLY HAVE ANOTHER SPARE
HERE AT THE KENNEDY SPACE CENTER

449
00:40:06,767 --> 00:40:07,767
RIGHT NOW.
WE ARE LOOKING AT EVA

450
00:40:07,767 --> 00:40:08,767
OPPORTUNITIES.
THINGS ARE NOT AS EASY AS THEY

451
00:40:08,767 --> 00:40:09,767

MIGHT SEEM.
IN ORDER TO DO THIS, THE SPACE

452
00:40:09,767 --> 00:40:10,767
WALK, YOU ACTUALLY HAVE TO DO IT
IN ECLIPSE BECAUSE OF THE HIGH

453
00:40:10,767 --> 00:40:11,767
POWER INVOLVED.
SO YOU NEED TO MAXIMIZE THE

454
00:40:11,767 --> 00:40:12,767
ECLIPSE TIME, WHICH OCCURS
DURING THE SOLAR BETA ZERO.

455
00:40:12,767 --> 00:40:13,767
IF YOU REMEMBER WHAT I SAID
EARLIER, WE ARE GETTING THE HIGH

456
00:40:13,767 --> 00:40:14,767
BETA, WHICH HAS NO ECLIPSE
AROUND THE END OF THE CALENDAR

457
00:40:14,767 --> 00:40:15,767
YEAR, YOU NEED TO GO DOWN TO A
MAXIMUM ESCHOLARSHIPS I CLIPS,

458
00:40:15,767 --> 00:40:16,767
WHICH WILL HAPPEN ABOUT THE
MIDDLE OF THE MONTH.

459
00:40:16,767 --> 00:40:17,767
WE'RE LOOKING AT AN OPPORTUNITY
IN THE MIDDLE.

460
00:40:17,767 --> 00:40:18,767
THE 12th TO THE 18th IS WHEN THE
BETA IS WITHIN THE WINDOW THAT

461
00:40:18,767 --> 00:40:19,767

WE WOULD BE ABLE TO EXECUTE IT.
SO WE ARE ACTUALLY TALKING ABOUT

462

00:40:19,767 --> 00:40:20,767
THAT PROGRAM RIGHT NOW.
WE DO HAVE SOME FLEXIBILITY.

463

00:40:20,767 --> 00:40:21,767
WE HAVEN'T LOST REDUNDANCY
BECAUSE OF THE HARDWARE, THE

464

00:40:21,767 --> 00:40:22,767
POWER CHANNELIZATION.
WE CAN WITHSTAND ANOTHER FAILURE

465

00:40:22,767 --> 00:40:23,767
AND BE SAFE ON BOARD ISS FROM A
POWER STANDPOINT.

466

00:40:23,767 --> 00:40:24,767
WE HAVEN'T LOST ONE SOLAR RAYS
WORTH OF ENERGY, SO BLENDS AND

467

00:40:24,767 --> 00:40:25,767
ALLOCATING POWER IS A LITTLE
MORE DIFFICULT NOW.

468

00:40:25,767 --> 00:40:26,767
SO NOT TIME CRITICAL THAT WE DO
IT.

469

00:40:26,767 --> 00:40:27,767
BUT WE ARE LOOKING AT AN
OPPORTUNITY IN JANUARY, AGAIN,

470

00:40:27,767 --> 00:40:28,767
BALANCING NOT ONLY READINESS OF
THE TEAM AND THE CREW TO PERFORM

471

00:40:28,767 --> 00:40:29,767

THAT EVA BUT ALSO THE VEHICLE
TRACK AND ONE VEHICLE MIGHT BE

472

00:40:29,767 --> 00:40:30,767

READY TO ARRIVE AND/OR THE PARK.
SO I WOULD EXPECT, THOUGH, THAT

473

00:40:30,767 --> 00:40:31,767

WE'LL EXPECT TO HAVE A REVIEW
THIS FRIDAY AFTERNOON WITH MY

474

00:40:31,767 --> 00:40:32,767

TEAM ON THIS VERY SUBJECT.
SO I EXPECT US TO MAKE A

475

00:40:32,767 --> 00:40:33,767

DECISION HERE IN THE NEXT WEEK
ABOUT WHETHER OR NOT WE'LL TRY

476

00:40:33,767 --> 00:40:34,767

TO EXECUTE EVAs IN JANUARY.
WE'RE CERTAINLY IS PREPARED TO

477

00:40:34,767 --> 00:40:35,767

GO BEYOND JANUARY INTO FEBRUARY
OR MARCH.

478

00:40:35,767 --> 00:40:36,767

[INAUDIBLE]

479

00:40:36,767 --> 00:40:37,767

>> LET'S TAKE A QUESTION OVER
HERE.

480

00:40:37,767 --> 00:40:38,767

THIS QUESTION IS FOR FRANK.
THE SIGNOUS ATLAS COMBINATION

481

00:40:38,767 --> 00:40:39,767

PROVIDES THE ABILITY TO PUT MORE
CARGO INTO ORBIT ON A LAUNCH.

482

00:40:39,767 --> 00:40:40,767

DO YOU SEE SIGNOUS AND ATLAS TO
BE A POTENTIAL OPTION FOR NASA

483

00:40:40,767 --> 00:40:41,767

IN THE FUTURE GIVEN THAT YOU'LL
POTENTIALLY NEED TO MOVE MORE

484

00:40:41,767 --> 00:40:42,767

CARGO UP TO STATION TO A
SEVEN-MEMBER CREW, JUST

485

00:40:42,767 --> 00:40:43,767

SOMETHING YOU PUT OUT OR NASA
PUTS OUT?

486

00:40:43,767 --> 00:40:44,767

>> WE ARE STILL IN THE MIDDLE OF
THAT PROCUREMENT.

487

00:40:44,767 --> 00:40:45,767

SO I REALLY CAN'T TALK ABOUT THE
DETAILS OF.

488

00:40:45,767 --> 00:40:46,767

THAT IT WOULDN'T APPROPRIATE TO
GET INTO THAT.

489

00:40:46,767 --> 00:40:47,767

BUT, OBVIOUSLY, FLYING ON ATLAS
GIVES US SMARTER CAPABILITY.

490

00:40:47,767 --> 00:40:48,767

WHEN WE FLY O 85 WE WILL BE
CARRYING MORE CARGO THAN IN THE

491

00:40:48,767 --> 00:40:49,767

PAST.
SO WE HAVE TWO OPTIONS

492
00:40:49,767 --> 00:40:50,767
[INAUDIBLE]

493
00:40:50,767 --> 00:40:51,767
>>
[INAUDIBLE]

494
00:40:51,767 --> 00:40:52,767
ALSO FOR FRANK.
I WAS WONDERING, SOUNDED LIKE

495
00:40:52,767 --> 00:40:53,767
YOU WERE GOING TO HAVE THREE
LAUNCHES NEXT YEAR.

