1
00:01:13,190 --> 00:01:06,630
columbia houston simo on air to ground

2
00:01:17,749 --> 00:01:15,510
we're ready

3
00:01:20,149 --> 00:01:17,759
dr jim the mmt

4
00:01:22,070 --> 00:01:20,159
had all players in on the meeting

5
00:01:24,950 --> 00:01:22,080
right through from the factory and the

6
00:01:28,149 --> 00:01:24,960
consensus is they just do not understand

7
00:01:29,910 --> 00:01:28,159
the behavior of fuel cell 2

8
00:01:31,990 --> 00:01:29,920
even though your folks efforts have done

9
00:01:35,030 --> 00:01:32,000
a good job towards stabilizing the

10
00:01:36,630 --> 00:01:35,040
problem it's significantly out of family

11
00:01:37,590 --> 00:01:36,640
and so

12
00:01:39,030 --> 00:01:37,600
it will

13
00:01:41,590 --> 00:01:39,040

shorten the mission

14
00:01:43,749 --> 00:01:41,600
and we're looking at a tig

15
00:01:45,190 --> 00:01:43,759
on tuesday for us down here that's in an

16
00:01:46,550 --> 00:01:45,200
met

17
00:01:47,990 --> 00:01:46,560
of 3

18
00:01:49,749 --> 00:01:48,000
22

19
00:01:51,190 --> 00:01:49,759
14.

20
00:01:54,069 --> 00:01:51,200
and of course we're looking at the

21
00:01:56,550 --> 00:01:54,079
various types of entries looking at

22
00:01:58,550 --> 00:01:56,560
procedures to reduce the load loss to

23
00:02:00,230 --> 00:01:58,560
one fuel cell type procedures and we'll

24
00:02:05,670 --> 00:02:00,240
be discussing those over the next couple

25
00:02:08,869 --> 00:02:07,350
okay that's certainly disappointed but

26
00:02:10,229 --> 00:02:08,879
we know you guys put your best effort

27
00:02:12,229 --> 00:02:10,239
forward and you're doing the right thing

28
00:02:14,869 --> 00:02:12,239
and we appreciate all the work that's

29
00:02:16,790 --> 00:02:14,879
going into that 3 2 14.

