



1
00:00:04,896 --> 00:00:06,976
>> Greetings from
Mission Control Houston,

2
00:00:06,976 --> 00:00:09,076
and welcome to "Space
Station Live".

3
00:00:09,906 --> 00:00:11,486
On board today, a lot

4
00:00:11,486 --> 00:00:15,276
of biological experiments
taking place, starting off

5
00:00:15,276 --> 00:00:17,146
with NASA astronaut
Michael Hopkins,

6
00:00:17,146 --> 00:00:21,206
who immediately upon waking
up today collected a number

7
00:00:21,206 --> 00:00:24,426
of vital signs that he'll be
doing periodically throughout

8
00:00:24,426 --> 00:00:25,986
his anchoring on
board the station,

9
00:00:25,986 --> 00:00:27,716
taking his blood
pressure and temperature.

10
00:00:28,536 --> 00:00:30,496
Aside from that, he'll
be spending a lot

11

00:00:30,496 --> 00:00:32,356
of time today inside one

12

00:00:32,356 --> 00:00:35,546
of the station airlocks doing
some maintenance on one of the,

13

00:00:35,546 --> 00:00:39,796
two of the station
extravehicular mobility units,

14

00:00:39,796 --> 00:00:44,826
or EMU's, that all US-base
spacewalking astronauts use,

15

00:00:44,826 --> 00:00:47,646
the large white suits
you can see there.

16

00:00:47,836 --> 00:00:50,606
Today, Hopkins is responsible
for scrubbing maintenance,

17

00:00:51,636 --> 00:00:55,186
clearing out the cooling water
loops, and two of the EMU suits

18

00:00:55,186 --> 00:00:56,866
and also inside of the airlock.

19

00:00:57,556 --> 00:01:00,526
Aside from that, he'll also be
doing just some familiarization

20

00:01:00,526 --> 00:01:02,666
work with the space
suits and tag

21

00:01:02,666 --> 00:01:06,006
up with some ground

experts a little bit later

22

00:01:06,006 --> 00:01:07,876

in the afternoon as he prepares

23

00:01:07,876 --> 00:01:10,336

to do some more maintenance
activities tomorrow

24

00:01:10,336 --> 00:01:11,396

on the spacesuits.

25

00:01:12,216 --> 00:01:14,046

What we now Luca Parmitano

26

00:01:14,046 --> 00:01:17,376

of the European Space Agency
upon wake up this morning,

27

00:01:17,856 --> 00:01:21,086

taking some saliva samples for
the human research facility

28

00:01:21,086 --> 00:01:22,746

on board the International
Space Station.

29

00:01:23,306 --> 00:01:25,576

He was also using
some devices on board

30

00:01:25,576 --> 00:01:28,706

to measure the internal
pressure of his own eyes

31

00:01:29,026 --> 00:01:33,446

and also performing the skin b
experiment, which taking place

32

00:01:33,446 --> 00:01:35,266
on board station,
hoping to contribute

33
00:01:35,266 --> 00:01:38,386
to a better understanding
of skin-aging mechanisms,

34
00:01:38,786 --> 00:01:41,306
which are slow, so
slow down here

35
00:01:41,306 --> 00:01:43,316
on Earth it's pretty
much impossible

36
00:01:43,316 --> 00:01:45,776
to study them very efficiently,

37
00:01:45,816 --> 00:01:48,326
but in that microgravity
environment,

38
00:01:48,326 --> 00:01:50,336
it's accelerated a great deal.

39
00:01:50,336 --> 00:01:52,466
So just one of, again,

40
00:01:52,466 --> 00:01:54,346
many biological experiments
taking place

41
00:01:54,346 --> 00:01:55,366
on board the station.

42
00:01:55,986 --> 00:01:59,246
Parmitano also responsible
for setting up some samples

43

00:01:59,246 --> 00:02:03,096

for the binary colloidal alloy
test, continuing some work

44

00:02:03,096 --> 00:02:04,256

that he did yesterday.

45

00:02:04,466 --> 00:02:08,036

That studying nanoscale
particles dispersed in liquids

46

00:02:08,356 --> 00:02:10,406

in a process known as
colloidal suspension.

47

00:02:11,586 --> 00:02:16,166

Meanwhile, NASA astronaut Karen
Nyberg this morning also taking

48

00:02:16,166 --> 00:02:17,876

some biological samples.

49

00:02:17,876 --> 00:02:19,356

She was taking some
blood samples

50

00:02:19,356 --> 00:02:22,266

for the NASA's vascular
experiment,

51

00:02:22,666 --> 00:02:26,366

which looks to determine
the impact of long durations

52

00:02:26,366 --> 00:02:29,876

of time spent in space
and the effect that it has

53

00:02:29,876 --> 00:02:32,676

on these astronauts' blood
vessels and also hoping

54

00:02:32,676 --> 00:02:35,496

to develop any necessary
countermeasures

55

00:02:35,496 --> 00:02:37,946

to counterman any of
those negative effects.