496
00:40:53,767 --> 00:40:54,767
YOU CAN ONLY HAVE ONE AT ALL AND
WOULD YOU CONSIDER A SORT OF

497
00:40:54,767 --> 00:40:55,767
FOLLOW UP, WOULD YOU CONSIDER
EVER LAUNCHING ANOTHER SIGNOUS

498
00:40:55,767 --> 00:40:56,767
ON AN ATLAS?
>> I CONSIDER THAT IF THE

499
00:40:56,767 --> 00:40:57,767
OPPORTUNITY AROSE.
TO BE CLEAR, WHAT I OUTLINED

500
00:40:57,767 --> 00:40:58,767
WERE THE FLIGHT CREW NEXT SPRING
THROUGH MAY OR JUNE, WHICH THE

501
00:40:58,767 --> 00:40:59,767

THIRD OF WHICH WILL BE
ANTARRESMENT WE HAVE ANOTHER

502

00:40:59,767 --> 00:41:00,767

SCHEDULED IN THE FALL.

SO ESSENTIALLY WE WILL HAVE FOUR

503

00:41:00,767 --> 00:41:01,767

FLIGHTS IN LESS THAN 12 MONTHS.

>> I AM WONDERINGS A, YOU ARE

504

00:41:01,767 --> 00:41:02,767

DELAYING THE

[INAUDIBLE]

505

00:41:02,767 --> 00:41:03,767

WILL THAT CAUSE A DELAY IN THE
FIRST ANTARRES OR ARE YOU STILL

506

00:41:03,767 --> 00:41:04,767

AIMING FOR MAY/JUNE?

>> ACTUALLY, WE MODIFIED THE

507

00:41:04,767 --> 00:41:05,767

CHANGE, BUT WE'RE RIGHT ON TRACK
FOR DOING IT IN FEBRUARY AND

508

00:41:05,767 --> 00:41:06,767

MARCH AND THEN THE LAUNCH IS
ACTUALLY CAPABLE OF FLYING IN

509

00:41:06,767 --> 00:41:07,767

EARLY MAY.

>> WE'LL TAKE ONE MORE IN THE

510

00:41:07,767 --> 00:41:08,767

ROOM BEFORE WE GO TO THE
TELEPHONE.

511

00:41:08,767 --> 00:41:09,767

>> JIM SIEGL, SPACE NEWS.
I HAVE A QUESTION FOR FRANK.

512
00:41:09,767 --> 00:41:10,767
COULD YOU TALK A LITTLE BIT
ABOUT THE CONTRAST OF LAUNCHING

513
00:41:10,767 --> 00:41:11,767
HERE AT THE CAPE VERSUS AT
WALLACE?

514
00:41:11,767 --> 00:41:12,767
WHAT ARE THE PLUS AND MINUS OF
EACH ONE AND ADVANTAGE AND

515
00:41:12,767 --> 00:41:13,767
DISADVANTAGE OF EACH ONE?
>> WELL, I GUESS THE DIFFERENCES

516
00:41:13,767 --> 00:41:14,767
HAVE TO DO WITH HOW WE PROCESS
THE SPACECRAFT AND THE CARGO IN

517
00:41:14,767 --> 00:41:15,767
TERMS OF BOTH THE FACILITIES WE
USE AS WELL AS THE TIME LINE,

518
00:41:15,767 --> 00:41:16,767
WE'RE ABLE TO EXECUTE ON.
AT WALLACE, WE CAN LOAD THE

519
00:41:16,767 --> 00:41:17,767
CARGO AS LATE AS THREE DAYS
BEFORE THE FLIGHT.

520
00:41:17,767 --> 00:41:18,767
BECAUSE WE WERE BROUGHT IN ON A
FAIRLY TIGHT TIME ON ULA AND

521
00:41:18,767 --> 00:41:19,767

THEY NEED TO INCAPSULATE THE
SPACE CRAFT FOR TWO WEEKS BEFORE

522

00:41:19,767 --> 00:41:20,767

LAUNCH.

WE HAD TO LOAD THE FINAL CARGO

523

00:41:20,767 --> 00:41:21,767

ABOUT MINUS TWO WEEKS.

WE TOOK AWAY SOME OF NASA'S

524

00:41:21,767 --> 00:41:22,767

FLEXIBILITY IN TERMS OF SCIENCE

PAY LOADS SO THEY CAN PUT ON.

525

00:41:22,767 --> 00:41:23,767

WE WERE DISCUSSING WAYS TO

SHORTEN THAT TIME LINE HERE WITH

526

00:41:23,767 --> 00:41:24,767

THE ULA.

AS FAR AS THE DELAY OF

527

00:41:24,767 --> 00:41:25,767

PROCESSING GOES, OTHER THAN THAT

ENCAPSULATION, IT'S PRETTY MUCH

528

00:41:25,767 --> 00:41:26,767

THE SAME IN TERMS OF HAND

HIMMING THE HARDWARE AND THE

529

00:41:26,767 --> 00:41:27,767

SPACECRAFT AND THE ATLAS HAS

DIFFERENT PROCEDURES AND

530

00:41:27,767 --> 00:41:28,767

OPERATIONS, BUT IT WAS ALSO THE

SAME.

531

00:41:28,767 --> 00:41:29,767

>> FOX NEWS IS ON THE TELEPHONE
WITH A QUESTION.

532

00:41:29,767 --> 00:41:30,767

GO AHEAD.

>> HEY, GOOD AFTERNOON,

533

00:41:30,767 --> 00:41:31,767

EVERYBODY.

GOOD LUCK TOMORROW ON THE BIG

534

00:41:31,767 --> 00:41:32,767

LAUNCH.

YOU KNOW, THE TRUTH OF ROCKET

535

00:41:32,767 --> 00:41:33,767

SCIENCE IS IT'S NOT ALWAYS

PERFECT.

536

00:41:33,767 --> 00:41:34,767

IN THIS LAST 13 MONTHS OF CARGO
SHIFT DELIVERIES HAVE SHOWN THE

537

00:41:34,767 --> 00:41:35,767

MISHAPS AND ANOMALIES VIVIDLY.

WITH THAT IN MIND, KIRK AND

538

00:41:35,767 --> 00:41:36,767

FRANK, BUT IF IRS TO FRANK.

DO YOU FEEL LIKE THE ENTIRE

539

00:41:36,767 --> 00:41:37,767

POST-SHUTT PASS PARADIGM OF
PRIVATE ADVERTISING AND

540

00:41:37,767 --> 00:41:38,767

OUTSOURCING RUNNING THE SPACE
STATION IS REALLY UNDER THE

541

00:41:38,767 --> 00:41:39,767

MICROSCOPE FOR A BIG HIGH STAKES
LAUNCH TOMORROW AND HOW PREPARED

542

00:41:39,767 --> 00:41:40,767

DO YOU GUYS FEEL AND CONFIDENT
DO YOU FEEL?

