



1921



1714



1415



1315

1
00:00:03,860 --> 00:00:01,969
the payload operations integration

2
00:00:06,769 --> 00:00:03,870
Center at the Marshall Space Flight

3
00:00:09,049 --> 00:00:06,779
Center in Huntsville Alabama is the

4
00:00:11,900 --> 00:00:09,059
heartbeat for Space Station research

5
00:00:14,180 --> 00:00:11,910
operations and it is where Lori Meggs is

6
00:00:17,480 --> 00:00:14,190
this morning with a report on the start

7
00:00:19,130 --> 00:00:17,490
of expedition 40 science well there's

8
00:00:21,590 --> 00:00:19,140
plenty to keep this control center

9
00:00:22,970 --> 00:00:21,600
buzzing 24-7 and one of the men

10
00:00:25,580 --> 00:00:22,980
responsible for making sure that

11
00:00:27,259 --> 00:00:25,590
everyone is doing his or her job to make

12
00:00:28,880 --> 00:00:27,269
sure that research is conducted is Mike

13
00:00:30,650 --> 00:00:28,890

shell night thanks for joining us today

14

00:00:32,540 --> 00:00:30,660

your payload operations director here

15

00:00:34,639 --> 00:00:32,550

might tell us about your work and what

16

00:00:36,319 --> 00:00:34,649

you do good morning Lori the payload

17

00:00:38,209 --> 00:00:36,329

operations directors are the real time

18

00:00:41,540 --> 00:00:38,219

operations managers here at Marshall our

19

00:00:43,580 --> 00:00:41,550

team manages all the US payloads aboard

20

00:00:46,100 --> 00:00:43,590

the International Space Station this

21

00:00:47,810 --> 00:00:46,110

includes the u.s. lab ISA and the

22

00:00:50,060 --> 00:00:47,820

Jackson module including our external

23

00:00:52,340 --> 00:00:50,070

payloads and our position reports

24

00:00:54,560 --> 00:00:52,350

directly to the JSC flight director so

25

00:00:56,420 --> 00:00:54,570

expedition 40 we always say with a new

26
00:00:58,189 --> 00:00:56,430
crew comes new and exciting research we

27
00:01:00,170 --> 00:00:58,199
also have some ongoing research so let's

28
00:01:02,450 --> 00:01:00,180
go ahead and jump in and talk about a

29
00:01:04,460 --> 00:01:02,460
few things first one is opals yeah opals

30
00:01:08,390 --> 00:01:04,470
uh this is opals being removed from the

31
00:01:09,740 --> 00:01:08,400
spacex trunk back in april and this main

32
00:01:11,719 --> 00:01:09,750
objective is really test laser

33
00:01:15,140 --> 00:01:11,729
technologies to transmit data to earth

34
00:01:16,730 --> 00:01:15,150
and the laser data transmission they're

35
00:01:19,219 --> 00:01:16,740
much faster than our traditional RF

36
00:01:21,109 --> 00:01:19,229
transmissions they've been checking this

37
00:01:23,420 --> 00:01:21,119
out for the last six weeks hopefully

38
00:01:25,910 --> 00:01:23,430

we're going to have a hopefully opals

39

00:01:27,460 --> 00:01:25,920

will have their successful video data

40

00:01:29,600 --> 00:01:27,470

transmission here in the next few days

41

00:01:32,270 --> 00:01:29,610

but they've been doing a lot of great

42

00:01:34,969 --> 00:01:32,280

work and and we're excited about what

43

00:01:37,460 --> 00:01:34,979

they're doing a lot of what they're

44

00:01:40,850 --> 00:01:37,470

doing is handled by some of their young

45

00:01:42,590 --> 00:01:40,860

engineers at JPL yeah a lot of young

46

00:01:43,700 --> 00:01:42,600

guys doing that work and they're so

47

00:01:46,249 --> 00:01:43,710

excited about the work they're doing

48

00:01:48,770 --> 00:01:46,259

yeah this is HD they was just installed

49

00:01:51,560 --> 00:01:48,780

recently and it's the high-definition

50

00:01:53,350 --> 00:01:51,570

earth viewing and it's for high

51
00:01:56,630 --> 00:01:53,360
definition cameras mounted externally

52
00:01:57,950 --> 00:01:56,640
they are commercial cameras and one of

53
00:02:00,459 --> 00:01:57,960
the things is just evaluating these

54
00:02:03,170 --> 00:02:00,469
commercial cameras for future missions

55
00:02:04,639 --> 00:02:03,180
