



1
00:00:01,476 --> 00:00:03,676
Good morning and welcome
to Mission Control Houston.

2
00:00:03,676 --> 00:00:06,726
We're inside the International
Space Station flight control room

3
00:00:06,886 --> 00:00:11,226
where the team is monitoring systems aboard the
station and following along with the activities

4
00:00:11,226 --> 00:00:15,016
of the Expedition 30 crew who's living
and working on board the complex.

5
00:00:15,896 --> 00:00:22,676
The crew is working through the early
afternoon of its stay on board with a focus

6
00:00:22,676 --> 00:00:27,806
on maintenance work, science activities
and preparation for the departure

7
00:00:27,806 --> 00:00:33,456
of a cargo vehicle from the station next week.

8
00:00:33,666 --> 00:00:37,646
All of the crew members are working
on a shifted to schedule today.

9
00:00:37,646 --> 00:00:41,496
They awakened at 1:30 a.m. Central
time - about an hour and a half later -

10
00:00:41,496 --> 00:00:44,556
and will go to sleep about
5:30 p.m. Central time.

11

00:00:45,096 --> 00:00:50,346

That was to adjust the schedule to allow for some preparations with the 45 Progress vehicle

12

00:00:51,086 --> 00:00:54,136

that is attached to the station and those activities

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00:00:54,136 --> 00:00:57,576

to occur while the station was orbiting over Russian ground sites.

14

00:00:57,676 --> 00:01:01,436

The particular activity being scheduled is

15

00:01:01,436 --> 00:01:07,706

to install a microsatellite called the Chibis-M satellite inside the hatchway of the Progress

16

00:01:08,406 --> 00:01:12,316

so that after the Progress departs the station the hatch will be opened

17

00:01:12,316 --> 00:01:18,036

and that microsatellite will be deployed.

18

00:01:20,146 --> 00:01:26,456

Cosmonauts Anton Shkaplerov and Oleg Kononenko are working on that activity later today

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00:01:27,226 --> 00:01:30,486

that nanosatellite will be deployed on Tuesday, Jan.

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00:01:30,486 --> 00:01:40,286

24 about 5:19 p.m. Central time at a distance of about 7,300 statute miles behind and 62 miles

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00:01:40,286 --> 00:01:44,916

above the station one day after the

Progress 45 undocks from the complex.

22
00:01:45,566 --> 00:01:51,276
The satellite will spend at least four years in space collecting data on plasma wave activity.

23
00:01:52,486 --> 00:01:56,396
The Progress then is scheduled to undock from the station on Monday.

24
00:01:56,906 --> 00:02:03,286
It will be removed from the docking compartment on the station at about 4:10 p.m. Central time,

25
00:02:04,166 --> 00:02:10,126
and then on the 24th after that satellite's been deployed the Progress will be commanded

26
00:02:10,126 --> 00:02:13,706
to deorbit into the Earth's atmosphere and burn up over the Pacific Ocean.

27
00:02:17,886 --> 00:02:22,206
In other work on board the space station today astronaut Don Pettit is working

28
00:02:22,206 --> 00:02:23,656
with some science experiments.

29
00:02:24,176 --> 00:02:28,516
He's been gathering the hardware for the SLICE experiment so it can be installed

30
00:02:28,516 --> 00:02:30,976
in the Microgravity Science Glovebox tomorrow.

31
00:02:31,646 --> 00:02:35,506
He's also working on that glovebox to help prepare it for its science work

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00:02:35,506 --> 00:02:37,496

and doing some recertification work of it.

33

00:02:38,126 --> 00:02:41,626

The SLICE is the Structure and
Liftoff in Combustion Experiment

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00:02:41,626 --> 00:02:44,506

which investigates the nature
of flames in microgravity.

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00:02:47,136 --> 00:02:51,906

The results from those experiments could lead
to improvements in technologies which aim

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00:02:51,906 --> 00:02:55,656

to reduce pollution emissions
and improve burning efficiency

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00:02:55,656 --> 00:02:57,396

for a wide variety of industries.

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00:02:59,636 --> 00:03:07,396

Pettit will also be performing an ultrasound
scan of his leg later and some help remote help

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00:03:07,576 --> 00:03:11,696

from the ground team in doing that
procedure for an experiment called Sprint,

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00:03:12,336 --> 00:03:18,126

which is also Integrated Resistance and
Aerobic Training Study which evaluates the use

41

00:03:18,126 --> 00:03:23,126

of high-intensity, low-volume exercise
training to minimize the loss of muscle,

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00:03:23,126 --> 00:03:27,646

bone and cardiovascular function in
space station crew members while living

43

00:03:27,646 --> 00:03:29,896

on board the space station
for long-duration missions.

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00:03:29,976 --> 00:03:37,306

Elsewhere on the complex, space station
Commander Dan Burbank has been working

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00:03:37,306 --> 00:03:43,246

on upgrading some software on a communications
unit, the backup unit that would be used

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00:03:43,246 --> 00:03:49,666

for commercial visiting vehicles to the
complex such as the SpaceX Dragon vehicle.

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00:03:53,476 --> 00:03:57,536

Burbank is also assisting with that
Microgravity Science Glovebox maintenance.

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00:04:00,566 --> 00:04:04,076

European Space Agency astronaut
Andre Kuipers is wrapping up his work

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00:04:04,076 --> 00:04:08,656

with an experiment this week called the
Integrated Cardiovascular experiment

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00:04:08,656 --> 00:04:12,896

which is monitoring and studying
the extent of cardiac atrophy

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00:04:12,896 --> 00:04:14,886

or the decrease in the size of the heart muscle.

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00:04:15,466 --> 00:04:18,716

He's wrapping up a monitoring

session in which he's worn a halter

53

00:04:19,406 --> 00:04:23,696
to measure his physical activity
and cardiac work for a few days.

54

00:04:27,666 --> 00:04:32,126
On the ground, the team here has been
networking on some robotics activities.

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00:04:32,606 --> 00:04:36,756
The robotics flight control team has been
remotely commanding some of the robotic systems

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00:04:36,756 --> 00:04:38,566
on the outside of the station this week,

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00:04:38,986 --> 00:04:45,626
and today that involved using the space
station robotic arm and its Dextre attachment

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00:04:45,626 --> 00:04:49,296
to survey an experiment on
the outside of the station.

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00:04:49,386 --> 00:04:56,936
The Space Test Program Houston 3 payload is on
the outside of the complex located on the P3,

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00:04:56,936 --> 00:05:01,556
or Port 3, truss structure exposed to the
environment of space and is being surveyed

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00:05:01,556 --> 00:05:03,846
to see how it's been faring in that position.

62

00:05:04,806 --> 00:05:08,706
It is a complement of four individual
experiments that are testing concepts