56

00:02:38,636 --> 00:02:41,856

Aside from that, Nyberg doing
some troubleshooting work

57

00:02:41,856 --> 00:02:45,206

with the station's
funduscope, a device found

58

00:02:45,326 --> 00:02:47,116

down here on the ground.

59

00:02:47,116 --> 00:02:49,806

You could find it in
your eye doctor's office.

60

00:02:49,806 --> 00:02:52,816

It's used for any eye
exams and also used

61

00:02:52,816 --> 00:02:55,236

to determine retina health
inside of these astronauts.

62

00:02:55,636 --> 00:02:59,576

A little bit earlier,
she also fixed a portable

63

00:02:59,576 --> 00:03:02,316

electrocardiogram and a number

of electrodes were [inaudible]

64

00:03:02,316 --> 00:03:04,886

for a 24-hour health
monitoring session.

65

00:03:05,396 --> 00:03:09,666

She'll also be joining Michael
Hopkins in that EMU review.

66

00:03:10,056 --> 00:03:14,776

She'll be assisting and taking
part in all of that repair

67

00:03:14,776 --> 00:03:16,406

and replacement work
that'll be happening

68

00:03:16,406 --> 00:03:17,976

on those suits tomorrow.

69

00:03:18,406 --> 00:03:21,246

Over on the Russian
side of the house,

70

00:03:21,556 --> 00:03:25,086

Commander Fyodor Yurchikhin
also doing a biological study,

71

00:03:25,356 --> 00:03:27,576

studying the veins in
the lower extremities

72

00:03:27,576 --> 00:03:30,596

in an ongoing Russian experiment
that he'll do a number

73

00:03:30,596 --> 00:03:32,596

of readings throughout
his increment on board.

74

00:03:33,246 --> 00:03:35,826

Also continuing some work
that he started yesterday

75

00:03:35,826 --> 00:03:38,126

on some preventative maintenance

76

00:03:38,126 --> 00:03:39,656

on the ventilation
systems inside

77

00:03:39,656 --> 00:03:41,556

of the Russian Vesda
service module.

78

00:03:42,886 --> 00:03:45,916

Fellow Russian cosmonaut
Oleg Kotov taking some blood

79

00:03:45,916 --> 00:03:50,026

and saliva samples for
the human research side

80

00:03:50,026 --> 00:03:51,886

over on the Russian segment.

81

00:03:52,416 --> 00:03:57,876

Also doing a lot of spacesuit
work today as he continues

82

00:03:57,876 --> 00:04:02,896

to configure his Orland
spacesuit and all the tools

83

00:04:02,896 --> 00:04:05,116

for his upcoming
EVA on November 9th,

84

00:04:05,516 --> 00:04:08,176
which will see two Russian
cosmonauts, Oleg Kotov

85

00:04:08,176 --> 00:04:11,776
and Sergey Ryazanskiy step
outside of station airlocks.

86

00:04:11,776 --> 00:04:15,396
Ryazanskiy doing a
lot of those same EVA,

87

00:04:15,396 --> 00:04:17,236
our spacewalk preparations today

88

00:04:17,236 --> 00:04:21,036
as Kotov also taking some
time today to participate

89

00:04:21,036 --> 00:04:22,836
in the Russian signor
experiment,

90

00:04:23,246 --> 00:04:26,726
doing some observations
of various parts

91

00:04:26,726 --> 00:04:27,656
of the world's oceans,

92

00:04:28,096 --> 00:04:31,356
an ongoing Russian research
study trying to locate

93

00:04:31,356 --> 00:04:34,456
and identify bioproductive
water areas across the globe.

94

00:04:35,716 --> 00:04:37,086
Aside from all this work,

95

00:04:37,216 --> 00:04:40,906

the crew yesterday saw the
signa's vehicle depart.

96

00:04:41,426 --> 00:04:45,286

That vehicle, the unmanned
cover craft completing its final

97

00:04:45,286 --> 00:04:49,186

do-over burns this
morning, and descending

98

00:04:49,186 --> 00:04:50,746

through the Earth's atmosphere

99

00:04:50,746 --> 00:04:52,546

for eventual burn
up and destruction.

100

00:04:53,086 --> 00:04:56,486

Again, that final do-over burn
will come a little bit later

101

00:04:56,486 --> 00:04:59,706

this afternoon, 12:41
p.m. Central Time,

102

00:05:00,206 --> 00:05:03,966

bringing a final end to orbital
sciences signa's first mission