



22:25 22:25



Mission Management Team



22:25 22:25

HOUSTON TV SD



1
00:00:01,256 --> 00:00:03,346
Good morning and welcome
to Mission Control Houston.

2
00:00:03,346 --> 00:00:08,236
We're inside the International Space Station
flight control room for today's ISS Update.

3
00:00:08,786 --> 00:00:10,886
It is Wednesday, January 18.

4
00:00:11,666 --> 00:00:16,256
The team here in the flight control room is
watching over systems aboard the space station

5
00:00:17,116 --> 00:00:20,576
and following along with the
activities of the Expedition 30 crew.

6
00:00:21,976 --> 00:00:31,986
The crew on board the space station is
working through the mid-afternoon of its day,

7
00:00:32,416 --> 00:00:37,436
focusing on science experiments and maintenance
and stowage on board the space station today.

8
00:00:37,766 --> 00:00:43,706
First up today, all of the crew members
participated in a fire drill to go

9
00:00:43,706 --> 00:00:47,026
through the procedures if there
were such an emergency on board.

10
00:00:48,446 --> 00:00:53,476
And then they separated off into
various tasks around the space station.

11

00:00:54,516 --> 00:00:58,196

Space station Commander Dan
Burbank did some sampling

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00:00:58,196 --> 00:01:05,416

of the surfaces inside the space station to
return those samples for analysis on Earth.

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00:01:06,386 --> 00:01:10,436

He is also doing some maintenance on
the Advanced Resistive Exercise Device,

14

00:01:10,766 --> 00:01:13,476

which is an exercise machine
on board the station

15

00:01:13,476 --> 00:01:17,326

that helps simulate weight lifting
in a microgravity environment.

16

00:01:17,806 --> 00:01:26,486

NASA astronaut Don Pettit was working with
a science experiment that is ongoing now,

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00:01:26,486 --> 00:01:32,336

as he is performing an ultrasound
scan on himself with the assistance

18

00:01:32,336 --> 00:01:35,376

of European Space Agency
astronaut Andre Kuipers.

19

00:01:36,136 --> 00:01:39,196

This is part of the Integrated
Cardiovascular experiment.

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00:01:40,136 --> 00:01:45,886

The crew performs a resting scan with remote
guidance from the team on the ground to help

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00:01:45,966 --> 00:01:48,316
with using the ultrasound equipment.

22

00:01:48,646 --> 00:01:55,266
The Integrated Cardiovascular experiment
investigates the magnitude of the left

23

00:01:55,266 --> 00:01:59,836
and right ventricular atrophy, or
decrease in the size of the heart muscle,

24

00:02:00,336 --> 00:02:02,776
that is associated with long-duration
spaceflight.

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00:02:03,596 --> 00:02:05,926
That measurement is done using MRI.

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00:02:06,696 --> 00:02:10,836
And also the experiment relates
this type of atrophy to measures

27

00:02:10,836 --> 00:02:14,296
of physical activity and cardiac work in flight.

28

00:02:14,446 --> 00:02:19,906
That is done by crew members wearing
a monitor or halter for several days

29

00:02:19,956 --> 00:02:22,646
at a time to monitor their activities.

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00:02:22,676 --> 00:02:27,616
And then also the ultrasound is used for
this experiment to determine the time,

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00:02:27,616 --> 00:02:32,166
course and pattern of the progression
of the cardiac atrophy in flight

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00:02:32,466 --> 00:02:35,806

by using the ultrasound to
do a scan of the chest.

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00:02:39,126 --> 00:02:43,636

Pettit was the subject of the scan
today with Kuipers' assistance,

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00:02:43,636 --> 00:02:46,476

and actually Kuipers is involved
in the experiment as well,

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00:02:46,626 --> 00:02:51,636

as he's wearing the halter
monitor as part of the experiment

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00:02:51,636 --> 00:02:54,566

to study his activity for a few days.

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00:02:54,566 --> 00:02:57,126

He has that to wear for another 24 hours.

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00:02:57,356 --> 00:03:02,166

Kuipers also connected with students today.

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00:03:02,166 --> 00:03:07,276

Earlier, he conducted an amateur
radio pass to speak with students

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00:03:07,276 --> 00:03:12,546

at an industrial technical school in Belgium,
and he's also helping with the sampling

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00:03:12,546 --> 00:03:14,446

of the environment on board the station

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00:03:15,216 --> 00:03:18,376

with analyzing some surface
samples and water samples.

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00:03:19,156 --> 00:03:22,416

Elsewhere on board the space station,

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00:03:22,416 --> 00:03:24,976

the cosmonauts are working
inside the Russian segment.

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00:03:25,566 --> 00:03:32,206

Anton Shkaplerov is performing a periodic
fitness evaluation today while exercising

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00:03:32,206 --> 00:03:38,876

on a treadmill and working on some
stowage audits inside the Russian segment.

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00:03:38,876 --> 00:03:43,476

Anatoly Ivanishin and Oleg Kononenko
are both working on different activities

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00:03:43,476 --> 00:03:51,276

to help stow unneeded equipment inside the 45
Progress cargo vehicle as that will be undocked

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00:03:51,726 --> 00:03:55,316

and commanded to burn up in the
Earth's atmosphere eventually.

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00:03:55,516 --> 00:03:57,206

Its undocking is scheduled for Monday.

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00:03:57,206 --> 00:04:05,796

And while the crew members are
working on board the space station,

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00:04:05,796 --> 00:04:09,666

there's some work being commanded from
the ground here in Mission Control.

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00:04:10,136 --> 00:04:14,216

The robotics flight controllers are operating the robotics systems on the outside

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00:04:14,216 --> 00:04:19,566

of the space station, moving the Mobile Transporter, which is atop the railway

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00:04:19,566 --> 00:04:23,006

of the truss structure - the backbone of the space station.

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00:04:23,766 --> 00:04:30,356

That transporter is being moved about 100 feet down the truss towards the port side,

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00:04:30,916 --> 00:04:36,776

getting closer to a location on the P3, or Port 3, truss where a platform is located,

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00:04:37,266 --> 00:04:39,646

and a science experiment is on top of that platform.

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00:04:40,356 --> 00:04:46,966

On Thursday, the Mobile Transporter will be in place with the space station's robotic arm

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00:04:47,216 --> 00:04:53,936

and the Dextre Special Purpose Dextrous Manipulator on it to perform a survey

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00:04:54,076 --> 00:04:57,256

of an experiment that's located on that platform.

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00:04:57,306 --> 00:05:02,636

It's called the Space Test Program Houston-3 experiment, which is a compliment

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00:05:02,636 --> 00:05:07,756
of four individual experiments actually that
are testing concepts aboard the space station

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00:05:07,756 --> 00:05:09,606
for future long-duration missions.

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00:05:11,116 --> 00:05:16,036
That experiment was installed during
the STS-134 mission in cooperation

66
00:05:16,206 --> 00:05:18,816
with the DOD Space Test Program Houston office.

67
00:05:19,366 --> 00:05:27,226
The flight control team has completed the
first phase of the software transition planned

68
00:05:27,546 --> 00:05:32,376
for this month aboard the station that
began on Sunday and lasted three days,

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00:05:32,886 --> 00:05:36,556
upgrading the software on the major
computers aboard the space station,

70
00:05:36,556 --> 00:05:42,966
the ones that perform the command and control
of the complex and some other computers

71
00:05:43,016 --> 00:05:47,986
and the laptops inside the space
station that the crew members use

72
00:05:47,986 --> 00:05:49,816
to interface with the station systems.