543

00:41:40,767 --> 00:41:41,767

>> WELL, WE FEEL EXTREMELY
CONFIDENT OR WE WOULDN'T BE

544

00:41:41,767 --> 00:41:42,767

SITTING ON ON THE OF THAT ROCKET
RIGHT NOW.

545

00:41:42,767 --> 00:41:43,767

WE HAVE BEEN THROUGH A LOT OF
REVIEWS, BOTH INTERNAL AND WITH

546

00:41:43,767 --> 00:41:44,767

FOLKS IN NASA AND ELSEWHERE
LOOKING AT US.

547

00:41:44,767 --> 00:41:45,767

AND ARE YOU RIGHT, IT IS A
CHALLENGING BUSINESS.

548

00:41:45,767 --> 00:41:46,767

WE DO HAVE A LOT OF ENERGY.
A LOT OF POWER COMING OFF THE

549

00:41:46,767 --> 00:41:47,767

PAD.
AND A COMPLEXITY, A LOT OF

550

00:41:47,767 --> 00:41:48,767

COMPLEXITY IN THE VEHICLES.
THAT'S JUST A PART OF THE

551

00:41:48,767 --> 00:41:49,767

BUSINESS.
WE LEARNED THAT THE HARD WAY

552
00:41:49,767 --> 00:41:50,767
OVER THE YEARS.
WE ALWAYS COME BACK TO THAT.

553
00:41:50,767 --> 00:41:51,767
WE ALWAYS DO WHATEVER IS
NECESSARY TO CORRECT WHATEVER

554
00:41:51,767 --> 00:41:52,767
PROBLEMS OCCUR, WHETHER MINOR OR
MAJOR.

555
00:41:52,767 --> 00:41:53,767
SO WE FEEL VERY GOOD ABOUT
LAUNCHING OUT OF HERE AND

556
00:41:53,767 --> 00:41:54,767
GETTING BACK TO THE STATION
TOMORROW.

557
00:41:54,767 --> 00:41:55,767
I'M WELL AWARE OF THE CHANGING
PARADIGM WITHIN NASA HAVING BEEN

558
00:41:55,767 --> 00:41:56,767
A PART OF THE SHUTTLE AND
SPACING PROGRAM AND NOW A PART

559
00:41:56,767 --> 00:41:57,767
OF THE COMMERCIAL SPACE FLIGHT.
THERE ARE CHANGING PARADIGMS.

560
00:41:57,767 --> 00:41:58,767
I THINK PARTICULARLY THE LEADER
SCHOLARSHIP OF ALL THE

561
00:41:58,767 --> 00:41:59,767

ORGANIZATIONS INVOLVED ARE
ADAPTING VERY WELL.

562

00:41:59,767 --> 00:42:00,767

THEY UNDERSTAND THE DIFFERENCE
BETWEEN SERVICES CONTRACT,

563

00:42:00,767 --> 00:42:01,767

COMMERCIAL CONTRACT.
AND A TRADITIONAL GOVERNMENT

564

00:42:01,767 --> 00:42:02,767

PLUS CONTRACT.
WHERE THE GOVERNMENT OWNS THE

565

00:42:02,767 --> 00:42:03,767

HARDWARE AND, YEAH, THERE ARE
PEOPLE WHO PROBABLY WISH FOR THE

566

00:42:03,767 --> 00:42:04,767

DAYS OF THE SHUTTLE, BUT THERE
WERE PROs AND CONs OF THAT, TOO.

567

00:42:04,767 --> 00:42:05,767

BUT THE ONLY WAY WE WILL KEEP
CARGO AND PEOPLE GOING INTO

568

00:42:05,767 --> 00:42:06,767

SPACE IS TO MOVE TOWARDS A MORE
COST EFFECTIVE MODEL AND TO LET

569

00:42:06,767 --> 00:42:07,767

INDUSTRY PARTICIPATE MORE AND
ACCEPT SOME OF THE RISKS

570

00:42:07,767 --> 00:42:08,767

INHERENT IN THIS BUSINESS.
I THINK NASA KNOWS THAT.

571

00:42:08,767 --> 00:42:09,767

I THINK SOME OF OUR OTHER
GOVERNMENT CUSTOMERS KNOW THAT

572

00:42:09,767 --> 00:42:10,767

AND WE'RE STARTING TO MOVE MORE
AND MORE IN THAT DIRECTION.

573

00:42:10,767 --> 00:42:11,767

SO I'M VERY OPTIMISTIC ABOUT THE
FUTURE.

574

00:42:11,767 --> 00:42:12,767

>> FIRST OF ALL, IN THIS
BUSINESS, THERE IS NO DOUBT, I

575

00:42:12,767 --> 00:42:13,767

THINK THE LAST YEAR, YOU'VE
DEMONSTRATED THAT AND, YOU KNOW,

576

00:42:13,767 --> 00:42:14,767

ANY TIME YOU TAKE SOMETHING
THAT'S HARD TO DESCRIBE, WHEN

577

00:42:14,767 --> 00:42:15,767

YOU TAKE SOMETHING AND AS LARGE,
THIS IS A 4 NEERT FERRY THAT

578

00:42:15,767 --> 00:42:16,767

LAYS 8,000 POUNDS AND WE'RE
LAUNCHING 17,500 MILES AN HOUR

579

00:42:16,767 --> 00:42:17,767

IN THE TIME YOU CAN GET A PIZZA.
AND THINGS ARE ROTATING AT OVER

580

00:42:17,767 --> 00:42:18,767

10,000 REVOLUTIONS PER MINUTE
AND EVERYTHING HAS TO WORK

581

00:42:18,767 --> 00:42:19,767

EXACTLY AS PLANNED.
PAY ATTENTION TO DETAIL IS

582
00:42:19,767 --> 00:42:20,767
REQUIRED.
IT'S REALLY, REALLY IMPORTANT.

583
00:42:20,767 --> 00:42:21,767
YOU CONTINENT HAVE THINGS
OVERDESIGNED BECAUSE CAN'T LIFT

584
00:42:21,767 --> 00:42:22,767
IT.
I WAS TALKING WHILE WE WERE

585
00:42:22,767 --> 00:42:23,767
WALKING DOWN THE PAD THE OTHER
DAY.

586
00:42:23,767 --> 00:42:24,767
IT'S AMAZING.
YOU SEE THE ROCKET RIGHT NEXT TO

587
00:42:24,767 --> 00:42:25,767
THE LAUNCH PAD AND HAVE THESE
BIG ATTACH POINTS TO HOLD THE

588
00:42:25,767 --> 00:42:26,767
ROCKET IN PLACE.
IT'S AMAZING WE HAVE A STARK

589
00:42:26,767 --> 00:42:27,767
DIFFERENCE BETWEEN VEHICLES THAT
SLIDE AND STAY ON THE GROUND.

