



NO SMOKING

GMT 000 16:37:04
PAO 70-1 00:00:14



Mars Mission



MISSION	STATUS	TIME
1	OK	10:00:00
2	OK	10:00:00
3	OK	10:00:00
4	OK	10:00:00
5	OK	10:00:00
6	OK	10:00:00
7	OK	10:00:00
8	OK	10:00:00
9	OK	10:00:00
10	OK	10:00:00



100 DL 3 LOS

PAO



1
00:00:05,749 --> 00:00:02,930
NASA is in the process of designing its

2
00:00:07,639 --> 00:00:05,759
next generation spacecraft Orion which

3
00:00:09,500 --> 00:00:07,649
will be able to take astronauts that far

4
00:00:12,650 --> 00:00:09,510
off destinations like an asteroid and

5
00:00:14,300 --> 00:00:12,660
eventually one day Mars Orion itself is

6
00:00:17,570 --> 00:00:14,310
gearing up for its first flight into

7
00:00:19,579 --> 00:00:17,580
space exploration flight test-1 that

8
00:00:22,130 --> 00:00:19,589
test going to be taking place in the

9
00:00:23,749 --> 00:00:22,140
fall of this year 2014 but this week

10
00:00:25,669 --> 00:00:23,759
we're also doing a lot of prep work and

11
00:00:27,560 --> 00:00:25,679
one important test to get ready for that

12
00:00:29,599 --> 00:00:27,570
here to tell us a little bit more is

13
00:00:31,159 --> 00:00:29,609

Mike Seraphin one of NASA's flight

14

00:00:33,410 --> 00:00:31,169

directors and someone who's involved

15

00:00:36,380 --> 00:00:33,420

pretty heavily in the test this week and

16

00:00:38,240 --> 00:00:36,390

that test is underway recovery test I

17

00:00:39,470 --> 00:00:38,250

don't know if it has a numbers at one or

18

00:00:43,069 --> 00:00:39,480

we're just going to call it underway

19

00:00:45,680 --> 00:00:43,079

recovery does it is just the underway

20

00:00:47,990 --> 00:00:45,690

recurring test so we are performing a

21

00:00:50,750 --> 00:00:48,000

test is a joint partnership with the

22

00:00:55,729 --> 00:00:50,760

United States Navy Lockheed Martin and

23

00:00:59,000 --> 00:00:55,739

NASA this week the crew of the USS San

24

00:01:01,160 --> 00:00:59,010

Diego a navy vessel out of the port of

25

00:01:03,470 --> 00:01:01,170

San Diego have sailed out into the

26

00:01:04,850 --> 00:01:03,480

Pacific off the coast of California and

27

00:01:06,850 --> 00:01:04,860

they are going to demonstrate the

28

00:01:08,899 --> 00:01:06,860

ability to recover Orion this week and

29

00:01:09,890 --> 00:01:08,909

me and my team are going to be here in

30

00:01:12,350 --> 00:01:09,900

Mission Control we're going to

31

00:01:14,929 --> 00:01:12,360

demonstrate the the handover process of

32

00:01:16,880 --> 00:01:14,939

the Orion capsule here in Mission

33

00:01:18,850 --> 00:01:16,890

Control were responsible for the Orion

34

00:01:22,219 --> 00:01:18,860

spacecraft from liftoff to splashdown in

35

00:01:24,170 --> 00:01:22,229

final power down and we're going to hand

36

00:01:27,499 --> 00:01:24,180

over the spacecraft to the recovery team

37

00:01:30,499 --> 00:01:27,509

orion like Apollo is designed to land on

38

00:01:32,410 --> 00:01:30,509

water and not on land so we need a ship

39

00:01:34,490 --> 00:01:32,420

to go out there and recover it and

40

00:01:36,230 --> 00:01:34,500

through this joint agreement we are

41

00:01:37,880 --> 00:01:36,240

going to go demonstrate that this week

42

00:01:40,310 --> 00:01:37,890

and make sure that we're ready to go for

43

00:01:42,109 --> 00:01:40,320

the exploration flight test-1 this fall

44

00:01:43,580 --> 00:01:42,119

and so what are some of the things that

