



1
00:00:00,766 --> 00:00:09,575
[Music]

2
00:00:16,048 --> 00:00:17,049
>> Kelly Humphries: Good day,

3
00:00:17,049 --> 00:00:22,154
and welcome to "Space
Station Live"

4
00:00:22,154 --> 00:00:25,357
and the Christopher C. Kraft
Jr. Mission Control Center

5
00:00:25,357 --> 00:00:27,126
in Houston, Texas, where a team

6
00:00:27,126 --> 00:00:30,129
of flight controllers is
watching over the activities

7
00:00:30,129 --> 00:00:31,764
of the Expedition 35

8
00:00:31,764 --> 00:00:35,067
and 36 crews aboard the
International Space Station.

9
00:00:35,067 --> 00:00:37,503
Flight Director today
is Dina Contella,

10
00:00:37,503 --> 00:00:39,305
and she's on console
being assisted

11
00:00:39,305 --> 00:00:43,175
by Spacecraft Communicator
or CAPCOM, Jeremy Hansen.

12

00:00:43,175 --> 00:00:45,778

It's appropriate for Jeremy
to be on console today

13

00:00:45,778 --> 00:00:48,547

with the first Canadian
Commander preparing

14

00:00:48,547 --> 00:00:50,116

to depart the Space
Station tonight.

15

00:00:50,116 --> 00:00:52,685

Hansen's also a Canadian
Space Agency astronaut.

16

00:00:52,685 --> 00:00:55,688

He was picked in May of
2009 as one of two members

17

00:00:55,688 --> 00:00:58,657

of the third Canadian
astronaut selection class.

18

00:00:58,657 --> 00:01:01,427

One of 14 members of the
20th NASA astronaut class,

19

00:01:01,427 --> 00:01:06,699

and he graduated from training
-- his initial training in 2011.

20

00:01:06,699 --> 00:01:08,501

On board the International
Space Station, of course,

21

00:01:08,501 --> 00:01:11,003

we still have six
astronauts and cosmonauts.

22

00:01:11,003 --> 00:01:16,008

The Expedition 35 crew is made up of Commander Chris Hadfield,

23

00:01:16,008 --> 00:01:17,843

who has just handed over command

24

00:01:17,843 --> 00:01:20,412

of the station to Pavel Vinogradov.

25

00:01:20,412 --> 00:01:22,915

He's joined by Roman Romanenko

26

00:01:22,915 --> 00:01:26,318

of the Russian Federal Space Agency, Tom Marshburn of NASA,

27

00:01:26,318 --> 00:01:30,222

Chris Cassidy of NASA, and of course, Alexander Misurkin also

28

00:01:30,222 --> 00:01:33,325

of the Canadian -- of the Russian Federal Space Agency.

29

00:01:33,325 --> 00:01:36,328

The crew is going through a very busy morning.

30

00:01:36,328 --> 00:01:38,664

They awoke a little bit later than usual,

31

00:01:38,664 --> 00:01:43,269

getting some extra rest after a busy space walking weekend,

32

00:01:43,269 --> 00:01:46,572
at 6:00 a.m. Central Time this
morning to begin preparations

33
00:01:46,572 --> 00:01:50,409
for the departure of Hadfield,
Romanenko, and Tom Marshburn,

34
00:01:50,409 --> 00:01:52,478
who'll be coming home
later this evening

35
00:01:52,478 --> 00:01:54,413
to the [inaudible]
of Kazakhstan.

36
00:01:54,413 --> 00:01:57,983
We have a replay of the
daily planning conference

37
00:01:57,983 --> 00:02:00,119
in which Hadfield and
[inaudible] played tribute

38
00:02:00,119 --> 00:02:03,455
to the flight control
teams that support them.

39
00:02:03,455 --> 00:02:12,531
Let's take a listen to that now.

40
00:02:13,499 --> 00:02:14,200
>> [inaudible] station
[inaudible].

41
00:02:14,200 --> 00:02:14,867
Good morning, Houston.

42
00:02:14,867 --> 00:02:16,202
[inaudible] Houston.

43

00:02:16,202 --> 00:02:17,570

>> [inaudible] Good morning,
International Space Station.