590
00:42:27,767 --> 00:42:28,767
YOU SEE GIANT THINGS THIS BIG
AND YOUR ROCK.

591
00:42:28,767 --> 00:42:29,767

IT'S RELATIVELY SMALL TINY
ATTACH POINT ON THE ROCKET.

592

00:42:29,767 --> 00:42:30,767
THE DIFFERENCE IS THE ATTACH
POINT FLIES AND THE ACTUATOR

593

00:42:30,767 --> 00:42:31,767
DOESN'T.
IT IS A RICKY BUSINESS.

594

00:42:31,767 --> 00:42:32,767
WE KNOW THAT EVERY DAY.
HAVING SAID THAT, ULA AS YOU

595

00:42:32,767 --> 00:42:33,767
HEARD VERNE TALK ABOUT IT HAS A
REMARKABLE SUCCESS RECORD.

596

00:42:33,767 --> 00:42:34,767
THE WORK THAT HAS GONE ON IN THE
LAST YEAR IN BETWEEN LAZY K AND

597

00:42:34,767 --> 00:42:35,767
ULA AND FIRST OF ALL TO MODIFY
THE SIGNOUS ALREADY IN THE PLAN

598

00:42:35,767 --> 00:42:36,767
TO ANALYZE IT TO FLY ON ATLAS
HAS BEEN INCREDIBLE.

599

00:42:36,767 --> 00:42:37,767
AND IT'S EXTREMELY CLEAN.
ALL OUR REVIEWS AT NASA AND WHAT

600

00:42:37,767 --> 00:42:38,767
I'VE HEARD FROM THE ORBITAL AND
ULA RESULTED IN EXTREMELY

601

00:42:38,767 --> 00:42:39,767

[INAUDIBLE]
I FEEL GOOD ABOUT.

602
00:42:39,767 --> 00:42:40,767
THAT I AGREE RELATIVE TO
COMMERCIAL SPACE, YOU POE, THE

603
00:42:40,767 --> 00:42:41,767
SPECIAL SPACE IS GOING TO
HAPPEN.

604
00:42:41,767 --> 00:42:42,767
IT'S INEVITABLE.
IT IS OCCURRING RIGHT NOW.

605
00:42:42,767 --> 00:42:43,767
IT IS OUR FUTURE.
HAS SA NEEDS IT TO HAPPEN AS

606
00:42:43,767 --> 00:42:44,767
FRANK WAS TALKING ABOUT RELATIVE
TO SHARING THE FINANCIAL RICK,

607
00:42:44,767 --> 00:42:45,767
IF YOU WILL.
BUT THE TRUTH IS, THE SPACE

608
00:42:45,767 --> 00:42:46,767
MARKET IS INCREASING.
WE EXPECT IT TO INCREASE EVEN

609
00:42:46,767 --> 00:42:47,767
MORE.
IT'S NOT SOMETHING THAT NASA OR

610
00:42:47,767 --> 00:42:48,767
THE U.S. DEPOSIT CAN OWN BY
ITSELF.

611
00:42:48,767 --> 00:42:49,767

IT'S SOMETHING THAT'S GROWING
ORGANICALLY AT THIS POINT IN

612

00:42:49,767 --> 00:42:50,767

TIME.

AS A RESULT IT ACTUALLY HAS A

613

00:42:50,767 --> 00:42:51,767

BENEFIT NO NAS SA.

WE ACTUALLY EXPECT TO GET OUR

614

00:42:51,767 --> 00:42:52,767

LAUNCH COST CHEAPER IN THE
FUTURE AS A RESULT OF THIS

615

00:42:52,767 --> 00:42:53,767

COMMERCIAL LAUNCH.

WE EXPECT TO FLY CREWS SAFELY TO

616

00:42:53,767 --> 00:42:54,767

ORBIT AND CHEAPER IN THE FUTURE
BECAUSE OF THE SPECIAL SPACE.

617

00:42:54,767 --> 00:42:55,767

SO WE'RE IN THAT TRANSITION
PERIOD.

618

00:42:55,767 --> 00:42:56,767

THERE ARE CERTAIN GROWING PAINS.
THERE ARE PROBABLY MORE GROWING

619

00:42:56,767 --> 00:42:57,767

PAINS AHEAD OF US.

BUT IT'S ALL OUR RESPONSIBILITY

620

00:42:57,767 --> 00:42:58,767

TO MAKE SURE WE ARE SUCCESSFUL
AND I AM CONFIDENT WE WILL BE.

621

00:42:58,767 --> 00:42:59,767

>> YOU MADE A POINT I'D LIKE TO
ELABORATE ON A LITTLE BIT.

622

00:42:59,767 --> 00:43:00,767
YOU TALKED ABOUT ATTENTION TO
DETAIL.

623

00:43:00,767 --> 00:43:01,767
THAT'S A FEATURE OF OUR BUSINESS
THAT IS EXTREMELY CRITICAL.

624

00:43:01,767 --> 00:43:02,767
IT'S SOMETHING YOU SEE, ALL OF
US SEE ACROSS THE INDUSTRY,

625

00:43:02,767 --> 00:43:03,767
WHETHER IT'S GOVERNMENT
EMPLOYEES, CONTRACTORS, OR FOLKS

626

00:43:03,767 --> 00:43:04,767
WHO ARE CHECKING WHAT WE DID AND
HOPEFULLY THE MEDIA PAYS A LOT

627

00:43:04,767 --> 00:43:05,767
OF ATTENTION TO ACT RACE AN
DETAILS.

628

00:43:05,767 --> 00:43:06,767
BECAUSE AEROSPACE, THE INDUSTRY
AT LARGE IS VERY UNIQUE IN TERMS

629

00:43:06,767 --> 00:43:07,767
OF HOW PEOPLE APPROACH IT.
WE ALL UNDERSTAND HOW SERIOUS

630

00:43:07,767 --> 00:43:08,767
THIS BUSINESS IS.
HOW DIFFICULT IT IS, BUT HOW

631

00:43:08,767 --> 00:43:09,767

IMPORTANT IT IS TO THE FUTURE OF
THIS COUNTRY AND TO THE REST OF

632

00:43:09,767 --> 00:43:10,767

THE WORLD.