these a lot of this hardware was

56
00:02:06,380 --> 00:02:04,649
designed by some of our high school

57
00:02:09,380 --> 00:02:06,390
students in the hunch program

58
00:02:11,840 --> 00:02:09,390
and one of the exciting things is a lot

59
00:02:14,510 --> 00:02:11,850
of views on ustream oh yeah yeah a lot I

60
00:02:15,680 --> 00:02:14,520
catch myself looking at next we're doing

61
00:02:17,930 --> 00:02:15,690
a little gardening in space all right

62
00:02:20,290 --> 00:02:17,940
absolutely veggies our new greenhouse

63
00:02:22,820 --> 00:02:20,300

all aboard the ISS it was built to KSC

64

00:02:24,650 --> 00:02:22,830

we've started a first garden we've got

65

00:02:26,930 --> 00:02:24,660

some red lettuce growing been going

66

00:02:29,030 --> 00:02:26,940

about three weeks commander Swanson he's

67

00:02:30,650 --> 00:02:29,040

kind of become our resident garden we

68

00:02:33,740 --> 00:02:30,660

call somebody's gotta have a green

69

00:02:35,750 --> 00:02:33,750

absolutely some of the plants that we're

70

00:02:37,520 --> 00:02:35,760

growing them just really to validate the

71

00:02:40,370 --> 00:02:37,530

veggie hardware that's up there and

72

00:02:42,199 --> 00:02:40,380

we'll be harvesting these next week and

73

00:02:44,570 --> 00:02:42,209

we'll be freezing them and bring them

74

00:02:47,270 --> 00:02:44,580

back later in the summer nobody can

75

00:02:48,650 --> 00:02:47,280

sneak it a bite or anything not yet but

76
00:02:50,990 --> 00:02:48,660
that's kind of the gold maybe in the

77
00:02:52,910 --> 00:02:51,000
future we'll see how it goes that'll be

78
00:02:55,670 --> 00:02:52,920
very interesting another thing that we

79
00:02:56,720 --> 00:02:55,680
also like to talk about is or what's

80
00:02:58,310 --> 00:02:56,730
very important not we'd like to talk

81
00:03:00,350 --> 00:02:58,320
about it but the risk two crew members

82
00:03:01,910 --> 00:03:00,360
about radiation we need to study this to

83
00:03:05,180 --> 00:03:01,920
understand it more right tell us about

84
00:03:07,190 --> 00:03:05,190
this experiment the Radian to is the

85
00:03:09,710 --> 00:03:07,200
second run of the this experiment is

86
00:03:11,690 --> 00:03:09,720
kind of a passive experiment but it's

87
00:03:15,050 --> 00:03:11,700
sponsored by the Canadian Space Agency

88
00:03:16,819 --> 00:03:15,060

will have eight Neutron bubble detectors

89

00:03:18,500 --> 00:03:16,829

they have a lot little vials basically

90

00:03:22,640 --> 00:03:18,510

and they'll be placed in various

91

00:03:24,170 --> 00:03:22,650

locations around the ISS and it's going

92

00:03:26,000 --> 00:03:24,180

to help us better understand health

93

00:03:28,699 --> 00:03:26,010

risks that are astronauts exposed to

94

00:03:30,440 --> 00:03:28,709

especially a neutron exposure and how

95

00:03:32,600 --> 00:03:30,450

these work these little bubble detectors

96

00:03:35,600 --> 00:03:32,610

basically when a neutron strikes the

97

00:03:37,039 --> 00:03:35,610

tube a tiny bubble is created oh I so

98

00:03:40,250 --> 00:03:37,049

that's kind of interesting it's kind of

99

00:03:42,500 --> 00:03:40,260

interesting technology and we're

100

00:03:44,050 --> 00:03:42,510

planning on deploying these next week

101
00:03:46,520 --> 00:03:44,060
and they'll be out for seven days

102
00:03:49,720 --> 00:03:46,530
they'll be located around various

103
00:03:52,640 --> 00:03:49,730
locations around the space station and

104
00:03:54,920 --> 00:03:52,650
once that's over with we'll bring those

105
00:03:56,960 --> 00:03:54,930
back in collect them up and use the

106
00:03:58,940 --> 00:03:56,970
Russian bubble reader to to evaluate the

107
00:04:00,920 --> 00:03:58,950
data all right well we really want to

108
00:04:02,660 --> 00:04:00,930
talk a little bit about ocular health

109
00:04:05,660 --> 00:04:02,670
which is also important to criminality

