



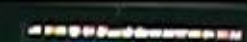
NO OR
NO LAUNCH
NO LAUNCH



MISSION CONTROL CENTER



NO OR
NO LAUNCH
NO LAUNCH



NO OR
NO LAUNCH
NO LAUNCH



TIME	STATUS	OPERATOR
00:00	NO OR	NO LAUNCH
00:01	NO OR	NO LAUNCH
00:02	NO OR	NO LAUNCH
00:03	NO OR	NO LAUNCH
00:04	NO OR	NO LAUNCH
00:05	NO OR	NO LAUNCH
00:06	NO OR	NO LAUNCH
00:07	NO OR	NO LAUNCH
00:08	NO OR	NO LAUNCH
00:09	NO OR	NO LAUNCH
00:10	NO OR	NO LAUNCH

OSD

CATG



1
00:00:14,310 --> 00:00:11,030
good morning and welcome to mission

2
00:00:15,829 --> 00:00:14,320
control houston and space station live

3
00:00:17,750 --> 00:00:15,839
we're here inside the international

4
00:00:19,269 --> 00:00:17,760
space station flight control room where

5
00:00:24,790 --> 00:00:19,279
the flight control team is watching over

6
00:00:29,189 --> 00:00:26,230
leading that team is flight director

7
00:00:31,910 --> 00:00:29,199
mike lammers with astronaut aki hoshide

8
00:00:33,750 --> 00:00:31,920
acting as capcom

9
00:00:36,150 --> 00:00:33,760
with one day left until the next russian

10
00:00:38,310 --> 00:00:36,160
soyuz launch in orbital science's new

11
00:00:40,630 --> 00:00:38,320
cygnus cargo vehicle delayed until after

12
00:00:41,590 --> 00:00:40,640
that the expedition 37 crew is making

13
00:00:43,670 --> 00:00:41,600

their way

14

00:00:45,910 --> 00:00:43,680

through one last day of normal science

15

00:00:48,310 --> 00:00:45,920

and maintenance work before traffic to

16

00:00:49,830 --> 00:00:48,320

the station picks up again

17

00:00:51,750 --> 00:00:49,840

crews now more than halfway through

18

00:00:53,750 --> 00:00:51,760

their day which begin at 1 am central

19

00:00:57,510 --> 00:00:53,760

time they're currently orbiting about

20

00:00:58,389 --> 00:00:57,520

260 miles above the southern ocean

21

00:01:01,510 --> 00:00:58,399

heading

22

00:01:03,270 --> 00:01:01,520

northeast towards indonesia

23

00:01:05,830 --> 00:01:03,280

they are russian commander fyodor

24

00:01:07,830 --> 00:01:05,840

yurchikhin u.s flight engineer karen

25

00:01:10,469 --> 00:01:07,840

nyberg and european space agency flight

26

00:01:12,230 --> 00:01:10,479

engineer luca parmitano

27

00:01:14,710 --> 00:01:12,240

they arrived at the space station on may

28

00:01:15,910 --> 00:01:14,720

28th and have now spent 118 days in

29

00:01:19,109 --> 00:01:15,920

space

30

00:01:21,830 --> 00:01:19,119

since the other half of what was then

31

00:01:23,749 --> 00:01:21,840

the expedition 36 crew left on september

32

00:01:25,429 --> 00:01:23,759

10th they'll be getting some company

33

00:01:27,350 --> 00:01:25,439

soon with the soyuz launch scheduled for

34

00:01:29,270 --> 00:01:27,360

tomorrow

35

00:01:32,310 --> 00:01:29,280

that will be delivering flight engineers

36

00:01:34,870 --> 00:01:32,320

mike hopkins and oleg kotov as well as

37

00:01:36,149 --> 00:01:34,880

sergey ryazanskiy

38

00:01:38,550 --> 00:01:36,159

and it's scheduled to lift off from the

39

00:01:41,429 --> 00:01:38,560

baikonur cosmodrome in kazakhstan at 3

40

00:01:44,710 --> 00:01:41,439

58 pm central time to arrive at the

41

00:01:46,469 --> 00:01:44,720

station six hours later at 9 48 p.m

42

00:01:48,630 --> 00:01:46,479

seeing here some video of the crew

43

00:01:50,630 --> 00:01:48,640

inside the integration facility at the

44

00:01:52,630 --> 00:01:50,640

baikonur cosmodrome in kazakhstan as

45

00:01:54,950 --> 00:01:52,640

they prepared for their launch over the

46

00:01:56,230 --> 00:01:54,960

weekend

47

00:01:58,469 --> 00:01:56,240