AND EVERYBODY I KNOW WHO WORKS

633

00:43:10,767 --> 00:43:11,767

IN THIS BUSINESS, WHETHER

TURNING A WRENCH ON AN ENGINE,

634

00:43:11,767 --> 00:43:12,767

BUILDING A PIECE OF STRUCTURE OR

MANAGING RESEARCH REMOTELY ON

635

00:43:12,767 --> 00:43:13,767

THE SPACE STATION ARE ACTUALLY

FLYING IN SPACE TAKES IT VERY

636

00:43:13,767 --> 00:43:14,767

SERIOUSLY AND TAKES PERSONAL

RESPONSIBILITY FOR WHAT THEIR

637

00:43:14,767 --> 00:43:15,767

JOBS ARE.

AND THAT'S ONE OF THE REASONS I

638

00:43:15,767 --> 00:43:16,767

LOVE THIS BUSINESS, BECAUSE YOU

ARE WORKING WITH PEOPLE WHO

639

00:43:16,767 --> 00:43:17,767

CARE.

WHO CARE ABOUT WHAT THEY'RE

640

00:43:17,767 --> 00:43:18,767

DOING.

RIGHT NOW, THAT I CARE ABOUT THE

641

00:43:18,767 --> 00:43:19,767

FUTURE FOR OUR CHILDREN AND
GRANDCHILDREN.

642

00:43:19,767 --> 00:43:20,767

IT'S A GREAT PLACE TO BE RIGHT
NOW.

643

00:43:20,767 --> 00:43:21,767

>> OKAY.

>> THAT WASN'T THERE A FEW WEEKS

644

00:43:21,767 --> 00:43:22,767

AGO, SO I GUESS THE QUESTION,
WHAT ARE YOU DO SOMETHING IS

645

00:43:22,767 --> 00:43:23,767

THIS GOING TO BE ENOUGH TO TEST
THE PERFORMANCES OF THAT -- AND

646

00:43:23,767 --> 00:43:24,767

ALSO IS THAT ACTUALLY A ACCURATE
CRUX SITE?

647

00:43:24,767 --> 00:43:25,767

WHAT ARE YOU DOING TO MAKE SURE
TO MITIGATE ANY FOREIGN OBJECT

648

00:43:25,767 --> 00:43:26,767

DEBRIS THAT MIGHT IMPACT THE
VEHICLE?

649

00:43:26,767 --> 00:43:27,767

OKAY.

KI ANSWER THAT.

650

00:43:27,767 --> 00:43:28,767

SO THAT IS THE CREW ACCESS TOWER
THAT YOU SEE HAS GONE UP THIS

651

00:43:28,767 --> 00:43:29,767

YEAR.
WE WILL BE USING THAT FOR

652
00:43:29,767 --> 00:43:30,767
ASTRONAUTS WHO ACTUALLY BOARD
THE COMMERCIAL CREW IN 2018.

653
00:43:30,767 --> 00:43:31,767
AND THE ONLY TESTING, IF YOU
WILL, THAT'S HAPPENING IN THIS

654
00:43:31,767 --> 00:43:32,767
FACILITY, THE ACOUSTICS, PLAST
OF THE LAUNCH, ANALYSTICALLY, WE

655
00:43:32,767 --> 00:43:33,767
ARE GOING TO EXTEND AND YOU KNOW
IT WILL, IN FACT, IT'S BEEN

656
00:43:33,767 --> 00:43:34,767
THERE THROUGH SEVERAL LAUNCHES
ALREADY WITH NO PROBLEM.

657
00:43:34,767 --> 00:43:35,767
PRIOR TO EVERY LAUNCH, WE DO
CEASE WORK ON THE CONSTRUCTION

658
00:43:35,767 --> 00:43:36,767
SITE, A COUPLE DAYS AHEAD OF
TIME.

659
00:43:36,767 --> 00:43:37,767
BETWEEN US AND THE CONTRACTOR,
WHO IS PUTTING THAT UP FOR US,

660
00:43:37,767 --> 00:43:38,767
THERE IS A VERY THOROUGH, VERY
DETAILED REVIEW AND WALKDOWN TO

661
00:43:38,767 --> 00:43:39,767

MAKE SURE WE DON'T HAVE AN
CLOGGED THINGS DOWN THERE.

662

00:43:39,767 --> 00:43:40,767

SO WE ARE CONCERNED ABOUT
EXACTLY WHAT YOU MENTIONED, WE

663

00:43:40,767 --> 00:43:41,767

TAKE GREAT PAINS AN SPEND A LOT
OF TIME MAKING SURE WE DON'T

664

00:43:41,767 --> 00:43:42,767

HAVE ISSUES, MAKING SURE
EVERYTHING IS SECURED AND

665

00:43:42,767 --> 00:43:43,767

CLEANED UP AND THE PAD THE
PRISTINE FOR.

666

00:43:43,767 --> 00:43:44,767

WIN OF OUR LAUNCHES.
>> THANKS.

667

00:43:44,767 --> 00:43:45,767

BUN FOR KIRK, ONE TERROR FRANK.
BACK ON THE CONSUMABLES, I

668

00:43:45,767 --> 00:43:46,767

APPRECIATE EVERYTHING RIGHT NOW,
[INAUDIBLE]

669

00:43:46,767 --> 00:43:47,767

BUT IF YOU COULD ADDRESS IN THE
UNLIKELY EVENT THAT YOU ARE

670

00:43:47,767 --> 00:43:48,767

HAVING A ANOTHER BAD DAY, I'M
WONDERING HOW YOU WOULD BE

671

00:43:48,767 --> 00:43:49,767

POSTUREING WHETHER THE CRISIS
WOULD BE MORE URGENT THAN IT WAS

672

00:43:49,767 --> 00:43:50,767

LAST TIME BECAUSE LOOKING AHEAD
I WONDER HOW YOU CAN EXPECT

673

00:43:50,767 --> 00:43:51,767

SpaceX TO LAUNCH NEXT?
YOU DON'T HAVE THAT MENTIONED?

674

00:43:51,767 --> 00:43:52,767

I DON'T KNOW IF YOU HAVE AN HD
TV IN THE PIPELINE LIKE YOU SAID

675

00:43:52,767 --> 00:43:53,767

THIS YEAR THAT WOULD HELP TAKE
THE PRESSURE OFF THE U.S.

676

00:43:53,767 --> 00:43:54,767

COMMERCIAL VEHICLES WHICH YOU
ARE GOING TO RELIE ON

677

00:43:54,767 --> 00:43:55,767

CREASEINGLY, I'M WONDER PHYSICAL
YOU HAD ANOTHER SETBACK NOW OR

678

00:43:55,767 --> 00:43:56,767

LATER, YOU KNOW, HOW WELL WOULD
YOU BE ABLE TO ABSORB THAT LIKE

679

00:43:56,767 --> 00:43:57,767

IN THIS PAST YEAR?
>> I'LL DO MY BEST.