45

00:01:45,620 --> 00:01:43,590

the recovery teams are going to be

46

00:01:49,700 --> 00:01:45,630

testing responsible for out there

47

00:01:52,219 --> 00:01:49,710

tomorrow yes so we are using a new

48

00:01:54,130 --> 00:01:52,229

design of ship that did not exist in the

49

00:01:58,969 --> 00:01:54,140

Apollo era it's called a well deck ship

50

00:02:01,730 --> 00:01:58,979

so the Orion capsule being larger than

51
00:02:04,039 --> 00:02:01,740
the Apollo capsule there was some

52
00:02:06,649 --> 00:02:04,049
concern about using a crane over the

53
00:02:09,770 --> 00:02:06,659
side of the ship to basically raised it

54
00:02:12,050 --> 00:02:09,780
over off the water onto the deck of the

55
00:02:13,850 --> 00:02:12,060
ship so folks went off and assess

56
00:02:16,730 --> 00:02:13,860
various options and

57
00:02:20,120 --> 00:02:16,740
we looked at a well deck ship and that

58
00:02:23,630 --> 00:02:20,130
was the the plan that we're going to try

59
00:02:25,970 --> 00:02:23,640
out here on eft-1 well deck is basically

60
00:02:28,550 --> 00:02:25,980
an area within the belly of the ship

61
00:02:30,800 --> 00:02:28,560
that they can flood and they'll open a

62
00:02:33,440 --> 00:02:30,810
stern gate which is much like the

63
00:02:36,920 --> 00:02:33,450

tailgate on a pickup truck and tow the

64

00:02:39,500 --> 00:02:36,930

Orion capsule in into the well deck and

65

00:02:41,660 --> 00:02:39,510

then close the stern gate and then drain

66

00:02:44,240 --> 00:02:41,670

the well deck and lowering the Orion

67

00:02:45,140 --> 00:02:44,250

capsule on to a recovery cradle so

68

00:02:46,610 --> 00:02:45,150

they're going to demonstrate that

69

00:02:49,370 --> 00:02:46,620

capability they're also going to

70

00:02:51,110 --> 00:02:49,380

demonstrate the ability to spot and

71

00:02:52,880 --> 00:02:51,120

recover things that have been jettisoned

72

00:02:54,920 --> 00:02:52,890

off of the Orion capsule during the

73

00:02:58,820 --> 00:02:54,930

final descent landing phase like the

74

00:03:00,320 --> 00:02:58,830

forward Bay cover and parachutes and go

75

00:03:02,690 --> 00:03:00,330

retrieve some of those as engineering

76

00:03:05,390 --> 00:03:02,700

test articles so it's it's a large

77

00:03:06,710 --> 00:03:05,400

integrated operation and we haven't done

78

00:03:08,560 --> 00:03:06,720

this for quite a while we certainly

79

00:03:11,390 --> 00:03:08,570

haven't done it with this class of ship

80

00:03:12,979 --> 00:03:11,400

or where they capsule this large so

81

00:03:14,150 --> 00:03:12,989

we're going to check it out and

82

00:03:16,400 --> 00:03:14,160

demonstrate it make sure we're ready to

83

00:03:18,020 --> 00:03:16,410

go and my guilty the flight director in

84

00:03:19,820 --> 00:03:18,030

the room right down the hall from here

85

00:03:22,490 --> 00:03:19,830

leading the team what do you guys going

86

00:03:25,160 --> 00:03:22,500

to be doing in there right so my team

87

00:03:26,690 --> 00:03:25,170

it's a small team of roughly two dozen

88

00:03:28,000 --> 00:03:26,700

folks that are going to be here in

89

00:03:30,949 --> 00:03:28,010

Mission Control on flight day

90

00:03:33,289 --> 00:03:30,959

responsible for Orion from liftoff the

91

00:03:35,270 --> 00:03:33,299

splashdown are going to be monitoring

92

00:03:37,910 --> 00:03:35,280

the health and status of Orion during

