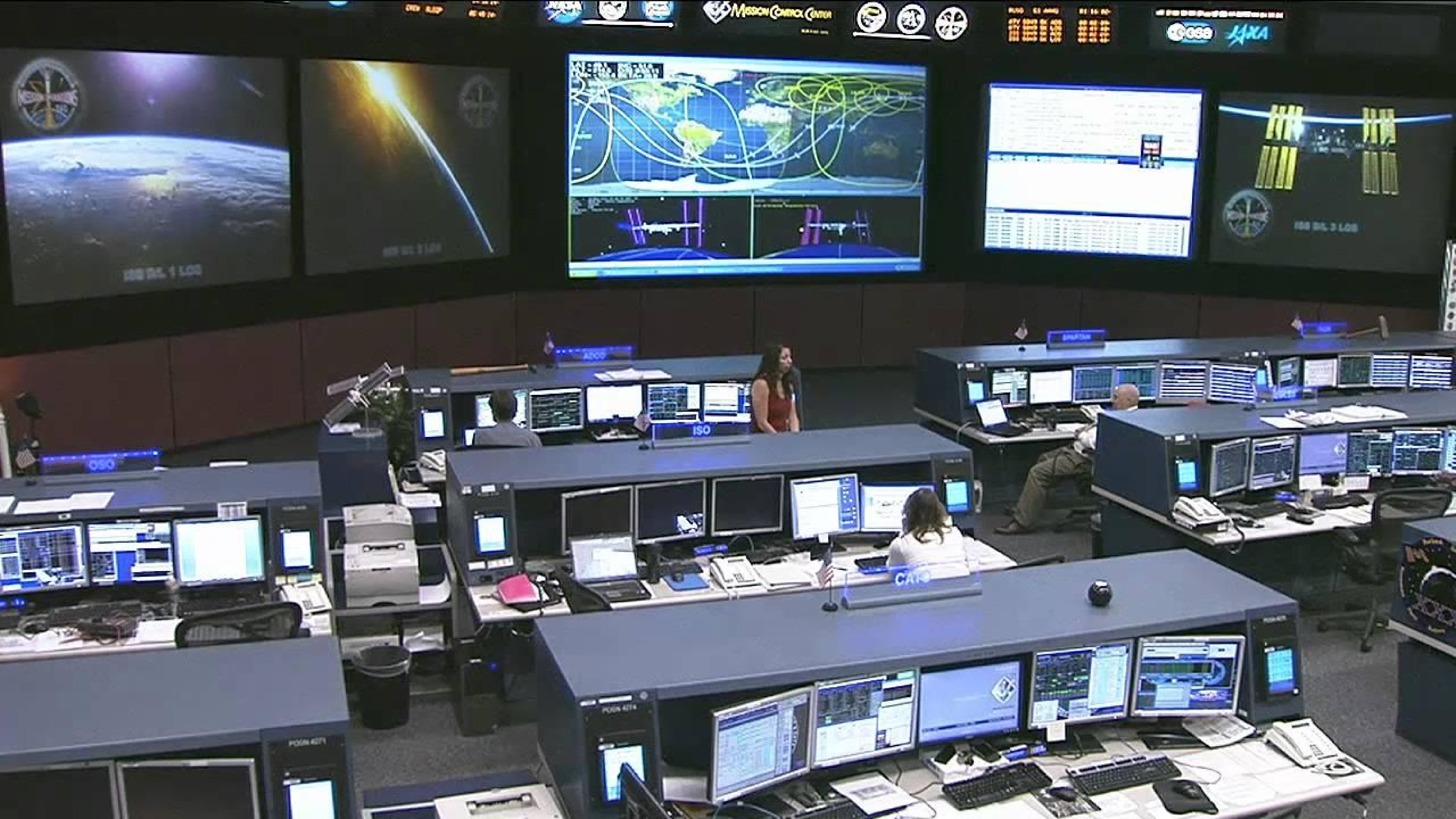
MISSION CONTROL CENTER
JAXA
ISO
OSO
CATO

1
00:00:01,310 --> 00:00:05,760
This is the International Space Station flight
control room, at NASA's Johnson Space Center

2
00:00:05,760 --> 00:00:09,140
in Houston where the team is
watching over the activities

3
00:00:09,140 --> 00:00:13,350
as the Expedition 30 crew wraps
up their busy week on orbit.

4
00:00:13,350 --> 00:00:19,430
Commander Dan Burbank, Flight Engineers Anton
Shkaplerov, Anatoly Ivanishin, Oleg Kononenko,

5
00:00:19,430 --> 00:00:23,090
Andre Kuipers and Don Pettit
stood by on Wednesday

6
00:00:23,090 --> 00:00:27,340
as the Automated Transfer Vehicle
docked to the aft end of the station

7
00:00:27,340 --> 00:00:35,840
to the Zvezda module The ATV "Edoardo Amaldi"
launched from Kourou in French Guiana Thursday

8
00:00:35,840 --> 00:00:43,190
of the previous week carrying more than 7
tons of supplies for the space station crew.