30
00:02:18,070 --> 00:02:16,800
and i imagine between now and then we'll

31
00:02:20,070 --> 00:02:18,080
keep marching forward with as much

32
00:02:21,589 --> 00:02:20,080
science as we can

33
00:02:23,910 --> 00:02:21,599
exactly right if you could continue with

34
00:02:26,309 --> 00:02:23,920
the nominal timeline for now for uh

35
00:02:27,670 --> 00:02:26,319
completing as much science as possible

36
00:02:30,390 --> 00:02:27,680
and we've pretty much worked up the

37
00:02:32,229 --> 00:02:30,400
procedure to reduce the load and looking

38
00:02:33,750 --> 00:02:32,239

at potentially eventually safe in a fuel

39
00:02:34,550 --> 00:02:33,760
cell but we haven't made that decision

40
00:02:36,390 --> 00:02:34,560
yet

41
00:02:39,110 --> 00:02:36,400
we'll have words for you shortly

42
00:02:40,470 --> 00:02:39,120
if you would like a face to face with

43
00:02:47,750 --> 00:02:40,480
some of the players down here we can

44
00:02:53,110 --> 00:02:49,830
yeah that would probably be helpful

45
00:02:55,030 --> 00:02:53,120
maybe uh after you've gone through uh

46
00:02:58,150 --> 00:02:55,040
your procedures and worked out your plan

47
00:02:59,430 --> 00:02:58,160
and then we can have a face to face

48
00:03:02,070 --> 00:02:59,440
okay we'll pick a time in the next

49
00:03:04,470 --> 00:03:02,080
little while here

50
00:03:06,309 --> 00:03:04,480
questions for you hello from rockford

51
00:03:09,110 --> 00:03:06,319
among the experiments you're conducting

52
00:03:11,110 --> 00:03:09,120
you're lighting as many as 200 small

53
00:03:21,190 --> 00:03:11,120
fires to study plans in space does this

54
00:03:24,229 --> 00:03:22,790
one of the things that we work very hard

55
00:03:26,710 --> 00:03:24,239
on the space shuttle program is to be

56
00:03:27,990 --> 00:03:26,720
safe we have a safety panel in

57
00:03:29,910 --> 00:03:28,000
both at kennedy space center we have

58
00:03:31,270 --> 00:03:29,920
safety troops we have safety folks at

59
00:03:32,470 --> 00:03:31,280
johnson space center they all worked

60
00:03:33,830 --> 00:03:32,480
very hard to make sure all of our

61
00:03:35,750 --> 00:03:33,840
payloads are safe

62
00:03:37,830 --> 00:03:35,760
the combustions on experiments on this

63
00:03:39,430 --> 00:03:37,840

fight of course that extra attention is

64
00:03:41,270 --> 00:03:39,440
one of the reasons why it's taken this

65
00:03:43,589 --> 00:03:41,280
long to fly rockslide's combustion

66
00:03:45,270 --> 00:03:43,599
experiments because in order to give the

67
00:03:46,869 --> 00:03:45,280
science investigators the access they

68
00:03:49,110 --> 00:03:46,879
need to run experiments yet still have

69
00:03:51,190 --> 00:03:49,120
the experiments be safe with a very

70
00:03:53,110 --> 00:03:51,200
difficult design issue and we've been

71
00:03:54,710 --> 00:03:53,120
involved in the last stage of that price

72
00:03:55,670 --> 00:03:54,720
of process and know that they work very

73
00:03:56,949 --> 00:03:55,680
hard and

74
00:04:02,390 --> 00:03:56,959
feel completely safe with the

75
00:04:06,630 --> 00:04:04,710
thank you roger crouch you have managed

76
00:04:08,869 --> 00:04:06,640
missions from the ground but never been

77
00:04:11,270 --> 00:04:08,879
on a flight as we show our viewers some

78
00:04:13,509 --> 00:04:11,280
pictures of yesterday's lunch describe

79
00:04:18,789 --> 00:04:13,519
for us what it felt like and was it what

80
00:04:22,870 --> 00:04:20,710
well it

81
00:04:24,870 --> 00:04:22,880
wasn't quite what i expected i expected

82
00:04:26,710 --> 00:04:24,880
the first two minutes to be real real

83
00:04:28,870 --> 00:04:26,720
take a real long time because the solid

84
00:04:30,629 --> 00:04:28,880
rocket boosters were the things that

85
00:04:32,550 --> 00:04:30,639
really give you a lot of trust in fact

86
00:04:34,629 --> 00:04:32,560
though the first two minutes were over

87
00:04:36,870 --> 00:04:34,639
in about like 20 seconds it seemed to me

88
00:04:37,830 --> 00:04:36,880

like we were all on the mid deck down

89
00:04:40,310 --> 00:04:37,840
below

90
00:04:41,830 --> 00:04:40,320
uh doing high fives and shaking hands

91
00:04:43,830 --> 00:04:41,840
with each other and after we got to the

92
00:04:46,070 --> 00:04:43,840
50 mile limit the commander announced

93
00:04:48,230 --> 00:04:46,080
that we were truly in space from an