93

00:03:39,650 --> 00:03:37,920

the mission and if we see anything off

94

00:03:40,940 --> 00:03:39,660

nominal that the spacecraft is not

95

00:03:44,390 --> 00:03:40,950

designed to handle on its own we're

96

00:03:46,670 --> 00:03:44,400

going to do what we say send commands to

97

00:03:49,729 --> 00:03:46,680

the spacecraft or issue computerized

98

00:03:53,000 --> 00:03:49,739

instructions to it too safe things like

99

00:03:56,030 --> 00:03:53,010

a propellant leak or issues that could

100

00:03:58,670 --> 00:03:56,040

potentially occur and make sure that the

101
00:04:02,300 --> 00:03:58,680
spacecraft is safe to handle by the

102
00:04:03,920 --> 00:04:02,310
recovery team those folks on board the

103
00:04:05,420 --> 00:04:03,930
the Navy vessel are going to put

104
00:04:07,039 --> 00:04:05,430
themselves in harm's way and I want to I

105
00:04:08,420 --> 00:04:07,049
want to make sure that mean my team tell

106
00:04:09,830 --> 00:04:08,430
them everything that we know about it so

107
00:04:12,050 --> 00:04:09,840
that they're safe and can take

108
00:04:14,750 --> 00:04:12,060
precautionary measures if necessary and

109
00:04:17,120 --> 00:04:14,760
so to switch gears a little bit we

110
00:04:18,979 --> 00:04:17,130
happen really had to train to handle a

111
00:04:20,569 --> 00:04:18,989
new vehicle well aside from the cargo

112
00:04:23,000 --> 00:04:20,579
vehicles recently but not really a new

113
00:04:24,409 --> 00:04:23,010

crew crew vehicle in a long time what's

114

00:04:26,029 --> 00:04:24,419

the training been like to get ready for

115

00:04:27,000 --> 00:04:26,039

Orion to get the flight control team

116

00:04:30,270 --> 00:04:27,010

ready to

117

00:04:32,160 --> 00:04:30,280

handle this new craft yeah I'll admit

118

00:04:34,290 --> 00:04:32,170

that I was a little bit spoiled as a

119

00:04:36,120 --> 00:04:34,300

space shuttle flight controller and then

120

00:04:38,160 --> 00:04:36,130

a shuttle flight director and then

121

00:04:40,460 --> 00:04:38,170

coming over here doing international

122

00:04:43,410 --> 00:04:40,470

space station operations I always had a

123

00:04:46,110 --> 00:04:43,420

baseline to work off of and it was

124

00:04:47,790 --> 00:04:46,120

largely a sustaining operation where you

125

00:04:50,580 --> 00:04:47,800

could use the previous mission or the

126
00:04:52,890 --> 00:04:50,590
previous flight and use that to to Delta

127
00:04:54,090 --> 00:04:52,900
your work off of so you never started

128
00:04:56,940 --> 00:04:54,100
from scratch but with a brand new

129
00:04:59,760 --> 00:04:56,950
program like we're flying here on Orion

130
00:05:01,350 --> 00:04:59,770
you are starting from scratch so all of

131
00:05:04,140 --> 00:05:01,360
the capabilities that were using in

132
00:05:06,090 --> 00:05:04,150
Mission Control all the products all of

133
00:05:09,090 --> 00:05:06,100
the tools all the software all the

134
00:05:12,210 --> 00:05:09,100
communication capabilities we're having

135
00:05:14,940 --> 00:05:12,220
to develop and test and check out from

136
00:05:17,160 --> 00:05:14,950
scratch we're obviously leveraging a lot

137
00:05:19,530 --> 00:05:17,170
of the capabilities that we had during

138
00:05:22,140 --> 00:05:19,540

the Space Shuttle area and have during

139

00:05:24,900 --> 00:05:22,150

the currently here in Mission Control is

140

00:05:26,760 --> 00:05:24,910