680

00:43:57,767 --> 00:43:58,767

OF COURSE, IT DEPENDS ON THE
SMEK SITUATION AND WHEN IT

681

00:43:58,767 --> 00:43:59,767

OCCURS AS TO HOW WE'D REACT.
BUT IT'S INTERESTING, WE HAD

682

00:43:59,767 --> 00:44:00,767
THREE ACCIDENTS LAST YEAR AND
ALL THREE OF THOSE VEHICLES ARE

683

00:44:00,767 --> 00:44:01,767
RIGHT NOW PLANNING TO LAUNCH
WITHIN THE NEXT 31 DAYS.

684

00:44:01,767 --> 00:44:02,767
SO IT'S REALLY INTERESTING THAT
THE PROGRESS IS THERE.

685

00:44:02,767 --> 00:44:03,767
SpaceX RIGHT NOW, NO EARLIER
THAN JANUARY, OKAY, THERE IS

686

00:44:03,767 --> 00:44:04,767
TECHNICAL ISSUES PAUSE THEY'RE
RECOVERING FROM AN ACCIDENT AS

687

00:44:04,767 --> 00:44:05,767
WELL, SO THERE IS A CHANCE THAT
THEY WON'T, BUT WE'RE READY TO

688

00:44:05,767 --> 00:44:06,767
HANDLE LAUNCH DELAYS.
BUT ANOTHER FACET OF OUR

689

00:44:06,767 --> 00:44:07,767
BUSINESS IS THINGS HAVE
THUNDERSTORMS COME UP OR

690

00:44:07,767 --> 00:44:08,767
TECHNICAL ISSUES WITH THE ROCKS
BECAUSE AHAVE TO BE SO PRISTINE

691

00:44:08,767 --> 00:44:09,767

WHEN YOU FIRE THEM BUT FIRST OF
ALL WE MONITOR OUR CONSUMABLES.

692

00:44:09,767 --> 00:44:10,767

WE HAVE ADEQUATE ONES, BUT WE
HIT OUR WARNING LINE, IF YOU

693

00:44:10,767 --> 00:44:11,767

WILL, IN FEBRUARY AND YOU RUN
OUT IF APRIL.

694

00:44:11,767 --> 00:44:12,767

SO THE OPTIONS WOULD BE
REMANIFEST SOME OF THE VEHICLES

695

00:44:12,767 --> 00:44:13,767

THAT WOULD COME LATER, TO PUT
SOME MORE OF THOSE CRITICAL

696

00:44:13,767 --> 00:44:14,767

CONSUMABLES ON THERE.
OBVIOUSLY, WE WOULD LOOK ON

697

00:44:14,767 --> 00:44:15,767

DEPENDING ON WHAT THE
CONSUMABLES ARE, ARE THERE WAYS

698

00:44:15,767 --> 00:44:16,767

TO RATION?
NOT NECESSARILY RATIONING FOOD

699

00:44:16,767 --> 00:44:17,767

AT THIS POINT IN TIME.
BUT IT'S ALMOST MAKING OTHER

700

00:44:17,767 --> 00:44:18,767

OPTIONS, ACTIVITIES YOU WOULDN'T
DO

701

00:44:18,767 --> 00:44:19,767

[INAUDIBLE]
BUT WE'VE BEEN IN A SITUATION IN

702
00:44:19,767 --> 00:44:20,767
THE PAST WHERE WE HAD DISRUPTED
SUPPLY CHAINS IN THE PAST AND WE

703
00:44:20,767 --> 00:44:21,767
KNOW THE KNOB TURN JUST DEPENDS
ON THE SITUATION.

704
00:44:21,767 --> 00:44:22,767
THAT'S WHAT WE DO.
AGAIN, WE HAVE A HERE IN THE

705
00:44:22,767 --> 00:44:23,767
NEXT TWO WEEKS, WE HAVE A, THIS
LAUNCH.

706
00:44:23,767 --> 00:44:24,767
WE HAVE A SOYUZ LAUNCH, WHICH
HAS THE ABILITY FOR A LITTLE

707
00:44:24,767 --> 00:44:25,767
CARGO AND A PROGRESS LAUNCH.
SO THERE ARE MULTIPLE

708
00:44:25,767 --> 00:44:26,767
OPPORTUNITIES HERE, NOT TO
MENTION AFTER THE 1st OF THE

709
00:44:26,767 --> 00:44:27,767
YEAR.
SO WE'RE NOT OVERLY CONCERNED AT

710
00:44:27,767 --> 00:44:28,767
THIS POINT IN TIME.
BUT AGAIN, WE'RE NOT AS ROBUST

711
00:44:28,767 --> 00:44:29,767

AS WE WOULD LIKE TO BE.
>> AND, FRANK, I WAS JUST

712
00:44:29,767 --> 00:44:30,767
WONDERING, HOW, TO WHAT EXTENT
THE IMAGE OF 4, 3 IS ON YOUR

713
00:44:30,767 --> 00:44:31,767
MIND TODAY GOING INTO TOMORROW?
IS THAT A SOURCE OF EXTRA

714
00:44:31,767 --> 00:44:32,767
COLLECTION NERVES GOING INTO
THIS LAUNCH?

715
00:44:32,767 --> 00:44:33,767
ALTHOUGH IT'S NOT YOUR ROCKET,
HAS THERE BEEN ANY DISCUSSION

716
00:44:33,767 --> 00:44:34,767
WITH YOUR TEAMS ABOUT THAT
BEHIND?

717
00:44:34,767 --> 00:44:35,767
>> WE TEND NOT TO BE DRAMATIC ON
THOSE THINGS.

718
00:44:35,767 --> 00:44:36,767
WE FOCUS ON THE LAUNCH.
EVERYBODY IS DOING THEIR JOB.

719
00:44:36,767 --> 00:44:37,767
RIGHT NOW WE ARE FOCUSED ON THE
SUCCESS OF THIS MISSION AND

720
00:44:37,767 --> 00:44:38,767
GETTING THE CARGO TO THE SPACE
STATION.

721
00:44:38,767 --> 00:44:39,767

>> OKAY.
QUESTION HERE IN THE FRONT.

722
00:44:39,767 --> 00:44:40,767

>> HI THERE.
MY QUESTION IS FOR VERNE.

723
00:44:40,767 --> 00:44:41,767
WHAT SETSDZ O 84 APART FROM THE
OTHER INVOLVEMENT?

724
00:44:41,767 --> 00:44:42,767
>> SO THE OTHER FAA LICENSE
MODULES WE HAVE PERFORMED WERE

725
00:44:42,767 --> 00:44:43,767
ACTUALLY LAUNCHED THROUGH LUCKY
MARTIN COMMERCIAL LAUNCH

726
00:44:43,767 --> 00:44:44,767
SERVICES.
YOU ARE PROBABLY AWARE AT ULA

727
00:44:44,767 --> 00:44:45,767
WHEN WE SELL A LAUNCH SERVICE TO
A COMMERCIAL ENDS USER, TYPICAL

728
00:44:45,767 --> 00:44:46,767
COMMUNICATION SATELLITE, THOSE
LAUNCH SERVICES ARE SOLD THROUGH

729
00:44:46,767 --> 00:44:47,767
LOCKHEED MARTIN.
WE FEEL THEY HAVE A

730
00:44:47,767 --> 00:44:48,767
RESPONSIBILITY FOR THE LICENSE
FOR THOSE EMISSIONS.