94
00:04:50,710 --> 00:04:48,240
astronaut point of view and we were just

95
00:04:52,390 --> 00:04:50,720
so elated it was like i guess a little

96
00:04:53,830 --> 00:04:52,400
child maybe just screaming and hollering

97
00:04:55,350 --> 00:04:53,840
about the first really great thing

98
00:05:00,070 --> 00:04:55,360
they'd ever done their life i felt

99
00:05:04,070 --> 00:05:01,749
many of our viewers would like to know

100
00:05:05,749 --> 00:05:04,080
what it's like to be weightless in space

101
00:05:11,830 --> 00:05:05,759
describe for us what that's like and

102
00:05:15,510 --> 00:05:13,909
one of the fun things with flying with

103
00:05:17,430 --> 00:05:15,520
rookies like roger and gregory and

104
00:05:18,790 --> 00:05:17,440
tara's other palette specialist is they

105
00:05:20,790 --> 00:05:18,800
say all the things that you remember

106
00:05:21,990 --> 00:05:20,800
happened on the first flight both roger

107
00:05:23,189 --> 00:05:22,000
and greg have been talking about how

108
00:05:25,909 --> 00:05:23,199
they feel like they're hanging upside

109
00:05:28,310 --> 00:05:25,919
down all the time which is true because

110
00:05:29,990 --> 00:05:28,320
the fluid tip causes the liquid that's

111
00:05:31,749 --> 00:05:30,000
normally pulled in your feet to shift up

112
00:05:33,110 --> 00:05:31,759
into your head and it feels like you're

113
00:05:34,310 --> 00:05:33,120

hanging upside down all the time there's

114
00:05:35,990 --> 00:05:34,320
a lot of things like that that sort of

115
00:05:37,670 --> 00:05:36,000
catch you by surprise

116
00:05:40,150 --> 00:05:37,680
but we've flown a lot of missions now

117
00:05:41,430 --> 00:05:40,160
where the 83 third space shuttle mission

118
00:05:42,790 --> 00:05:41,440
and we've had a lot of experience with

119
00:05:44,310 --> 00:05:42,800
how to counteract those symptoms and how

120
00:05:45,990 --> 00:05:44,320
to prepare yourself pre-flight and

121
00:05:48,150 --> 00:05:46,000
in-flight like drinking lots of fluids

122
00:05:50,150 --> 00:05:48,160
and eating lots of high-fiber foods or

123
00:05:51,830 --> 00:05:50,160
taking other fiber supplements etc so

124
00:05:53,350 --> 00:05:51,840
we've got a pretty good plan for how to

125
00:05:56,310 --> 00:05:53,360
make sure that we can perform at full

126
00:05:58,070 --> 00:05:56,320
efficiency while we're up here

127
00:05:59,670 --> 00:05:58,080
i guess the other thing that

128
00:06:01,749 --> 00:05:59,680
that you feel the vision is it's just

129
00:06:04,710 --> 00:06:01,759
fun to float around in space it's just

130
00:06:06,870 --> 00:06:04,720
fun everything you do is tremendously

131
00:06:08,710 --> 00:06:06,880
enjoyable because you're completely free

132
00:06:10,950 --> 00:06:08,720
to float it's like your little kid in

133
00:06:14,550 --> 00:06:10,960
some kind of peter pan movie or

134
00:06:18,469 --> 00:06:16,550
the the comet hellbop of course is

135
00:06:20,710 --> 00:06:18,479
drawing a lot of attention are you

136
00:06:24,230 --> 00:06:20,720
getting a good look at it right now this

137
00:06:29,510 --> 00:06:27,110
yeah we uh of course get to see it every

138
00:06:31,110 --> 00:06:29,520

time we have a sunset and we've been

139
00:06:33,909 --> 00:06:31,120
real busy the first couple days as you

140
00:06:36,150 --> 00:06:33,919
can imagine but uh don thomas and i got

141
00:06:38,469 --> 00:06:36,160
a good look at it with the binoculars uh

142
00:06:39,670 --> 00:06:38,479
just a few hours ago and it's it's

143
00:06:42,550 --> 00:06:39,680
really uh

144
00:06:44,629 --> 00:06:42,560
incredible to see it and to

145
00:06:46,710 --> 00:06:44,639
imagine that the last time human eyes

146
00:06:48,790 --> 00:06:46,720
saw that comet was when they were

147
00:06:49,830 --> 00:06:48,800
building the great pyramids 4 000 years

148
00:06:51,749 --> 00:06:49,840
ago

149
00:06:54,309 --> 00:06:51,759
and uh it really makes us feel special

150
00:06:56,070 --> 00:06:54,319
to be orbiting the earth in a spaceship

151
00:06:58,070 --> 00:06:56,080
looking at the earth and the comet in

152
00:07:00,469 --> 00:06:58,080
the same glance

153
00:07:02,390 --> 00:07:00,479
it also makes you wonder what human

154
00:07:04,469 --> 00:07:02,400
civilization will be like the next time

155
00:07:06,790 --> 00:07:04,479
the comet visits us

156
