1
00:00:01,190 --> 00:00:05,770
Good morning and welcome to
today's Expedition 29 ISS Update.

2
00:00:05,770 --> 00:00:12,120
Onboard right now is the crew of Expedition 29,
which consists of NASA astronauts Mike Fossum

3
00:00:12,120 --> 00:00:16,010
and Dan Burbank, who's the current
commander of the International Space Station.

4
00:00:16,010 --> 00:00:19,200
On the far left you see Japanese
astronaut Satoshi Furukawa,

5
00:00:19,200 --> 00:00:23,260
and then Russian cosmonaut Sergei
Volkov, and they are further joined

6
00:00:23,260 --> 00:00:27,970
by Russian cosmonauts Anton
Shkaplerov and Anatoly Ivanishin.

7
00:00:27,970 --> 00:00:31,330
Big item for today is going to
be the landing of half that crew.

8
00:00:31,330 --> 00:00:35,000
Fossum, Volkov and Furukawa are
scheduled to return to Earth,

9
00:00:35,000 --> 00:00:37,770
landing in Kazakhstan later tonight.

10
00:00:37,770 --> 00:00:40,250
They've been onboard the station since June 9.

11
00:00:40,250 --> 00:00:44,860

Commander Mike Fossum was the commander
of Expedition 29 till yesterday

12
00:00:44,860 --> 00:00:49,420
when they participated in a change of
command ceremony where he passed that command

13
00:00:49,420 --> 00:00:52,490
over to NASA astronaut Dan Burbank.

14
00:00:52,490 --> 00:00:58,610
Crew is scheduled to get inside their Soyuz
TMA-02M later this afternoon for landing

15
00:00:58,610 --> 00:01:03,520
with hatch closure scheduled to take
place at about 1:45 p.m. Coverage

16
00:01:03,520 --> 00:01:06,920
of that hatch closure will
start, will begin on NASA TV

17
00:01:06,920 --> 00:01:11,780
at 1:15 p.m. central, 2:15 p.m. eastern time.

18
00:01:11,780 --> 00:01:16,600
Undocking coverage will begin on NASA TV
at 4:30 p.m. central, 5:30 p.m. eastern,

19
00:01:16,600 --> 00:01:22,120
setting up for an undocking at 5
p.m. central time, 6 p.m. eastern.

20
00:01:22,120 --> 00:01:26,700
That is when the Soyuz spacecraft will then
separate from the International Space Station,

21
00:01:26,700 --> 00:01:32,760
perform a number of deorbit or separation
burns as it maintains a safe distance away

22
00:01:32,760 --> 00:01:36,800
from the station prepping it
for its final deorbit burn.

23
00:01:36,800 --> 00:01:43,100
Coverage of that deorbit burn and landing
will begin at 7 p.m. central, 8 p.m. eastern,

24
00:01:43,100 --> 00:01:49,490
with that deorbit burn scheduled to take
place at 7:32 p.m. central, 8:32 p.m. eastern.

25
00:01:49,490 --> 00:01:52,400
And all this sets up for a
final landing in Kazakhstan

26
00:01:52,400 --> 00:01:57,740
at 8:25 p.m. central time, 9:25 p.m. eastern.

27
00:01:57,740 --> 00:02:00,750
Crew is moving into the beginning
hours of their day, with Fossum

28
00:02:00,750 --> 00:02:03,810
and Furukawa doing some deorbit
prep work and getting

29
00:02:03,810 --> 00:02:07,040
in their last day of exercise while on orbit.

30
00:02:07,040 --> 00:02:12,480
Furukawa is also participating in
some storing of medical samples.

31
00:02:12,480 --> 00:02:15,090
These are for the Integrated Immune experiment,

32
00:02:15,090 --> 00:02:19,720

which is just one of the many biomedical
experiments that are conducted on station.

33
00:02:19,720 --> 00:02:25,320
These astronauts themselves are
experiments while they are crew members.

34
00:02:25,320 --> 00:02:28,690
Rounding out that Soyuz spacecraft
will be command...

