
CATO

1
00:00:03,086 --> 00:00:05,146
Good morning from Mission Control Houston,

2
00:00:05,146 --> 00:00:08,276
and welcome to today's International
Space Station update hour.

3
00:00:09,276 --> 00:00:14,146
Joining us now in the flight control room here
in Houston, Texas as the orbit two team is

4
00:00:14,146 --> 00:00:17,736
on console monitoring systems on
board the orbiting laboratory.

5
00:00:19,076 --> 00:00:21,956
Today's team is being led by
Flight Director Emily Nelson

6
00:00:22,606 --> 00:00:27,196
and joining her will be CAPCOM Rob
Hayhurst serving as the voice connection

7
00:00:27,196 --> 00:00:30,636
between controllers here on the
ground and the astronauts up in space.

8
00:00:31,706 --> 00:00:38,306
And those astronauts right now are the crew
of Expedition 30, and they are being led

9
00:00:38,306 --> 00:00:44,196
by NASA astronaut and Commander Dan Burbank
there on the front left of your screen and also

10
00:00:44,196 --> 00:00:48,216
in the front row joining him is
Russian cosmonaut Oleg Kononenko.

11

00:00:50,306 --> 00:00:54,056
And then along the back row we have
Russian cosmonauts Anton Shkaplerov

12
00:00:54,056 --> 00:00:58,366
and Anatoly Ivanishin, European
Space Agency astronaut Andre Kuipers

13
00:00:58,746 --> 00:01:00,436
and NASA astronaut Don Pettit.

14
00:01:02,816 --> 00:01:07,146
The crew awoke at about midnight
Central time today and then got right

15
00:01:07,146 --> 00:01:11,406
into some very busy work
with a number of experiments

16
00:01:11,406 --> 00:01:13,486
and maintenance activities going on today.

17
00:01:14,346 --> 00:01:18,536
Starting out we have Commander
Burbank who began his day doing some

18
00:01:18,536 --> 00:01:20,826
of the Treadmill Kinematics exercises.

19
00:01:22,196 --> 00:01:27,616
This is a research study into determining the
most beneficial treadmill exercise conditions

20
00:01:27,616 --> 00:01:31,476
for these astronauts in order to maintain
and improve their crew member health.

21
00:01:32,176 --> 00:01:38,836
He is also doing a number of experiment works
today with the Binary Colloidal Alloy Test,

22
00:01:39,436 --> 00:01:46,066
or the BCAT system, which is a very complicated
procedure that uses microscopic particles known

23
00:01:46,066 --> 00:01:51,096
as colloids as models for studying the
fundamental physics of the liquid crystal phase.

24
00:01:52,486 --> 00:01:56,216
Meanwhile Russian cosmonaut Anton
Shkaplerov did some work today

25
00:01:56,216 --> 00:01:59,226
on the Immuno experiment,
taking blood and saliva samples.

26
00:01:59,776 --> 00:02:05,746
This research looks to determine changes
in stress and immune responses both during

27
00:02:05,746 --> 00:02:09,816
and after a stay for these astronauts on
board the International Space Station.

28
00:02:10,306 --> 00:02:15,436
He is also doing some unloading work on that
Progress 46 spacecraft which docked last Friday.

29
00:02:17,056 --> 00:02:21,546
Russian cosmonaut Anatoly Ivanishin assisted
on that Immuno experiment earlier this morning

30
00:02:21,916 --> 00:02:25,606
and is involved in a number of maintenance
activities on the Russian segment,

31
00:02:25,946 --> 00:02:30,236
working on the Russian toilet, the
Elektron system which helps to generate some

32
00:02:30,236 --> 00:02:34,066
of the oxygen on board the station
and also doing a window inspection

33
00:02:34,066 --> 00:02:36,816
on the Pirs and Poisk docking modules.

34
00:02:38,016 --> 00:02:44,406
The third and final Russian cosmonaut Oleg
Kononenko is replacing a support panel in Poisk

35
00:02:44,406 --> 00:02:50,156
and taking a look and testing out the control
panel in Pirs, and this is all being done

36
00:02:50,156 --> 00:02:56,056
in preparation for an upcoming Russian EVA, or
spacewalk, scheduled to take place February 16

37
00:02:56,136 --> 00:02:58,936
that will be with Kononenko and Shkaplerov.

38
00:02:59,026 --> 00:03:06,386
European Space Agency astronaut
Andre Kuipers is working

39
00:03:06,386 --> 00:03:10,096
with the Water Resource System doing
some transfer work and cleaning it out

40
00:03:10,306 --> 00:03:15,066
and also doing some replacement work in
one of the Human Research Facilities,

41
00:03:15,066 --> 00:03:17,796
working on the Pulmonary Function System.

42
00:03:17,876 --> 00:03:24,966

That system helps to determine the concentration
of different respired gas components

43
00:03:24,966 --> 00:03:30,346
and is an ongoing research tool for studying
respiratory and cardiovascular measurements.

44
00:03:30,466 --> 00:03:36,486
And our final member of Expedition
30 Don Pettit did a lot of work today

45
00:03:36,486 --> 00:03:38,556
with the Capillary Flow Experiments.

46
00:03:38,556 --> 00:03:41,646
These are some very interesting
fluid experiments that go on in

47
00:03:41,646 --> 00:03:46,386
that microgravity environment that help to
investigate capillary flows and the flows

48
00:03:46,386 --> 00:03:50,526
of different fluids in containers
with very complex geometries.

49
00:03:50,526 --> 00:03:54,826
And then results from this will help
improve models used by designers