SPACE TO GROUND

1
00:00:06,389 --> 00:00:03,429
houston station on space to ground

2
00:00:08,390 --> 00:00:06,399
and liftoff of kate rubins anatoly

3
00:00:11,830 --> 00:00:08,400
ivanishin and takuya omnishi to the

4
00:00:13,430 --> 00:00:11,840
international space station

5
00:00:15,589 --> 00:00:13,440
welcome to space to ground i'm gary

6
00:00:17,109 --> 00:00:15,599
jordan the international space station

7
00:00:18,150 --> 00:00:17,119
is about to be home to three more crew

8
00:00:20,470 --> 00:00:18,160
members

9
00:00:22,470 --> 00:00:20,480
kate rubins anatoly ivanishin and tokuya

10
00:00:24,070 --> 00:00:22,480
onishi launched from baikonur kazakhstan

11
00:00:25,990 --> 00:00:24,080
and are now on a two-day trip to the

12
00:00:27,750 --> 00:00:26,000
station this is a bit longer than the

13
00:00:29,669 --> 00:00:27,760

usual six hour trip that more recent

14
00:00:31,589 --> 00:00:29,679
soyuz travelers have been taking but the

15
00:00:33,270 --> 00:00:31,599
extra time is needed to test a variety

16
00:00:35,350 --> 00:00:33,280
of systems that have been upgraded in

17
00:00:37,510 --> 00:00:35,360
the modified soyuz spacecraft like

18
00:00:39,590 --> 00:00:37,520
thrusters debris shielding power and

19
00:00:40,790 --> 00:00:39,600
digital video the three additional crew

20
00:00:42,790 --> 00:00:40,800
members bring the space station's

21
00:00:44,709 --> 00:00:42,800
population back up to six

22
00:00:46,389 --> 00:00:44,719
two crew members are pilots by trade

23
00:00:49,270 --> 00:00:46,399
ivanishin who has flown to the space

24
00:00:51,430 --> 00:00:49,280
station once before on expedition 2930

25
00:00:53,270 --> 00:00:51,440
and onishi who is now on his first space

26
00:00:55,270 --> 00:00:53,280
flight reubens will be the scientists

27
00:00:57,830 --> 00:00:55,280
for expedition 48 holding a bachelor's

28
00:00:59,270 --> 00:00:57,840
degree in molecular biology and a phd in

29
00:01:00,790 --> 00:00:59,280
cancer biology

30
00:01:02,630 --> 00:01:00,800
right after our nation's independence

31
00:01:04,149 --> 00:01:02,640
day jeff williams set up an experiment

32
00:01:06,149 --> 00:01:04,159
on the international space station to

33
00:01:07,750 --> 00:01:06,159
study nature's fireworks

34
00:01:09,429 --> 00:01:07,760
the meteor experiment will be studying

35
00:01:11,030 --> 00:01:09,439
the physical and chemical composition of

36
00:01:13,429 --> 00:01:11,040
the celestial rocks using visible

37
00:01:14,870 --> 00:01:13,439
spectroscopy equipment meteor spectra

38
00:01:16,630 --> 00:01:14,880

are commonly observed from instruments

39
00:01:17,910 --> 00:01:16,640
on the ground or on aircraft but the

40
00:01:20,070 --> 00:01:17,920
measurements are limited to short

41
00:01:21,830 --> 00:01:20,080
durations and the ozone masks emission

42
00:01:24,149 --> 00:01:21,840
of carbon-based compounds the building

43
00:01:25,910 --> 00:01:24,159
blocks of life meteor is able to provide

44
00:01:27,510 --> 00:01:25,920
continuous monitoring of meteor

45
00:01:29,990 --> 00:01:27,520
interaction and will be able to analyze

46
00:01:31,190 --> 00:01:30,000
carbon without ozone absorption this

47
00:01:33,270 --> 00:01:31,200
experiment will make the first

48
00:01:35,429 --> 00:01:33,280
space-based observations of meteors and

49
00:01:37,270 --> 00:01:35,439
provide high-resolution photo and video

50
00:01:39,030 --> 00:01:37,280
of the atmosphere the more we know about

51
00:01:41,190 --> 00:01:39,040
meteor composition the more we

52
00:01:42,389 --> 00:01:41,200
understand how planets develop

53
00:01:44,710 --> 00:01:42,399
keep sending us your questions and