00:07:08,390 --> 00:07:06,800
and uh i think all of us here feel quite

157
00:07:10,230 --> 00:07:08,400
certain that that'll involve uh

158
00:07:11,350 --> 00:07:10,240
colonization of space and we're real

159
00:07:13,510 --> 00:07:11,360
proud to be

160
00:07:15,430 --> 00:07:13,520
part of the baby steps we're taking in

161
00:07:17,029 --> 00:07:15,440
that direction

162
00:07:19,350 --> 00:07:17,039
we're wondering you know what would be

163
00:07:21,029 --> 00:07:19,360

seeing you go up in space more often and

164
00:07:23,110 --> 00:07:21,039
seeing you on television do you think

165
00:07:29,110 --> 00:07:23,120
americans still the same enthusiasm for

166
00:07:31,909 --> 00:07:30,230
well one of the things that i was

167
00:07:33,670 --> 00:07:31,919
privileged to do during the training was

168
00:07:35,350 --> 00:07:33,680
to go to a lot of elementary schools and

169
00:07:37,029 --> 00:07:35,360
talk to the children there

170
00:07:39,350 --> 00:07:37,039
and i do believe that there's a certain

171
00:07:41,350 --> 00:07:39,360
lethargy in a lot of

172
00:07:43,270 --> 00:07:41,360
the adults in america about the interest

173
00:07:45,749 --> 00:07:43,280
in the space program but when you talk

174
00:07:47,670 --> 00:07:45,759
to kids and you talk to them about space

175
00:07:49,510 --> 00:07:47,680
and their minds start to expand you can

176
00:07:51,749 --> 00:07:49,520
just see the energy within the room and

177
00:07:53,670 --> 00:07:51,759
it's an incredible energy that these

178
00:07:55,909 --> 00:07:53,680
kids generate just in their thought

179
00:07:58,150 --> 00:07:55,919
processes about going to space and about

180
00:08:00,230 --> 00:07:58,160
the space program so i think there's a

181
00:08:01,350 --> 00:08:00,240
lot of enthusiasm there and maybe people

182
00:08:03,029 --> 00:08:01,360
just

183
00:08:05,350 --> 00:08:03,039
are at a younger age when they're really

184
00:08:07,189 --> 00:08:05,360
feeling it so much the people in the

185
00:08:37,430 --> 00:08:07,199
older age maybe have

186
00:11:16,790 --> 00:08:39,509
okay good heads up and i'll give you the

187
00:11:22,310 --> 00:11:19,590
okay that's complete

188
00:11:31,430 --> 00:11:22,320

okay don you can follow through with fo2

189
00:11:37,910 --> 00:11:33,750
okay copy up o2 step alpha here to

190
00:11:41,350 --> 00:11:39,509
okay when you've completed those steps

191
00:12:12,949 --> 00:11:41,360
i'll give you an experiment command we

192
00:12:17,829 --> 00:12:14,629
has been completed moving on to step

193
00:12:17,839 --> 00:12:26,790
copy

194
00:12:35,110 --> 00:12:30,069
chambered pressure is reading 0.00

195
00:13:46,629 --> 00:12:37,110
we copy that zero decimal zero zero

196
00:13:46,639 --> 00:13:49,910
oh

197
00:13:53,110 --> 00:13:52,069
experiment i can see here gas going into

198
00:13:54,710 --> 00:13:53,120
the chamber

199
00:13:56,389 --> 00:13:54,720
i can't put the dust cover back on

200
00:14:19,110 --> 00:13:56,399
although if i press harder i probably

201
00:14:19,120 --> 00:14:27,509
columbia houston for jim

202
00:14:30,310 --> 00:14:29,509
and uh she's coming up call us about

203
00:14:32,389 --> 00:14:30,320
that

204
00:14:34,069 --> 00:14:32,399
link

205
00:14:35,829 --> 00:14:34,079
yeah we're looking at that and we don't

206
00:14:37,509 --> 00:14:35,839
have any steps for you right now we're

207
00:14:40,069 --> 00:14:37,519
checking into a couple of things that we

208
00:14:42,230 --> 00:14:40,079
may be calling you to now later

209
00:14:44,310 --> 00:14:42,240
what we'd like for you to now do now

210
00:14:46,470 --> 00:14:44,320
though is

211
00:14:49,910 --> 00:14:46,480
we've made the decision down here to go

212
00:14:52,150 --> 00:14:49,920
ahead and save fuel cell 2.

213
00:14:54,790 --> 00:14:52,160

first however we have a number of power

214
00:14:56,949 --> 00:14:54,800
down steps that are will involve both

215
00:14:59,110 --> 00:14:56,959
orbiter and payload equipment for you to

216
00:15:02,550 --> 00:14:59,120
perform and we've come up with some

217
00:15:04,389 --> 00:15:02,560
priorities so we're just going to talk

218
00:15:05,430 --> 00:15:04,399
talk you through it a few steps at a

219
00:15:06,790 --> 00:15:05,440
time

220
00:15:08,629 --> 00:15:06,800
and

221
00:15:10,790 --> 00:15:08,639
we'll be watching you know the power