731
00:44:48,767 --> 00:44:49,767

SO THE DIFFERENCE FOR EFC AND O
84 ASK WE WERE RESPONSIBLE FOR

732

00:44:49,767 --> 00:44:50,767

THE LICENSE.

WE HAD TO LEARN THE

733

00:44:50,767 --> 00:44:51,767

APPLICATIONS.

WE HAVE A LAWYER THAT

734

00:44:51,767 --> 00:44:52,767

SPECIALIZES IN WORKING FOR THE
FAA.

735

00:44:52,767 --> 00:44:53,767

THEN WE HAD ULTIMATE

RESPONSIBILITY FOR MAKING SURE

736

00:44:53,767 --> 00:44:54,767

EVERY SINGLE REQUIREMENT WAS
SATISFIED.

737

00:44:54,767 --> 00:44:55,767

NORMALLY, WE SUPPORT THEM IN
DOING THAT.

738

00:44:55,767 --> 00:44:56,767

THEY PROBABLY TEND TO WORK ON
IT.

739

00:44:56,767 --> 00:44:57,767

THIS TIMES, WE'RE GOING IT 100%.

I WOULD ADD OVER THE YEARS, THEY

740

00:44:57,767 --> 00:44:58,767

HAVE COMMERCIAL SPACE AND THE
REQUIREMENT THAT YOU HAVE TO

741

00:44:58,767 --> 00:44:59,767

GRADUALLY BE INVOLVED.
SO SINCE IT'S BEEN A WHILE SENSE

742

00:44:59,767 --> 00:45:00,767
WE HAD A LEARNING CURVE FOR
THESE LAST MISSIONS.

743

00:45:00,767 --> 00:45:01,767
IT'S TURNED OUT VERY WELL.
>>.

744

00:45:01,767 --> 00:45:02,767
I HAVE TWO QUESTIONS.
COULD YOU KIND OF GO THROUGH THE

745

00:45:02,767 --> 00:45:03,767
IMPLICATIONS OF THE POWER
CANNELL ISSUE IF THERE WAS

746

00:45:03,767 --> 00:45:04,767
ANOTHER FAILURE AT THAT POINT
YOU USE REDUNDANCY AND THE WHOLE

747

00:45:04,767 --> 00:45:05,767
SCHEDULE AND YOU OUTLINE WHAT
NEEDS TO BE REWORKED, USE A

748

00:45:05,767 --> 00:45:06,767
SPARE ON BOARD, WHAT WOULD
HAPPEN?

749

00:45:06,767 --> 00:45:07,767
IN THERE FIRST OFF, WE THINK OF
IT AS WE TALK ABOUT THE NEXT, WE

750

00:45:07,767 --> 00:45:08,767
TYPICALLY HAVE THE ABILITY TO
PAY UP, ONE FAILURE AND FOR A

751

00:45:08,767 --> 00:45:09,767

PERIOD OF TIME, WE CAN OPERATE
IN THE DEGRADED MODE BEFORE WE

752

00:45:09,767 --> 00:45:10,767

CAN MAKE REPAIRS.

IN THIS PARTICULAR CASE, MORE

753

00:45:10,767 --> 00:45:11,767

IMPORTANTLY, WHEN THE DEVICES
THAT CAN FAIL ARE OUTSIDE.

754

00:45:11,767 --> 00:45:12,767

YOU CAN'T.

IT TAKES LONGER TO MOUNT A SPACE

755

00:45:12,767 --> 00:45:13,767

WALK TO GO OUT AND MAKE THE
REPAIRS.

756

00:45:13,767 --> 00:45:14,767

IN THIS PARTICULAR CASE, THE WAY
OF THE ARCHITECTURE OF OUR

757

00:45:14,767 --> 00:45:15,767

POWER SYSTEM, WE'VE LOST THE
POWER FROM THAT, WE HAVEN'T LST

758

00:45:15,767 --> 00:45:16,767

REDUNDANCY THE FAILURE IS NO
WORSE TODAY THAN IT WAS THE

759

00:45:16,767 --> 00:45:17,767

ARTIFACTS OF OUR DESIGN.
WE PLAN FOR THESE TYPES OF

760

00:45:17,767 --> 00:45:18,767

FAILURES.

AGAIN WE REDUCE THE OVERALL

761

00:45:18,767 --> 00:45:19,767

POWER CAPABILITY OF OUR SYSTEM.
BUT WE HAVEN'T REDUCED THE

762

00:45:19,767 --> 00:45:20,767
REDUNDANCY AT ALL T. POWER
GENERATION BECOMES AN ISSUE WHEN

763

00:45:20,767 --> 00:45:21,767
YOU HAVE TO HOLD A FIXED
ATTITUDE, IF YOU HAVE A FIXED

764

00:45:21,767 --> 00:45:22,767
ATTITUDE FOR A VISITING VEHICLE,
YOU HAVE AS TO MANAGE THE POWER

765

00:45:22,767 --> 00:45:23,767
VERY DELICATELY.
BECAUSE ARE YOU NOT IN AN

766

00:45:23,767 --> 00:45:24,767
OPTIMUM POWER GENERATION.
SO THAT'S WHAT WE DO.

767

00:45:24,767 --> 00:45:25,767
WE HAVE NO ISSUE.
IF WE HAVE A NETWORK FAILURE, WE

768

00:45:25,767 --> 00:45:26,767
HAVEN'T LOST REDUNDANCY.
THE NEXT FAILURE WOULD BE A MAIN

769

00:45:26,767 --> 00:45:27,767
BUS SWITCHING ISSUE, WHICH WOULD
TAKE OUT A SIGNIFICANT AMOUNT OF

770

00:45:27,767 --> 00:45:28,767
REDUNDANCY AND THEN WE'D BE IN A
MUCH MORE URGENT SITUATION TO GO

771

00:45:28,767 --> 00:45:29,767

OUTSIDE AND MAKE REPAIR EITHER
TO THE SHUT UNIT OR THE OTHER

772

00:45:29,767 --> 00:45:30,767

DEVICE THAT FAILED.

BY THE WAY, THERE IS A LONG LIST

773

00:45:30,767 --> 00:45:31,767

OF OTHER FAILURES THAT WE COULD

HAVE THAT AGAIN WE'RE PREPARED

774

00:45:31,767 --> 00:45:32,767

TO GO DO THOSE THINGS.

