

# Operations Integration Center

NASA Marshall Space Flight Center  
Huntsville, Alabama



1  
00:00:04,550 --> 00:00:02,950  
let's now head out to the marshall space

2  
00:00:06,150 --> 00:00:04,560  
flight center in huntsville alabama

3  
00:00:08,629 --> 00:00:06,160  
where our friend lori meigs is standing

4  
00:00:11,110 --> 00:00:08,639  
by live lori things look uh slightly

5  
00:00:13,110 --> 00:00:11,120  
different out there in marshall today

6  
00:00:15,430 --> 00:00:13,120  
they sure do josh the payload operations

7  
00:00:17,189 --> 00:00:15,440  
integration center recently underwent a

8  
00:00:19,670 --> 00:00:17,199  
little facelift and now this room is

9  
00:00:21,349 --> 00:00:19,680  
equipped to do just about anything

10  
00:00:23,029 --> 00:00:21,359  
joining me now someone who knows a lot

11  
00:00:24,630 --> 00:00:23,039  
about that is rick rodriguez he is the

12  
00:00:27,109 --> 00:00:24,640  
payload operations manager for

13  
00:00:28,630 --> 00:00:27,119

expedition 36 here and rick first of all

14

00:00:29,750 --> 00:00:28,640

before we start talking about the room

15

00:00:32,229 --> 00:00:29,760

let's talk a little bit about the

16

00:00:33,590 --> 00:00:32,239

accomplishments of expedition 36 so far

17

00:00:34,630 --> 00:00:33,600

we're about a month in tell us what's

18

00:00:37,190 --> 00:00:34,640

been going on

19

00:00:39,270 --> 00:00:37,200

um well we've been very lucky we have a

20

00:00:41,350 --> 00:00:39,280

crew up there that is extremely hard

21

00:00:42,549 --> 00:00:41,360

working and really gun whole about

22

00:00:43,830 --> 00:00:42,559

everything so

23

00:00:45,750 --> 00:00:43,840

they're just doing every bit of science

24

00:00:48,150 --> 00:00:45,760

we can throw at them and we're throwing

25

00:00:49,750 --> 00:00:48,160

a lot of it at him so it's it's been a

26  
00:00:51,430 --> 00:00:49,760  
lot of science that we've accomplished

27  
00:00:53,510 --> 00:00:51,440  
in that one month let's talk a little

28  
00:00:55,830 --> 00:00:53,520  
bit about specific experiments i know

29  
00:00:58,790 --> 00:00:55,840  
you've had a lot of fun with one surface

30  
00:01:01,270 --> 00:00:58,800  
tele robotics yeah that one um it's a

31  
00:01:04,229 --> 00:01:01,280  
it's a experiment that we just started

32  
00:01:07,109 --> 00:01:04,239  
last week and it's where the uh the

33  
00:01:08,550 --> 00:01:07,119  
astronaut on the station drives a rover

34  
00:01:11,910 --> 00:01:08,560  
that's on the

35  
00:01:14,550 --> 00:01:11,920  
uh on a field at ames research center in

36  
00:01:15,910 --> 00:01:14,560  
california and so it's a remote control

37  
00:01:17,830 --> 00:01:15,920  
rover

38  
00:01:19,429 --> 00:01:17,840

it's an experiment within an experiment

39

00:01:21,270 --> 00:01:19,439

which is cool because

40

00:01:23,910 --> 00:01:21,280

chris the astronaut on station never saw

41

00:01:26,390 --> 00:01:23,920

it before he never got trained on it and

42

00:01:28,550 --> 00:01:26,400

so it's the first time he learned on

43

00:01:30,390 --> 00:01:28,560

station he he did a little conversation

44

00:01:32,550 --> 00:01:30,400

with the scientists on the ground and

45

00:01:34,149 --> 00:01:32,560

then he just went right to it and he had

46

00:01:35,429 --> 00:01:34,159

a lot of fun driving that rover around i

47

00:01:37,670 --> 00:01:35,439

bet every boy's dream but you know

48

00:01:39,429 --> 00:01:37,680

that's where you guys come in too you

49

00:01:41,190 --> 00:01:39,439

actually go to houston and train the

50