part of the space station program to

141

00:05:29,910 --> 00:05:26,770

minimize costs and overhead associated

142

00:05:33,690 --> 00:05:29,920

with that but because Orion talks

143

00:05:36,390 --> 00:05:33,700

differently via its telemetry stream and

144

00:05:38,700 --> 00:05:36,400

because it has different capabilities on

145

00:05:40,980 --> 00:05:38,710

board we've got to develop a lot of new

146

00:05:42,720 --> 00:05:40,990

things from scratch and we're in the

147

00:05:45,240 --> 00:05:42,730

process of testing and checking all that

148

00:05:46,650 --> 00:05:45,250

out right now and again that's to make

149

00:05:49,650 --> 00:05:46,660

sure that we're ready to go and fly this

150

00:05:53,490 --> 00:05:49,660

ball team team get excited for this fall

151

00:05:55,890 --> 00:05:53,500

yeah the the team's excited I I came on

152

00:05:58,200 --> 00:05:55,900

board the Orion program about two years

153

00:06:00,420 --> 00:05:58,210

ago and when I was introduced to the

154

00:06:02,220 --> 00:06:00,430

team I was really excited because all of

155

00:06:04,350 --> 00:06:02,230

the folks that I'm working with I've

156

00:06:07,650 --> 00:06:04,360

worked with in the past during my space

157

00:06:13,290 --> 00:06:07,660

shuttle career so they are a veteran

158

00:06:14,760 --> 00:06:13,300

team that we are using to to fly the

159

00:06:18,260 --> 00:06:14,770

Orion spacecraft here out of Mission

160

00:06:20,870 --> 00:06:18,270

Control very capable very dedicated and

161

00:06:24,300 --> 00:06:20,880

also a very small team as I said before

162

00:06:27,630 --> 00:06:24,310

and just the sheer volume of work we're

163

00:06:29,960 --> 00:06:27,640

having to work really hard really fast a

164

00:06:32,280 --> 00:06:29,970

development program always has

165

00:06:34,410 --> 00:06:32,290

unexpected events or surprises that come

166

00:06:36,900 --> 00:06:34,420

up software doesn't always work as

167

00:06:38,370 --> 00:06:36,910

designed and we're having to tweak

168

00:06:40,340 --> 00:06:38,380

things here on the ground as well as

169

00:06:41,720 --> 00:06:40,350

with some based on some

170

00:06:43,940 --> 00:06:41,730

flight software updates that we're

171

00:06:45,920 --> 00:06:43,950

getting through our avionics and

172

00:06:48,530 --> 00:06:45,930

software counterparts and things that we

173

00:06:50,990 --> 00:06:48,540

learned in testing we always learn about

174

00:06:53,300 --> 00:06:51,000

design features that that we have to

175

00:06:55,130 --> 00:06:53,310

modify our our planned operation or

176

00:06:56,510 --> 00:06:55,140

tools around and and the team is doing a

177

00:06:58,490 --> 00:06:56,520

really good job adapting to that and

178

00:07:00,650 --> 00:06:58,500

working really hard I'm sure they'll be

179

00:07:02,840 --> 00:07:00,660

ready okay well again the underway

180

00:07:05,450 --> 00:07:02,850

recovery test taking place tomorrow on

181

00:07:07,700 --> 00:07:05,460

Thursday february 20th an important

182

00:07:10,250 --> 00:07:07,710

recovery of Orion from the water joint

183

00:07:11,870 --> 00:07:10,260

with the US Navy all that in preparation

184

00:07:14,360 --> 00:07:11,880

for the upcoming exploration flight

185

00:07:16,040 --> 00:07:14,370

test-1 later this year Mike thanks for

186

00:07:17,570 --> 00:07:16,050

joining me really looking forward to