9
00:00:43,190 --> 00:00:47,630
The European Space Agency and the Russian
flight control teams did spend time

10
00:00:47,630 --> 00:00:52,600
on Friday working an issue to make sure
that the station's systems will be able

11
00:00:52,600 --> 00:00:59,320
to provide enough power to the cargo ship during
a period when the solar beta angle will keep ATV

12
00:00:59,320 --> 00:01:04,030
from generating enough power of
its own through its solar arrays.

13
00:01:04,030 --> 00:01:09,720
The food, water, fuel, clothes, hardware
and experiment materials and other supplies

14
00:01:09,720 --> 00:01:16,360
that are inside ATV will ultimately be unloaded
and staged in the Permanent Multipurpose Module.

15
00:01:16,360 --> 00:01:20,880
The empty space in ATV will be
filled with trash and unneeded items

16
00:01:20,880 --> 00:01:24,770
that will all be destroyed
when the ship is undocked.

17
00:01:24,770 --> 00:01:29,270
Last Saturday morning the crew members
did have to get up a little early.

18
00:01:29,270 --> 00:01:31,900
They were ordered to spend
time sheltering in place

19
00:01:31,900 --> 00:01:37,110
in their Soyuz vehicles during the closest
approach of a piece of satellite debris,

20
00:01:37,110 --> 00:01:43,980
which passed safely by the International Space
Station at about 2:38 Houston time that day.

21
00:01:43,980 --> 00:01:49,880
The first tracking of a hunk of a Cosmos
satellite had come the prior day -

22
00:01:49,880 --> 00:01:54,510
too late to plan and then execute
a debris avoidance maneuver

23
00:01:54,510 --> 00:01:57,350
and move the entire station out of the way.

24
00:01:57,350 --> 00:02:01,550
It is just the third time that a station
crew has had to shelter in the Soyuz

25
00:02:01,550 --> 00:02:04,540
for a possible conjunction with debris.

26
00:02:04,540 --> 00:02:08,900
Throughout the week Flight Engineers Anton
Shkaplerov and Anatoly Ivanishin worked

27
00:02:08,900 --> 00:02:12,710
on a Russian experiment that
tests out principles and methods

28
00:02:12,710 --> 00:02:16,070
for controlling leaks inside a spacecraft.

29
00:02:16,070 --> 00:02:19,750
And their colleague Oleg Kononenko
spent time throughout the week

30
00:02:19,750 --> 00:02:23,560
on Earth observation photography
plus a Russian experiment

31
00:02:23,560 --> 00:02:30,280
in which the crew members can measure carbon

dioxide and methane in the Earth's atmosphere.

32
00:02:30,280 --> 00:02:36,090
On Thursday Kornienko, Kuipers and
Pettit had a Soyuz emergency egress drill

33
00:02:36,090 --> 00:02:39,960
in which they routinely, they practiced
the steps they would have to take

34
00:02:39,960 --> 00:02:44,200
up if they were called upon to make an
emergency departure from the station.

35
00:02:44,200 --> 00:02:49,340
These three crew members are due
to remain in orbit until July.

36
00:02:49,340 --> 00:02:55,750
Pettit joined Dan Burbank during the week in
routing cables inside the Destiny laboratory

37
00:02:55,750 --> 00:03:02,290
for the new High Rate Communication System which
will add additional voice and video channels

38
00:03:02,290 --> 00:03:06,300
to improve communications between
the station and the ground.

39
00:03:06,300 --> 00:03:10,190
Burbank also spent time working
with the VO2max experiment,

40
00:03:10,190 --> 00:03:15,470
which is a way to measure the maximum
oxygen uptake of a crew member.

41
00:03:15,470 --> 00:03:19,930
It's part of the overall careful

monitoring plan of all of the crew members

42
00:03:19,930 --> 00:03:24,470
to get more information to find
out just how prolonged exposure

43
00:03:24,470 --> 00:03:30,300
in a microgravity environment impacts the
human health Pettit also conducted the first

44
00:03:30,300 --> 00:03:36,520
experiment operations with BASS, which
stands for Burning And Suppression Of Solids.

45
00:03:36,520 --> 00:03:40,420
That experiment is looking at
both the burning characteristics

46
00:03:40,420 --> 00:03:44,590
and the extinction characteristics
of a variety of different fuels.

47
00:03:44,590 --> 00:03:49,620
They're looking to find out more about
how different things burn in microgravity

48
00:03:49,620 --> 00:03:52,650
and how they burn differently
than they do on Earth.

49
00:03:52,650 --> 00:03:56,370
That's all a way of guiding the
development of new strategies

50
00:03:56,370 --> 00:04:02,320
for extinguishing accidental fires onboard
a spacecraft as well as adding to data

51
00:04:02,320 --> 00:04:08,690
of the models that are developing of fire

extinguishing techniques for use here on Earth.

52
00:04:08,690 --> 00:04:12,890
The full crew wrapped up the week with a review
of emergency procedures that are specific

53
00:04:12,890 --> 00:04:17,930
to the Automated Transfer Vehicle and
then looked ahead to an off-duty weekend

54
00:04:17,930 --> 00:04:22,590
with a chance for conferences with their
families and some rest before getting back