00:01:43,109 --> 00:01:41,200

astronauts on the procedures for

51  
00:01:45,670 --> 00:01:43,119  
experiments that's part of the job in

52  
00:01:47,510 --> 00:01:45,680  
here but this one was different yeah we

53  
00:01:49,670 --> 00:01:47,520  
still developed all the procedures and

54  
00:01:51,830 --> 00:01:49,680  
helped the scientists and and put

55  
00:01:53,910 --> 00:01:51,840  
together all the documentation that the

56  
00:01:55,670 --> 00:01:53,920  
crew uses but we didn't get to train the

57  
00:01:57,670 --> 00:01:55,680  
crew in this case right he did it all

58  
00:01:59,510 --> 00:01:57,680  
himself on orbit let's talk a little bit

59  
00:02:01,109 --> 00:01:59,520  
about the racks and another experiment

60  
00:02:04,069 --> 00:02:01,119  
that used our microgravity science

61  
00:02:06,389 --> 00:02:04,079  
glovebox right we just finished doing an

62  
00:02:08,790 --> 00:02:06,399  
experiment called bass

63  
00:02:11,270 --> 00:02:08,800

burning and suppression in space

64

00:02:12,790 --> 00:02:11,280

and that experiment is fun because we

65

00:02:14,949 --> 00:02:12,800

get to burn things

66

00:02:17,670 --> 00:02:14,959

they're little samples they're made of

67

00:02:21,830 --> 00:02:17,680

wax and things like wax and

68

00:02:23,670 --> 00:02:21,840

we learn how the flames grow in space

69

00:02:25,510 --> 00:02:23,680

and how to put them out so that's really

70

00:02:27,670 --> 00:02:25,520

important to figure out how do we do

71

00:02:29,030 --> 00:02:27,680

firefighting in space better than you

72

00:02:30,790 --> 00:02:29,040

know trying to learn how to do it better

73

00:02:31,589 --> 00:02:30,800

than we know now

74

00:02:33,670 --> 00:02:31,599

well

75

00:02:36,150 --> 00:02:33,680

last wednesday was a really special day

76  
00:02:38,309 --> 00:02:36,160  
yeah for you guys here you unveiled this

77  
00:02:40,550 --> 00:02:38,319  
beautiful new room it's a beautiful

78  
00:02:42,790 --> 00:02:40,560  
photograph on the back wall nice

79  
00:02:45,190 --> 00:02:42,800  
backdrop for us and and a lot of

80  
00:02:47,190 --> 00:02:45,200  
dignitaries on hand some important ones

81  
00:02:49,350 --> 00:02:47,200  
last week to unveil the new payload

82  
00:02:51,110 --> 00:02:49,360  
operations integration center the iss

83  
00:02:52,790 --> 00:02:51,120  
program manager was here

84  
00:02:54,630 --> 00:02:52,800  
marshall's center director and deputy

85  
00:02:56,150 --> 00:02:54,640  
director and also the manager of the

86  
00:02:58,229 --> 00:02:56,160  
mission operations laboratory was here

87  
00:03:00,229 --> 00:02:58,239  
so it was a big event but this room is

88  
00:03:01,910 --> 00:03:00,239

not only beautiful rick it's also

89

00:03:03,910 --> 00:03:01,920

functional tell us about how it is

90

00:03:05,350 --> 00:03:03,920

enhancing science okay

91

00:03:07,750 --> 00:03:05,360

the biggest thing you see when you walk

92

00:03:10,149 --> 00:03:07,760

into the room is the video wall

93

00:03:12,309 --> 00:03:10,159

it's 24 monitors all put together so

94

00:03:15,110 --> 00:03:12,319

it's like one big monitor and it's great

95

00:03:17,110 --> 00:03:15,120

because it gives us a way to communicate

96

00:03:18,949 --> 00:03:17,120

better it gives us a way to see more

97

00:03:20,229 --> 00:03:18,959

information and the whole team gets to

98

00:03:22,149 --> 00:03:20,239

see it

99

00:03:24,229 --> 00:03:22,159

so a couple of examples of what's on

100

00:03:26,070 --> 00:03:24,239

there that we use one of them is uh what

101