110
00:04:07,699 --> 00:04:05,670
debt today what the crease primarily

111
00:04:10,190 --> 00:04:07,709
doing is ultrasounds they're doing

112
00:04:12,770 --> 00:04:10,200
ultrasounds on their eyes and heart

113
00:04:15,890 --> 00:04:12,780

ocular and cardiac evaluations they're

114

00:04:19,670 --> 00:04:15,900

doing that all afternoon so that's an

115

00:04:19,970 --> 00:04:19,680

interesting experiment commander Swanson

116

00:04:21,890 --> 00:04:19,980

this

117

00:04:24,530 --> 00:04:21,900

I think it's about his 60th day so he's

118

00:04:26,630 --> 00:04:24,540

collecting data for 60 day run and of

119

00:04:28,760 --> 00:04:26,640

course with Reed and Gerse that are up

120

00:04:30,800 --> 00:04:28,770

there this is their first full week in

121

00:04:33,110 --> 00:04:30,810

expedition 40 so we're collecting some

122

00:04:34,730 --> 00:04:33,120

baseline data for them so this is data

123

00:04:36,170 --> 00:04:34,740

we collect over over the entire

124

00:04:37,760 --> 00:04:36,180

increment and it's just happens to be

125

00:04:39,110 --> 00:04:37,770

the first time for them let's talk a

126

00:04:40,640 --> 00:04:39,120

little bit about the training that that

127

00:04:42,410 --> 00:04:40,650

you guys help with this talking about

128

00:04:44,390 --> 00:04:42,420

the new crew how much training do they

129

00:04:45,320 --> 00:04:44,400

get before they go and it continues

130

00:04:47,810 --> 00:04:45,330

while they're on board right oh

131

00:04:49,910 --> 00:04:47,820

absolutely absolutely the crews been

132

00:04:51,230 --> 00:04:49,920

training for about two years so this is

133

00:04:53,300 --> 00:04:51,240

not something new to them they're

134

00:04:55,910 --> 00:04:53,310

they're training all the time during

135

00:04:59,390 --> 00:04:55,920

that two-year period they they probably

136

00:05:00,800 --> 00:04:59,400

took about 110 courses which is that's a

137

00:05:02,480 --> 00:05:00,810

lot if you start thinking about it

138

00:05:05,420 --> 00:05:02,490

that's a lot of class work but it

139

00:05:07,820 --> 00:05:05,430

doesn't it doesn't stop there you know a

140

00:05:09,410 --> 00:05:07,830

lot of the experiments they'll do some

141

00:05:10,850 --> 00:05:09,420

refresher courses or will provide them

142

00:05:13,520 --> 00:05:10,860

reviews before they actually do some

143

00:05:15,980 --> 00:05:13,530

more complex experiments and then on

144

00:05:17,420 --> 00:05:15,990

some of those simpler will come simpler

145

00:05:18,830 --> 00:05:17,430

experiments they actually do

146

00:05:20,510 --> 00:05:18,840

computer-based training once they get on

147

00:05:23,120 --> 00:05:20,520

boards that may be the first time

148

00:05:24,860 --> 00:05:23,130

they've seen it or just you know they

149

00:05:26,840 --> 00:05:24,870

may not have studied it a lot before

150

00:05:29,480 --> 00:05:26,850

then so we do a lot of training on board

151
00:05:30,860 --> 00:05:29,490
it helps with just the training protocol

152
00:05:32,360 --> 00:05:30,870
as we go along and they're really

153
00:05:34,730 --> 00:05:32,370
helping you get the word out to a lot of

154
00:05:37,550 --> 00:05:34,740
tweets from Reed absolutely r & Reed is

155
00:05:40,100 --> 00:05:37,560
a tweet maniac so far he's had some

156
00:05:43,250 --> 00:05:40,110
great tweets we like that you know we've

157
00:05:44,900 --> 00:05:43,260
had a few tweeters up there I guess over

158
00:05:46,850 --> 00:05:44,910
the years and and they tend to go by

159
00:05:48,440 --> 00:05:46,860
astro whatever their name is and his his

160
00:05:50,780 --> 00:05:48,450
astro read and he's picked up about

161
00:05:53,150 --> 00:05:50,790
20,000 followers this week and i was

162
00:05:55,880 --> 00:05:53,160
looking at his feed last night he's got

163
00:05:57,590 --> 00:05:55,890

some great photos so you know people you