1
00:00:00,766 --> 00:00:05,104
[Music]

2
00:00:05,104 --> 00:00:07,873
>> It's a light duty day
for the Expedition 37 crew

3
00:00:07,873 --> 00:00:09,075
as they begin unpacking.

4
00:00:09,075 --> 00:00:12,311
The recently arrived
Soyuz TMA-10M

5
00:00:12,311 --> 00:00:14,046
and getting the crew
members who arrived on it

6
00:00:14,046 --> 00:00:16,916
up to speed on life in space.

7
00:00:16,916 --> 00:00:18,818
The full Expedition 37 crew now

8
00:00:18,818 --> 00:00:21,353
on board the station includes
Russian Commander Fyodor

9
00:00:21,353 --> 00:00:24,557
Yurchikhin, U.S. Flight
Engineer Karen Nyberg,

10
00:00:24,557 --> 00:00:28,260
and European Space Agency Flight
Engineer, Luca Parmitano all

11
00:00:28,260 --> 00:00:29,261
of whom have been at the station

12
00:00:29,261 --> 00:00:33,265
since May 28th, 121
days now in all.

13
00:00:33,265 --> 00:00:35,434
And then also three newly
arrived crew members.

14
00:00:35,434 --> 00:00:37,336
U.S. Flight Engineer
Mike Hopkins

15
00:00:37,336 --> 00:00:39,605
and Russian Flight
Engineers Oleg Kotov

16
00:00:39,605 --> 00:00:42,074
and Sergey Ryazanskiy.

17
00:00:42,074 --> 00:00:45,444
Hopkins, Kotov, and Ryazanskiy
launched aboard their Soyuz

18
00:00:45,444 --> 00:00:49,048
TMA-10M from the [inaudible]
cosmodraum [phonetic]

19
00:00:49,048 --> 00:00:52,952
in Kosnastonic, 3:58 p.m.
Central Time Wednesday kicking

20
00:00:52,952 --> 00:00:55,421
off a 6 month stay in space.

21
00:00:55,421 --> 00:00:58,691
Like the two previous Soyuz
crews, they made the journey

22
00:00:58,691 --> 00:01:00,860

to the station in just
about 6 hours arriving

23
00:01:00,860 --> 00:01:04,330
at 9:45 p.m. Central Time that
same night and opening hatches

24
00:01:04,330 --> 00:01:08,834
at 11:34 p.m. Since
Wednesday was such a long day

25
00:01:08,834 --> 00:01:09,969
for both [inaudible]
of the crew,

26
00:01:09,969 --> 00:01:12,071
they had Thursday completely off

27
00:01:12,071 --> 00:01:14,006
with no items on
their to do list.

28
00:01:14,006 --> 00:01:17,776
And now today they're easing
back into regular routine

29
00:01:17,776 --> 00:01:21,046
with just that light
duty time scheduled.

30
00:01:21,046 --> 00:01:24,183
The light duty day today gives
the crew another chance to rest

31
00:01:24,183 --> 00:01:27,052
up before they're called
upon to work this weekend.

32
00:01:27,052 --> 00:01:29,088
The Space Station Missions

Management Team has been meeting

33
00:01:29,088 --> 00:01:31,524
on the subject of a
second berthing attempt

34
00:01:31,524 --> 00:01:35,427
for Orbital Sciences Cygnus
cargo vehicle on Sunday.

35
00:01:35,427 --> 00:01:37,696
That vehicle has completed
several engine firings

36
00:01:37,696 --> 00:01:41,901
that would put in place
for that possible berthing

37
00:01:41,901 --> 00:01:45,871
and NASA TV coverage would
begin at 3:30 a.m. Central Time.

38
00:01:45,871 --> 00:01:49,341
You can keep an eye on NASA.gov

39
00:01:49,341 --> 00:01:53,078
for further updates
on its status.

40
00:01:53,078 --> 00:01:54,113
It's been a very busy week

41
00:01:54,113 --> 00:01:55,748
for the crew onboard
the Space Station.

42
00:01:55,748 --> 00:01:58,484
With the postponement of the
Cygnus birthing, they were able

43
00:01:58,484 --> 00:02:01,587
to squeeze in a good deal
of extra science work.

44
00:02:01,587 --> 00:02:02,821
Flight engineers Karen Nyberg

45
00:02:02,821 --> 00:02:04,823
and Luca Parmitano
both spent some time

46
00:02:04,823 --> 00:02:07,426
on the InSPACE-3 experiment

47
00:02:07,426 --> 00:02:11,530
which examines colloidal fluids
classified as smart materials.

48
00:02:11,530 --> 00:02:13,966
Those transfer into a solid
like state in the presence

49
00:02:13,966 --> 00:02:15,935
of a magnetic field
and the hope is

50
00:02:15,935 --> 00:02:18,404
that new manufacturing
models based on the idea

51
00:02:18,404 --> 00:02:20,239
of having nanoparticles act

52
00:02:20,239 --> 00:02:23,375
as self assembling building
blocks could be used to improve

53
00:02:23,375 --> 00:02:25,844
or develop active

mechanical systems

54
00:02:25,844 --> 00:02:30,049
such as new brake systems
in airplane landing gear.

55
00:02:30,049 --> 00:02:31,217
Nyberg and Parmitano
also took part

56
00:02:31,217 --> 00:02:33,452
in the reaction self
test experiment.

57
00:02:33,452 --> 00:02:36,622
That study is aimed at trying
out a way for astronauts

58
00:02:36,622 --> 00:02:40,059
to objectively assess whether
fatigue might affect their

59
00:02:40,059 --> 00:02:41,627
performance in space.

60
00:02:41,627 --> 00:02:44,563
Nyberg also worked on the
Ice Crystals 2 experiment

61
00:02:44,563 --> 00:02:46,665
which looks at the
growth rates and stability

62
00:02:46,665 --> 00:02:49,235
of ice crystals in
super cold water.

63
00:02:49,235 --> 00:02:50,903
The results of that
experiment could open

64
00:02:50,903 --> 00:02:53,305
up a new research field
related to the fundamentals

65
00:02:53,305 --> 00:02:55,307
of crystal growth
mechanisms controlled

66
00:02:55,307 --> 00:02:58,043
by biological macromolecules.

67
00:02:58,043 --> 00:02:59,645
And Parmitano performed
some maintenance

68
00:02:59,645 --> 00:03:02,381
on the materials science
laboratory changing

69
00:03:02,381 --> 00:03:05,618
out experiments being
run from the ground.

70
00:03:05,618 --> 00:03:09,822
Materials at science laboratory
can be used for basic materials

71
00:03:09,822 --> 00:03:13,659
on metals, alloys, polymers,
semiconductors, ceramics,

72
00:03:13,659 --> 00:03:15,160
crystals, and glasses.

73
00:03:15,160 --> 00:03:17,563
It could help scientists
discover new applications

74

00:03:17,563 --> 00:03:20,532
for existing materials
or help lead to new

75
00:03:20,532 --> 00:03:22,534
or improved materials.

76
00:03:22,534 --> 00:03:24,203
That's what's been going
on in space this week