00:03:27,830 --> 00:03:26,080

we call a fault summary display if

102

00:03:30,309 --> 00:03:27,840

something happens on station we get a

103

00:03:32,470 --> 00:03:30,319

message and that false summary display

104

00:03:35,270 --> 00:03:32,480

will pop up and it actually is very

105

00:03:37,830 --> 00:03:35,280

apparent when it pops up it's very

106

00:03:39,270 --> 00:03:37,840

bright and so it all lets the whole room

107

00:03:41,430 --> 00:03:39,280

know hey something's happening we need

108

00:03:44,149 --> 00:03:41,440

to pay attention right so that's one the

109

00:03:46,550 --> 00:03:44,159

other example is what we call an aos los

110

00:03:47,990 --> 00:03:46,560

display aos is acquisitional signal

111

00:03:51,190 --> 00:03:48,000

that's when we have communication with

112

00:03:52,550 --> 00:03:51,200

the station los is when we lose it so we

113

00:03:54,470 --> 00:03:52,560

need to know that because if we're

114

00:03:56,869 --> 00:03:54,480

working with the scientists and the crew

115

00:03:59,270 --> 00:03:56,879

members then if they're coming up on an

116

00:04:01,030 --> 00:03:59,280

los period it's really useful to know

117

00:04:02,309 --> 00:04:01,040

because we can plan ahead and and tell

118

00:04:03,670 --> 00:04:02,319

the crew hey we're going to lose you for

119

00:04:05,589 --> 00:04:03,680

15 minutes we'll be back on the other

120

00:04:07,110 --> 00:04:05,599

side here's what we want you to do so

121

00:04:09,429 --> 00:04:07,120

it's very useful to have it right in

122

00:04:11,509 --> 00:04:09,439

front of us

123

00:04:13,270 --> 00:04:11,519

right and you've changed the layout too

124

00:04:15,589 --> 00:04:13,280

of the room you used to face the back

125

00:04:17,590 --> 00:04:15,599

wall now you face the video wall

126  
00:04:19,749 --> 00:04:17,600  
and that's improved communications for

127  
00:04:21,670 --> 00:04:19,759  
you guys right yeah and a couple of

128  
00:04:23,270 --> 00:04:21,680  
things it puts us all closer to the

129  
00:04:24,629 --> 00:04:23,280  
video

130  
00:04:26,230 --> 00:04:24,639  
before the people in the back of the

131  
00:04:28,469 --> 00:04:26,240  
room really couldn't see the front wall

132  
00:04:30,070 --> 00:04:28,479  
which is where we had the video and

133  
00:04:31,670 --> 00:04:30,080  
so now we're all closer together the

134  
00:04:33,510 --> 00:04:31,680  
other thing we did is we learned over

135  
00:04:35,030 --> 00:04:33,520  
the years that maybe one console

136  
00:04:36,230 --> 00:04:35,040  
operator needed to talk to another one

137  
00:04:38,230 --> 00:04:36,240  
but they were all the way across the

138  
00:04:39,830 --> 00:04:38,240

room so we've learned which ones needed

139

00:04:42,230 --> 00:04:39,840

to be close together and we moved the

140

00:04:43,350 --> 00:04:42,240

people around this time so now they're

141

00:04:45,350 --> 00:04:43,360

all

142

00:04:47,030 --> 00:04:45,360

that's better as far as which ones are

143

00:04:48,550 --> 00:04:47,040

closer to each other and we can talk to

144

00:04:49,670 --> 00:04:48,560

each other easier

145

00:04:51,590 --> 00:04:49,680

and one other thing i want to point out

146

00:04:53,510 --> 00:04:51,600

are those cool signs back there i need

147

00:04:55,270 --> 00:04:53,520

one for my office tell us they're

148

00:04:57,189 --> 00:04:55,280

functional too they're not only pretty

149

00:04:59,590 --> 00:04:57,199

right they're obviously they have our

150

00:05:00,710 --> 00:04:59,600

names on our position names but more

151  
00:05:02,230 --> 00:05:00,720  