44

00:02:17,570 --> 00:02:25,344

We're happy to join you on the
first day of Expedition 36.

45

00:02:25,344 --> 00:02:34,420

>> [inaudible] Expedition 36.

46

00:02:42,094 --> 00:02:36,288

[inaudible].

47

00:02:42,094 --> 00:02:43,195

[inaudible] to ask

48

00:02:43,195 --> 00:02:50,502

if [inaudible] start

[inaudible] of Houston.

49

00:02:50,502 --> 00:02:51,270

[pause]

50

00:02:51,270 --> 00:02:54,039

>> Houston, good morning.

51

00:02:57,676 --> 00:03:00,479

>> Jeremy Hansen:

Good morning, Chris.

52

00:03:00,479 --> 00:03:03,949

Great to talk to you.

53

00:03:03,949 --> 00:03:05,150

Important day today.

54

00:03:05,150 --> 00:03:07,353

We're looking forward
to getting some

55

00:03:07,353 --> 00:03:11,123

of the precious cargo you
have onboard safely back

56

00:03:11,123 --> 00:03:13,592

to the planet Earth today.

57

00:03:17,162 --> 00:03:20,099

>> Chris Hadfield: All
smiles up here, Jeremy.

58

00:03:22,234 --> 00:03:23,602

>> Jeremy Hansen:
Yeah, absolutely.

59

00:03:23,602 --> 00:03:26,105

We don't have a lot
for you today.

60

00:03:26,105 --> 00:03:29,141

The plan's on board [inaudible]
you know Delta for Houston.

61

00:03:29,141 --> 00:03:32,411

Basically, we just wanted to
send along our words of thanks

62

00:03:32,411 --> 00:03:35,748

for the hard work for the
Expedition 35 crew before they

63

00:03:35,748 --> 00:03:36,815

come home.

64

00:03:36,815 --> 00:03:39,151

We wish them God's

speed and safe travels.

65

00:03:39,151 --> 00:03:43,989

And when -- if you have
any comments or questions

66

00:03:43,989 --> 00:03:45,658

for us, we're standing by.

67

00:03:45,658 --> 00:03:48,794

But if not, I'll pass you
over to Penny in Huntsville.

68

00:03:48,794 --> 00:03:50,729

She had some words.

69

00:03:52,665 --> 00:03:54,833

>> Chris Hadfield: Hey, Jeremy,
just before we leave Houston --

70

00:03:54,833 --> 00:03:59,471

it's been an incredible
personal experience as well

71

00:03:59,471 --> 00:04:01,907

as an extremely satisfying
professional experience for all

72

00:04:01,907 --> 00:04:04,777

of us on board, as Tom and
I are packing up our things,

73

00:04:04,777 --> 00:04:06,111

getting ready to go home.

74

00:04:06,111 --> 00:04:09,581

And we will be talking to
Huntsville and the other centers

75

00:04:09,581 --> 00:04:10,649
that have done

76
00:04:10,649 --> 00:04:11,817
such a magnificent
job around the world.

77
00:04:11,817 --> 00:04:14,420
I just wanted to
momentarily thank the --

78
00:04:14,420 --> 00:04:16,689
my home agency, the
Canadian Space Agency,

79
00:04:16,689 --> 00:04:21,627
who have worked this flight for
years and years and supported

80
00:04:21,627 --> 00:04:24,897
so magnificently and have
allowed all this to happen

81
00:04:24,897 --> 00:04:25,998
on behalf of my country.

82
00:04:25,998 --> 00:04:31,804
And it's just been an
extremely fulfilling

83
00:04:31,804 --> 00:04:34,139
and amazing experience
end to end.

84
00:04:34,139 --> 00:04:37,109
We're of course focusing very
much on [inaudible] home now

85
00:04:37,109 --> 00:04:41,213
and looking forward to seeing

everybody face-to-face.

86

00:04:41,213 --> 00:04:44,383

But from this Canadian
to all the rest of them,

87

00:04:44,383 --> 00:04:46,819

I offer an enormous debt
of thanks and look forward

88

00:04:46,819 --> 00:04:48,554

to seeing everybody soon.