BUT WE'RE NOT IN A CRITICAL

775

00:45:32,767 --> 00:45:33,767

SITUATION.

IT'S THE NEXT FORCED FAILURE

776

00:45:33,767 --> 00:45:34,767

WERE TO OCCUR, WE'D HAVE TO GO

OUTSIDE IN ANOTHER 24 HOURS.

777

00:45:34,767 --> 00:45:35,767

WE'RE NOT IN THAT KIND OF

SITUATION AT ALL.

778

00:45:35,767 --> 00:45:36,767

REALLY, WE MADE OUR OPERATORS

TURN THEIR TAIL A LITTLE HARDER.

779

00:45:36,767 --> 00:45:37,767

THEY HAVE TO MANAGE THE POWER

BALANCE AND WHAT THINGS THEY

780

00:45:37,767 --> 00:45:38,767

POWER OFF.

TYPICALLY WE POWER OFF THINGS

781

00:45:38,767 --> 00:45:39,767

LIKE HEATERS, IF WE HAVE TO, WE
POWER OFF FANS AN OTHER THINGS.

782

00:45:39,767 --> 00:45:40,767

WE GIVE FIRST PRIORITY TO THE
ARM THAT'S GRABBING A SICKNOUS

783

00:45:40,767 --> 00:45:41,767

VEHICLE AND PAY LOAD.
SO THE OTHER THINGS WE POWER

784

00:45:41,767 --> 00:45:42,767

DOWN FOR A SHORT DURATION FOR A
POWER INTENSIVE OPERATION.

785

00:45:42,767 --> 00:45:43,767

>> I HAVE A QUESTION FOR YOU,
FRANK.

786

00:45:43,767 --> 00:45:44,767

REGARDING THE ANTARRES.
FIRST DOES ORBITAL EVEN TOY WITH

787

00:45:44,767 --> 00:45:45,767

THE IDEA OF RETIRING THE ROCKET?
>> NO.

788

00:45:45,767 --> 00:45:46,767

>>.
OUTSIDE OF NASA, WHAT ARE YOU

789

00:45:46,767 --> 00:45:47,767

DOING FOR THE SALES EVENT?
>> ACTUALLY, WE'RE TALKING TO

790

00:45:47,767 --> 00:45:48,767

SEVERAL PARTICULAR COMMERCE.
I THINK THEY WILL PROBABLY WAIT

791

00:45:48,767 --> 00:45:49,767

UNTIL WE GET GOING AGAIN BEFORE
THEY GET SERIOUS ABOUT IT.

792

00:45:49,767 --> 00:45:50,767
BUT WE GOT SOME PRETTY GOOD
PROSPECTS.

793

00:45:50,767 --> 00:45:51,767
[INAUDIBLE]
AS WELL AS FOR MODIFYING THE

794

00:45:51,767 --> 00:45:52,767
OTHER TYPES OF MISSIONS.
>> UNFORTUNATELY, WE HAVE RUN

795

00:45:52,767 --> 00:45:53,767
OUT OF TIME FOR QUESTIONS.
I APOLOGIZE FOR THOSE WHO

796

00:45:53,767 --> 00:45:54,767
HAVEN'T GOTTEN THEIR QUESTIONS
ASKED.

797

00:45:54,767 --> 00:45:55,767
WE'LL BE HERE AFTERWARDS.
I'D LIKE TO CLOSE WITH SOME

798

00:45:55,767 --> 00:45:56,767
CLOSING COMMENTS.
>> I TOUCHED ON IT EARLIER

799

00:45:56,767 --> 00:45:57,767
TODAY, I REALLY WANT TO CONVEY
TO YOU HOW IMPRESSED I AM THE

800

00:45:57,767 --> 00:45:58,767
ORBITAL AND ULA HAVE BEEN ABLE
TO CREATE THIS MARRIAGE AND BE

801

00:45:58,767 --> 00:45:59,767

IN THIS POSITION JUST LITERALLY
A YEAR FROM WHEN IT STARTED.

802

00:45:59,767 --> 00:46:00,767

THESE ARE COMPLICATED VEHICLES
FLY IN SPACE.

803

00:46:00,767 --> 00:46:01,767

IT'S DIFFICULT.
IT REALLY IS.

804

00:46:01,767 --> 00:46:02,767

I HAVE BEEN INTERESTED A LONG
TIME.

805

00:46:02,767 --> 00:46:03,767

I AM VERY IMPRESSED THAT WE ARE
AT THIS POSITION HERE READY TO

806

00:46:03,767 --> 00:46:04,767

GO LAUNCH IN A LITTLE OVER 24
HOURS.

807

00:46:04,767 --> 00:46:05,767

SO AMAZING TO ME.
THE SEC THING WE ALSO TOUCHED

808

00:46:05,767 --> 00:46:06,767

ON, A YEAR, REALLY, A YEAR AND A
COUPLE DAYS FROM A YEAR AND TWO

809

00:46:06,767 --> 00:46:07,767

DAYS FROM A MONTH AGO, WE WERE
ALL HERE LOOKING FOR THE FIRST

810

00:46:07,767 --> 00:46:08,767

FLIGHT OF ORION WHICH IS REALLY
THE STAIR STEP EXPLORATION.

811

00:46:08,767 --> 00:46:09,767

I FEEL WE ARE TAKING ANOTHER
STEP HERE TOMORROW.

812

00:46:09,767 --> 00:46:10,767

A LOT OF THE RESEARCH ON BOARD
ISS IS LEADING THIS EXPLORATION.

813

00:46:10,767 --> 00:46:11,767

SO I SEE THIS AS ANOTHER STEP IF
THAT DIRECTION TOWARDS HUMAN

814

00:46:11,767 --> 00:46:12,767

COMMERCIALIZATION AND I'M REALLY
EXCITED ABOUT THE OPPORTUNITY

815

00:46:12,767 --> 00:46:13,767

WE WILL HAVE TOMORROW.
THANK YOU VERY MUCH.

816

00:46:13,767 --> 00:46:14,767

>> THANK YOU ALL VERY MUCH FOR
HIM COMING.

817

00:46:14,767 --> 00:46:15,767

OUR LAUNCH COVERAGE TOMORROW AN
NASA TELEVISION WILL BEGIN AT

818

00:46:15,767 --> 00:46:16,767

4:30 P.M. EASTERN TIME AND A
LAUNCH AT 5:55 EASTERN.

819

00:46:16,767 --> 00:46:17,767

PLEASE KEEP UP WITH UPDATES BY
GOING TO THE WEB

820

00:46:17,767 --> 00:46:18,767

WWW.NASA.ORG/ORBITALATK.
IF YOU HAVE QUESTIONS, YOU CAN