importantly

152  
00:05:04,230 --> 00:05:02,240  
they change colors we can actually

153  
00:05:05,990 --> 00:05:04,240  
change the colors on them and we're

154  
00:05:07,990 --> 00:05:06,000  
starting to learn how to use that as a

155  
00:05:11,110 --> 00:05:08,000  
communication tool so for instance if

156  
00:05:13,430 --> 00:05:11,120  
we're doing a review of of a timeline or

157  
00:05:15,749 --> 00:05:13,440  
the crew's plan for tomorrow

158  
00:05:17,830 --> 00:05:15,759  
we may tell the team okay you start out

159  
00:05:19,510 --> 00:05:17,840  
blue which is the normal color and you

160  
00:05:21,670 --> 00:05:19,520  
may tell the team go green when you're

161  
00:05:23,029 --> 00:05:21,680  
good with the timeline or go yellow if

162  
00:05:24,950 --> 00:05:23,039  
you have a comment

163  
00:05:27,029 --> 00:05:24,960

so when the pod looks around the room

164

00:05:28,950 --> 00:05:27,039

it's easy to say who's who's good or

165

00:05:31,110 --> 00:05:28,960

who's not and we can concentrate on the

166

00:05:32,790 --> 00:05:31,120

people that need attention well we know

167

00:05:34,629 --> 00:05:32,800

how we feel about the room but let's

168

00:05:36,629 --> 00:05:34,639

hear what international space station

169

00:05:38,469 --> 00:05:36,639

program manager mike sufferdini what he

170

00:05:43,430 --> 00:05:38,479

thought about it

171

00:05:47,590 --> 00:05:45,350

it's got to feel like you have control

172

00:05:49,270 --> 00:05:47,600

of everything there's lots of displays

173

00:05:51,830 --> 00:05:49,280

lots of data

174

00:05:54,310 --> 00:05:51,840

we've added capability for more downlink

175

00:05:55,990 --> 00:05:54,320

more calm channels more video

176  
00:05:58,390 --> 00:05:56,000  
uh and you get the sense it's all right

177  
00:05:59,670 --> 00:05:58,400  
here in front of you now and uh and that

178  
00:06:01,990 --> 00:05:59,680  
to me

179  
00:06:04,469 --> 00:06:02,000  
sir rings of you know we're we're

180  
00:06:06,469 --> 00:06:04,479  
maximizing the use of the iss which of

181  
00:06:07,749 --> 00:06:06,479  
course is very important to us that's

182  
00:06:09,510 --> 00:06:07,759  
right how does this

183  
00:06:12,230 --> 00:06:09,520  
room play a role in the whole and fit

184  
00:06:14,870 --> 00:06:12,240  
into the whole space station program so

185  
00:06:17,749 --> 00:06:14,880  
as as most people know all of the

186  
00:06:19,749 --> 00:06:17,759  
research management is done here and

187  
00:06:21,830 --> 00:06:19,759  
all of the usos control of the

188  
00:06:23,590 --> 00:06:21,840

facilities done here and the management

189

00:06:25,830 --> 00:06:23,600

of all the us

190

00:06:27,670 --> 00:06:25,840

performed researches managed out of this

191

00:06:29,670 --> 00:06:27,680

facility so

192

00:06:31,270 --> 00:06:29,680

with the with the conclusion of last

193

00:06:33,189 --> 00:06:31,280

shuttle flight we transitioned really at

194

00:06:34,790 --> 00:06:33,199

that point from assembly operations to

195

00:06:36,629 --> 00:06:34,800

payload operations

196

00:06:38,950 --> 00:06:36,639

and and so the focus kind of all

197

00:06:40,070 --> 00:06:38,960

switched to to here in huntsville that's

198

00:06:41,510 --> 00:06:40,080

not to say there's not a lot of work

199

00:06:43,670 --> 00:06:41,520

going on in houston to operate the

200

00:06:45,430 --> 00:06:43,680

systems and keep the systems going but

201  
00:06:47,110 --> 00:06:45,440  
their focus really is to operate the

202  
00:06:48,550 --> 00:06:47,120  
