



1
00:00:01,290 --> 00:00:04,080
This is Mission Control Houston.

2
00:00:04,080 --> 00:00:10,340
Looking at the space station flight control
room at the Johnson Space Center in Houston

3
00:00:10,340 --> 00:00:14,610
where a team of flight controllers are
on duty, helping the Expedition 30 crew

4
00:00:14,610 --> 00:00:20,150
through a day focused on science and maintenance
onboard the International Space Station.

5
00:00:20,150 --> 00:00:24,630
Flight Engineers Andre Kuipers and Don
Pettit began their day with some tests

6
00:00:24,630 --> 00:00:30,130
of their reaction time in order
to monitor the effects of fatigue,

7
00:00:30,130 --> 00:00:36,770
while flight engineers Anton Shkaplerov and
Anatoly Ivanishin measured their body masses

8
00:00:36,770 --> 00:00:39,640
and observed for distribution of fluids.

9
00:00:39,640 --> 00:00:44,860
Later on in the day Pettit
did the VO2max experiment,

10
00:00:44,860 --> 00:00:49,080
which is measuring his oxygen
uptake during exercise.

11
00:00:49,080 --> 00:00:53,970

All of those are part of the ongoing human life sciences research to find

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00:00:53,970 --> 00:00:59,710

out how prolonged experienced microgravity impacts the human body.

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00:00:59,710 --> 00:01:04,990

Other science work done today included taking measurements of the amount of methane

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00:01:04,990 --> 00:01:08,530

and carbon dioxide in the Earth's atmosphere.

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00:01:08,530 --> 00:01:14,370

Flight Engineer Oleg Kononenko was at the controls for that Russian experiment.

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00:01:14,370 --> 00:01:17,660

Later in the day he also took some microbial air samplings

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00:01:17,660 --> 00:01:20,680

of the atmosphere inside the space station.

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00:01:20,680 --> 00:01:25,630

For Commander Dan Burbank good portion of his day was spent in the Quest airlock

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00:01:25,630 --> 00:01:29,780

where he was setting up and then executing a protocol

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00:01:29,780 --> 00:01:34,050

to scrub the cooling loops of two of the spacesuits.

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00:01:34,050 --> 00:01:41,200

The EMU or Extravehicular Mobility Unit, the spacesuits that are worn for spacewalks

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00:01:41,200 --> 00:01:44,720

that are conducted in the US
section the space station.

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00:01:44,720 --> 00:01:51,220

Those spacesuits have cooling systems in
order to keep the astronauts inside them

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00:01:51,220 --> 00:01:56,390

at a comfortable temperature, and then
during the times when the suits are not used

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00:01:56,390 --> 00:02:01,120

over an extended period of time, they
require some maintenance to make sure

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00:02:01,120 --> 00:02:04,960

that the loops remain clear of any debris.

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00:02:04,960 --> 00:02:10,200

All of the crew members had time during
the day today at some part to take part

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00:02:10,200 --> 00:02:15,620

in the daily cleaning activities also
as regular maintenance of the station.

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00:02:15,620 --> 00:02:21,950

Burbank, Kuipers and Pettit spent some time just
after their lunch today discussing the mission

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00:02:21,950 --> 00:02:26,620

in an interview with the Weather
Channel, and late in the day Burbank

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00:02:26,620 --> 00:02:32,160

and Kuipers performed routine eye examinations
that are part of an ongoing effort to learn more

32
00:02:32,160 --> 00:02:40,140
about how human bodies respond, change, during
long stretches of time away from gravity.

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00:02:40,140 --> 00:02:43,660
On Thursday morning the team in
Mission Control begin planning

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00:02:43,660 --> 00:02:47,330
for a possible debris avoidance maneuver,

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00:02:47,330 --> 00:02:52,070
which if necessary was scheduled
to take place on Friday morning.

36
00:02:52,070 --> 00:02:56,440
The trajectory operations officers
are watching a piece of debris

37
00:02:56,440 --> 00:03:02,680
from the Iridium 33 communications satellite
that might pass close by the station

38
00:03:02,680 --> 00:03:06,600
on two consecutive orbits on Friday afternoon.

39
00:03:06,600 --> 00:03:12,450
Due to some unusual drag conditions and
solar activity and atmospheric density,

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00:03:12,450 --> 00:03:17,730
the teams are developing a debris
avoidance maneuver plan as a precaution.

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00:03:17,730 --> 00:03:24,790
If that maneuver is necessary it would
be executed some time on Friday morning

42
00:03:24,790 --> 00:03:28,710

at approximately 10:20 a.m. central time.

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00:03:28,710 --> 00:03:31,540

Also on the schedule for the crew on Friday.

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00:03:31,540 --> 00:03:37,480

Kuipers has a ham radio opportunity
to talk to students in Belgium.

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00:03:37,480 --> 00:03:40,490

Crew members will continue
preparing the Progress ship

46

00:03:40,490 --> 00:03:44,410

for departure later this
month while continuing to work