89

00:04:48,554 --> 00:04:51,423

>> Jeremy Hansen:
Well, the feeling is --

90

00:04:51,423 --> 00:04:52,658

>> Tom Marshburn:
Jeremy, I'd like to --

91

00:04:52,658 --> 00:04:56,228

I'd like to just
step in real quick.

92

00:04:56,228 --> 00:05:01,700

This is Tom, and just to close
it out from us, finishing up 35.

93

00:05:01,700 --> 00:05:05,070

I just want to say never
forget that what everyone does

94

00:05:05,070 --> 00:05:08,040

down there is absolutely
miraculous,

95

00:05:08,040 --> 00:05:11,110

not only keeping this incredible
spacecraft going but taking care

96

00:05:11,110 --> 00:05:13,846
of your fellow human
beings up on board.

97

00:05:13,846 --> 00:05:17,249
So, thanks for your patience,
and thanks for everything.

98

00:05:19,685 --> 00:05:21,954
>> Jeremy Hansen: Everyone
on the ground is more

99

00:05:21,954 --> 00:05:23,122
than happy to do that job.

100

00:05:23,122 --> 00:05:25,524
You guys make this
very fulfilling

101

00:05:25,524 --> 00:05:27,760
for everybody watching
the way you work in space.

102

00:05:27,760 --> 00:05:30,295
It looks like it's just
been an amazing place to be.

103

00:05:30,295 --> 00:05:31,330
Makes us all envious.

104

00:05:31,330 --> 00:05:32,931
We want to come up
there and join you.

105

00:05:32,931 --> 00:05:34,933
You've done a really great job.

106

00:05:34,933 --> 00:05:38,604

And Chris, I know from
the Canadian Space Agency,

107

00:05:38,604 --> 00:05:40,205

I received some emails
yesterday.

108

00:05:40,205 --> 00:05:43,342

There's a lot of pride
there in what you've done.

109

00:05:43,342 --> 00:05:46,545

Everyone's very appreciative
of your efforts

110

00:05:46,545 --> 00:05:49,782

to make a name for
Canada and space.

111

00:05:49,782 --> 00:05:54,353

So, thank you from all of us.

112

00:05:54,353 --> 00:05:56,088

>> Kelly Humphries: And
very appropriate words.

113

00:05:56,088 --> 00:05:59,825

As Tom Marshburn mentioned,
the Herculean efforts

114

00:05:59,825 --> 00:06:02,594

of mission control here and
Chris Hadfield, the Commander --

115

00:06:02,594 --> 00:06:05,330

off-going Commander --
thanking folks around the world

116

00:06:05,330 --> 00:06:07,800

that have supported

their stay on orbit.

117

00:06:07,800 --> 00:06:12,504

A good example of that was this weekend's activity on Thursday.

118

00:06:12,504 --> 00:06:16,675

We saw a major increase to a leak of an ammonia system

119

00:06:16,675 --> 00:06:19,445

out on the P6 truss structure on the Space Station.

120

00:06:19,445 --> 00:06:23,282

Within just a couple of days, the mission control team working

121

00:06:23,282 --> 00:06:25,851

with the crew on orbit was able to put together a space walk

122

00:06:25,851 --> 00:06:28,921

that successfully removed and replaced the pump

123

00:06:28,921 --> 00:06:33,459

and flow control subassembly box on Saturday during a five-hour

124

00:06:33,459 --> 00:06:35,227

and 30-minute space walk that was turned

125

00:06:35,227 --> 00:06:37,296

around probably quicker than any other space walk

126

00:06:37,296 --> 00:06:38,997

on the International

Space Station.

127

00:06:38,997 --> 00:06:43,502

Flight controllers here continue to monitor the successful work

128

00:06:43,502 --> 00:06:45,737

of Chris Cassidy and Tom Marshburn, who were outside

129

00:06:45,737 --> 00:06:49,274

for that space walk, as they watched the pump

130

00:06:49,274 --> 00:06:52,544

and flow control subsystem box that was installed.

131

00:06:52,544 --> 00:06:57,883

So far, we're not seeing any instances of the large leak

132

00:06:57,883 --> 00:07:00,619

that we were seeing prior to the space walk.