systems as efficient as possible to

203  
00:06:51,029 --> 00:06:48,560  
provide the most

204  
00:06:52,309 --> 00:06:51,039  
time and capability to the research

205  
00:06:54,629 --> 00:06:52,319  
community so that they can get as much

206  
00:06:57,510 --> 00:06:54,639  
done on iss and so really

207  
00:06:59,670 --> 00:06:57,520  
this does represent where we are all

208  
00:07:02,230 --> 00:06:59,680  
starting to focus our attention on and

209  
00:07:03,430 --> 00:07:02,240  
so it's it's neat what's your vision for

210  
00:07:04,870 --> 00:07:03,440  
this room and the rest of the space

211  
00:07:07,270 --> 00:07:04,880  
station

212  
00:07:09,510 --> 00:07:07,280  
well my vision is that we fully utilize

213  
00:07:12,469 --> 00:07:09,520

the iss and we've got a ways to go to

214

00:07:14,469 --> 00:07:12,479

fully utilize it and that means maximize

215

00:07:15,670 --> 00:07:14,479

to the extent you can all the resources

216

00:07:18,390 --> 00:07:15,680

today

217

00:07:20,870 --> 00:07:18,400

we pretty much maximize crew time but we

218

00:07:22,790 --> 00:07:20,880

still got that's not the only resource a

219

00:07:25,270 --> 00:07:22,800

lot of research is done by commanding by

220

00:07:26,710 --> 00:07:25,280

this very room commanding of payloads on

221

00:07:29,029 --> 00:07:26,720

orbit

222

00:07:31,029 --> 00:07:29,039

and and we still have a ways to go to

223

00:07:32,469 --> 00:07:31,039

really fill up all the rack capacity the

224

00:07:33,909 --> 00:07:32,479

storage capacity things like that on

225

00:07:36,150 --> 00:07:33,919

board iss so

226

00:07:38,950 --> 00:07:36,160

my dream is to fully utilize iss and i

227

00:07:40,870 --> 00:07:38,960

really believe when we're done

228

00:07:42,550 --> 00:07:40,880

utilizing iss to the maximum extent

229

00:07:44,070 --> 00:07:42,560

possible great great things will be

230

00:07:46,790 --> 00:07:44,080

discovered on orbit that will really be

231

00:07:47,830 --> 00:07:46,800

a big benefit to us here on earth so

232

00:07:53,430 --> 00:07:47,840

it's a

233

00:07:57,990 --> 00:07:56,230

and taking a live look inside this very

234

00:07:59,110 --> 00:07:58,000

popular place rick we want to thank you

235

00:08:00,309 --> 00:07:59,120

we know you've got a lot of work to do

236

00:08:02,629 --> 00:08:00,319

we'll let you get back to all your

237

00:08:04,790 --> 00:08:02,639

expedition 36 work congratulations on

238

00:08:06,550 --> 00:08:04,800

your new room thank you and that'll do

239

00:08:08,070 --> 00:08:06,560

it for us from the marshall space flight

240

00:08:10,070 --> 00:08:08,080

center payload operations integration

241

00:08:12,629 --> 00:08:10,080

center now back to you josh at mission

242

00:08:13,749 --> 00:08:12,639

control in houston

243

00:08:15,029 --> 00:08:13,759

all right thank you lori of course if

244

00:08:17,749 --> 00:08:15,039

you would like to learn more about all

245

00:08:19,350 --> 00:08:17,759

the various facilities that help make up

246

00:08:21,350 --> 00:08:19,360

this international space station team

247

00:08:22,790 --> 00:08:21,360

including mission control houston

248

00:08:25,670 --> 00:08:22,800

just log onto the nasa website at

249

00:08:27,749 --> 00:08:25,680

[www.nasa.gov](http://www.nasa.gov)

250

00:08:29,350 --> 00:08:27,759

station you can take a tour

251

00:08:31,189 --> 00:08:29,360

of our facility here in houston also the

252

00:08:32,550 --> 00:08:31,199

different international partner

253

00:08:35,190 --> 00:08:32,560

facilities around the world including