35
00:02:28,690 --> 00:02:34,990
Soyuz Commander Sergei Volkov, who's doing a
lot of stowage work moving any final experiments

36
00:02:34,990 --> 00:02:40,570
and supplies inside the Soyuz as they prepare
to leave the station and return to Earth.

37
00:02:40,570 --> 00:02:45,460
He's also taking some photographs of the
external surface of their Soyuz spacecraft

38
00:02:45,460 --> 00:02:49,080
and those will be downlinked to ground
controllers on the ground for analysis

39
00:02:49,080 --> 00:02:52,630
as they prepare to undock and
re-enter the Earth's atmosphere.

40
00:02:52,630 --> 00:02:55,640
And then once they're onboard

41
00:02:55,640 --> 00:03:00,520
that Soyuz spacecraft he will perform
all the final system activations

42
00:03:00,520 --> 00:03:06,390
and checkouts including the comm systems

and leak checks once the hatch is closed.

43
00:03:06,390 --> 00:03:10,460
Current space station commander Dan Burbank
started his day with some Reaction self tests,

44
00:03:10,460 --> 00:03:16,440
which again are part of those biomedical
experiments that the crews conduct on themselves

45
00:03:16,440 --> 00:03:20,360
and each other as they're onboard
the International Space Station.

46
00:03:20,360 --> 00:03:24,000
He then had some of his morning exercise.

47
00:03:24,000 --> 00:03:29,160
He then did some EXPRESS rack configuration,
which those racks contain the majority

48
00:03:29,160 --> 00:03:31,380
of International Space Station experiments.

49
00:03:31,380 --> 00:03:34,540
Later in the day he'll do some maintenance
work on the water recovery system,

50
00:03:34,540 --> 00:03:38,630
which is set up as part of a closed
loop system inside the station

51
00:03:38,630 --> 00:03:42,950
to help recycle both waste and spent water.

52
00:03:42,950 --> 00:03:46,700
He'll be assembling and activating a
fluid transfer pump, which helps to filter

53

00:03:46,700 --> 00:03:48,980
out any particulates from
any already stored water.

54
00:03:48,980 --> 00:03:52,330
And then at the end of his day he'll
relocate some emergency equipment

55
00:03:52,330 --> 00:03:55,540
and replace some batteries
inside an experiment camera.

56
00:03:55,540 --> 00:03:59,290
His Russian colleagues that'll be staying
onboard the station with him after Fossum,

57
00:03:59,290 --> 00:04:03,810
Furukawa and Volkov leave, Anton
Shkaplerov and Anatoly Ivanishin,

58
00:04:03,810 --> 00:04:06,360
will be doing some maintenance
work on the Russian side

59
00:04:06,360 --> 00:04:09,310
of the space station including
some maintenance activation

60
00:04:09,310 --> 00:04:11,760
of the Vozdukh emergency vacuum valves.

61
00:04:11,760 --> 00:04:18,940
The Vozdukh is a carbon dioxide scrubber that
helps maintain the atmosphere at safe levels

62
00:04:18,940 --> 00:04:20,580
for the International Space Station crew.

63
00:04:20,580 --> 00:04:26,080
And Anatoly Ivanishin will be working

on an atmosphere purification system,

64
00:04:26,080 --> 00:04:31,390
which also helps the crew maintain a safe
breathing atmosphere while they're onboard.

65
00:04:31,390 --> 00:04:35,930
They'll be helping Sergei Volkov transfer a
lot of items over to the Soyuz as it prepares

66
00:04:35,930 --> 00:04:41,910
to land including numerous biology experiments,
which will return to Earth for further analysis

67
00:04:41,910 --> 00:04:44,840
by controllers and scientists on the ground.

68
00:04:44,840 --> 00:04:48,980
They will help with some comm configurations
with the Soyuz as it prepares to leave

69
00:04:48,980 --> 00:04:52,130
and will also photograph
the Soyuz after it undock,

70
00:04:52,130 --> 00:04:55,340
making sure everything is going
nominally, and then following

71
00:04:55,340 --> 00:05:00,430
that they will return the International Space
Station to its normal communications operations