133

00:07:00,619 --> 00:07:03,589

The older box that was installed

134

00:07:03,589 --> 00:07:06,859

in a stowage platform is showing some sights --

135

00:07:06,859 --> 00:07:09,695

signs of minor leakage.

136

00:07:09,695 --> 00:07:10,996

It's going to take four

137

00:07:10,996 --> 00:07:13,799

to six weeks before we can
actually get all the data we

138

00:07:13,799 --> 00:07:16,468

need and follow the [inaudible]
of this leakage to ensure

139

00:07:16,468 --> 00:07:19,571

that this has solved the
problem that has been going

140

00:07:19,571 --> 00:07:22,207

on for quite some
time in this area

141

00:07:22,207 --> 00:07:23,842

of the ammonia cooling systems

142

00:07:23,842 --> 00:07:26,512

that help cool the
electrical generations,

143

00:07:26,512 --> 00:07:30,215

solar array systems, and the
International Space Station.

144

00:07:30,215 --> 00:07:33,418

Otherwise, everything is set
for tonight's return to Earth

145

00:07:33,418 --> 00:07:35,420

of the Expedition 35, folks.

146

00:07:35,420 --> 00:07:38,891

Commander Chris Hadfield, Soyuz
Commander Roman Romanenko,

147

00:07:38,891 --> 00:07:41,560

and NASA flight engineer

Tom Marshburn are going

148

00:07:41,560 --> 00:07:45,797
to be wrapping up 146
days in space and 144 days

149

00:07:45,797 --> 00:07:47,900
on the International
Space Station.

150

00:07:47,900 --> 00:07:52,404
Of course, yesterday,
Hadfield turned over command

151

00:07:52,404 --> 00:07:54,273
of the station to
Pavel Vinogradov

152

00:07:54,273 --> 00:07:56,341
in the change of
command ceremony.

153

00:07:56,341 --> 00:07:59,244
And Expedition 36
formally begins tonight

154

00:07:59,244 --> 00:08:01,980
at 6:08 p.m. Central
Time at the time

155

00:08:01,980 --> 00:08:04,583
that the Soyuz spacecraft
docks, taking Hadfield,

156

00:08:04,583 --> 00:08:06,351
Romanenko, and Marshburn home.

157

00:08:06,351 --> 00:08:07,452
>> [inaudible] 35.

158

00:08:07,452 --> 00:08:09,354

It is time to --

159

00:08:09,354 --> 00:08:12,758

>> Kelly Humphries: We do have
a small snippet of the change

160

00:08:12,758 --> 00:08:16,728

of command ceremony that
we'll replay for you later.

161

00:08:16,728 --> 00:08:18,597

Our hatch closure is scheduled

162

00:08:18,597 --> 00:08:20,666

for 2:50 p.m. Central
Time today,

163

00:08:20,666 --> 00:08:24,503

and then undocking's scheduled
at 6:08 p.m. Central Time.

164

00:08:24,503 --> 00:08:26,138

[inaudible] with the
deorbit burn that's planned

165

00:08:26,138 --> 00:08:29,508

for 8:37 p.m. Central
Time and landing

166

00:08:29,508 --> 00:08:34,613

in Kazakhstan 9:30 p.m.
Central Time tonight.

167

00:08:34,613 --> 00:08:37,049

That's going to be southeast of
the remote town, [inaudible],

168

00:08:37,049 --> 00:08:42,588

Kazakhstan, and the helicopters
and support teams are all

169
00:08:42,588 --> 00:08:45,223
in route to get ready
and in place

170
00:08:45,223 --> 00:08:48,927
for that landing
activity later tonight.

171
00:08:48,927 --> 00:08:50,329
Meanwhile, the next crew to go

172
00:08:50,329 --> 00:08:51,797
up on the International
Space Station --

173
00:08:51,797 --> 00:08:55,534
Karen Nyberg, Luca
Parmitano, and [inaudible].

174
00:08:55,534 --> 00:08:58,937
And their backups are doing
administrative work today,

175
00:08:58,937 --> 00:09:01,239
all set to depart Thursday
for the launch site

176
00:09:01,239 --> 00:09:03,375
at the Baikonur [inaudible]
in Kazakhstan

177
00:09:03,375 --> 00:09:05,243
for their final launch
preparations