today the crew is going to be appearing

48

00:02:00,069 --> 00:01:58,479

before the russian state commission and

49

00:02:03,270 --> 00:02:00,079

participating in one final news

50

00:02:05,109 --> 00:02:03,280

conference in baikonur

51

00:02:06,870 --> 00:02:05,119

meanwhile in space

52

00:02:09,350 --> 00:02:06,880

their waiting crewmates are busy with

53

00:02:11,510 --> 00:02:09,360

science and maintenance activities

54

00:02:13,510 --> 00:02:11,520

karen nyberg is performing several runs

55

00:02:15,750 --> 00:02:13,520

of the in-space iii experiment which

56

00:02:17,190 --> 00:02:15,760

examines colloidal fluids classified as

57

00:02:19,670 --> 00:02:17,200

smart materials

58

00:02:21,510 --> 00:02:19,680

which transition to a solid-like state

59

00:02:23,430 --> 00:02:21,520

in the presence of a magnetic of a

60

00:02:25,270 --> 00:02:23,440

magnetic field

61

00:02:27,910 --> 00:02:25,280

the hope is that new manufacturing

62

00:02:30,470 --> 00:02:27,920

models based on the idea of having these

63

00:02:32,869 --> 00:02:30,480

nanoparticles act as self-assembling

64

00:02:35,030 --> 00:02:32,879

building blocks could be used to improve

65

00:02:37,110 --> 00:02:35,040

or develop active mechanical systems

66

00:02:38,550 --> 00:02:37,120

such as new brake systems seat

67

00:02:41,750 --> 00:02:38,560

suspensions

68

00:02:44,070 --> 00:02:41,760

stress transducers robotics rovers air

69

00:02:48,710 --> 00:02:44,080

paint airplane landing clear gear and

70

00:02:52,630 --> 00:02:50,630

while nyberg worked on that experiment

71

00:02:54,070 --> 00:02:52,640

luca parmitano checked off several of

72

00:02:55,910 --> 00:02:54,080

his activities

73

00:02:58,309 --> 00:02:55,920

he spent some time first with the b-cat

74

00:03:00,149 --> 00:02:58,319

experiment or the binary colloidal alloy

75

00:03:02,550 --> 00:03:00,159

test which studies the effects of phase

76

00:03:04,309 --> 00:03:02,560

separation on crystal growth

77

00:03:05,670 --> 00:03:04,319

and he did some annual maintenance on

78

00:03:08,229 --> 00:03:05,680

the station's

79

00:03:10,070 --> 00:03:08,239

exercise bike lubricating some of its

80

00:03:12,070 --> 00:03:10,080

guides

81

00:03:14,550 --> 00:03:12,080

in the destiny laboratory he replaced a

82

00:03:16,229 --> 00:03:14,560

ground strap on the express rack 3 which

83

00:03:19,110 --> 00:03:16,239

is one of the modular rack systems

84

00:03:22,550 --> 00:03:19,120

inside the station can house up to 80

85

00:03:23,910 --> 00:03:22,560

experience experiments at a time

86

00:03:25,670 --> 00:03:23,920

and he also worked on one of the

87

00:03:27,670 --> 00:03:25,680

spacesuits inside the quest airlock to

88

00:03:30,949 --> 00:03:27,680

replace a waterline vent tube that's

89

00:03:36,630 --> 00:03:30,959

coming up on its expiration date

90

00:03:39,830 --> 00:03:37,990

on the russian side of the station

91

00:03:41,350 --> 00:03:39,840

commander fyodor yurchikhin performed

92

00:03:42,990 --> 00:03:41,360

some communication checkouts with

93

00:03:45,190 --> 00:03:43,000

baikonur in preparation for the

94

00:03:47,030 --> 00:03:45,200

congratulatory calls that will be made

95

00:03:48,789 --> 00:03:47,040

following tomorrow's launch and he

96

00:03:50,550 --> 00:03:48,799

worked on the column crystal experiment

97

00:03:54,229 --> 00:03:50,560

which studies the behavior of charged

98

00:03:58,470 --> 00:03:56,630

as well as a technology demonstration

99

00:04:02,630 --> 00:03:58,480

experiment on guidance and navigation