SpacetoGround

1
00:00:02,966 --> 00:00:05,390
"HOUSTON, STATION ON SPACE TO GROUND."

2
00:00:05,390 --> 00:00:07,689
WELCOME TO SPACE TO GROUND, I'M KATHRYN
CLAYTON.

3
00:00:07,689 --> 00:00:11,429
THIS WEEK, THE EXPEDITION 64 SAYS FAREWELL,

4
00:00:11,429 --> 00:00:14,400
THERE'S PREPARATIONS FOR THE SPACEX CREW 2
LAUNCH,

5
00:00:14,400 --> 00:00:17,590
AND SCIENCE JUST RIGHT FOR EARTH DAY.

6
00:00:17,590 --> 00:00:20,690
AFTER THE ARRIVAL OF NASA ASTRONAUT MARK VANDE
HEI

7
00:00:20,690 --> 00:00:24,700
AND ROSCOSMOS COSMONAUTS OLEG NOVITSKIY AND
PYOTR DUBROV LAST WEEK,

8
00:00:24,700 --> 00:00:28,350
THE EXPEDITION 64 CREW CAN NOW RETURN HOME.

9
00:00:28,350 --> 00:00:30,760
NASA ASTRONAUT KATE RUBINS ALONG WITH

10
00:00:30,760 --> 00:00:34,329
SERGEY KUD SVERCHKOV AND SERGEY RYZHIKOV OF
ROSCOSMOS

11
00:00:34,329 --> 00:00:36,300
WILL UNDOCK FROM THE STATION THIS WEEK,

12

00:00:36,300 --> 00:00:38,900
MARKING THE END OF EXPEDITION 64.

13
00:00:38,900 --> 00:00:41,040
DURING THIS TRANSITION ISS COMMAND

14
00:00:41,040 --> 00:00:42,510
WILL CHANGE FROM SERGEY RYZHIKOV

15
00:00:42,510 --> 00:00:44,650
TO NASA ASTRONAUT SHANNON WALKER.

16
00:00:44,650 --> 00:00:46,400
SHANNON WILL REMAIN IN COMMAND UNTIL

17
00:00:46,400 --> 00:00:48,110
THE END OF APRIL WHEN SHE WILL JOIN

18
00:00:48,110 --> 00:00:50,548
ASTRONAUTS MIKE HOPKINS AND VICTOR GLOVER

19
00:00:50,548 --> 00:00:54,283
ALONG WITH JAXA ASTRONAUT SOICHI NOGUCHI TO
RETURN TO EARTH.

20
00:00:54,760 --> 00:00:56,829
THE UPCOMING CREW-2 LAUNCH WILL BRING

21
00:00:56,829 --> 00:01:01,200
FOUR NEW CREWMEMBERS TO THE INTERNATIONAL
SPACE STATION.

22
00:01:01,200 --> 00:01:04,420
THE SPACEX CREW-2 MISSION IS READY TO TRAVEL
TO THE ISS

23
00:01:04,420 --> 00:01:07,070
AND WILL BE LAUNCHING ON APRIL 22nd.

24
00:01:07,070 --> 00:01:08,850
THE FLIGHT WILL MARK THE SECOND FLIGHT

25
00:01:08,850 --> 00:01:10,990
OF THE CREW DRAGON ENDEAVOUR TO THE STATION,

26
00:01:10,990 --> 00:01:14,670
AND WILL CARRY NASA ASTRONAUTS SHANE KIMBROUGH
AND MEGAN MCARTHUR,

27
00:01:14,670 --> 00:01:19,550
JAXA ASTRONAUT AKIHIKO HOSHIDE AND ESA ASTRONAUT
THOMAS PESQUEST.

28
00:01:19,550 --> 00:01:20,990
ALSO, BE SURE TO LISTEN TO

29
00:01:20,990 --> 00:01:23,310
THE LATEST EPISODE OF “HOUSTON, WE HAVE
A PODCAST”.

30
00:01:23,310 --> 00:01:27,740
THE FOUR DRAGON CREWMEMBERS, SHANE, MEGAN,
AKI, AND THOMAS,

31
00:01:27,740 --> 00:01:31,034
SAT DOWN FOR A SPECIAL PRE-LAUNCH INTERVIEW.

32
00:01:31,440 --> 00:01:33,679
APRIL 22nd IS ALSO EARTH DAY,

33
00:01:33,679 --> 00:01:35,520
AND A SCIENCE FACILITY ON THE ISS

34
00:01:35,520 --> 00:01:37,740
IS ANSWERING IMPORTANT QUESTIONS ABOUT

35
00:01:37,740 --> 00:01:41,210

HOW HARD OUR PLANET IS WORKING FOR US.

36
00:01:41,210 --> 00:01:44,130
THE ORBITING CARBON OBSERVATORY-3 OR OCO-3

37
00:01:44,130 --> 00:01:47,380
IS A SENSOR THAT USES SUNLIGHT REFLECTIONS

38
00:01:47,380 --> 00:01:50,509
THROUGH THE ATMOSPHERE TO MEASURE CARBON DIOXIDE
VARIATIONS

39
00:01:50,509 --> 00:01:54,333
IN THE ATMOSPHERE AT ANY GIVEN TIME FOR A
SPECIFIC LOCATION.

40
00:01:54,333 --> 00:01:56,860
PLANTS AND THE OCEAN REMOVE APPROXIMATELY
HALF OF

41
00:01:56,860 --> 00:01:59,090
THE HUMAN CARBON DIOXIDE EMMISIONS EACH YEAR,

42
00:01:59,090 --> 00:02:01,294
BUT THAT PERCENTAGE CAN VARY.

43
00:02:01,294 --> 00:02:03,750
LAUNCHED IN 2019, THE OBSERVATORY IS

44
00:02:03,750 --> 00:02:06,840
DESIGNED TO HELP DETERMINE THE CAUSES OF THAT
VARIATION.

45
00:02:06,840 --> 00:02:10,840
DUE TO THE ISS ORBITAL PATH, OCO-3 WILL PASS
OVER FORESTS,

46
00:02:10,840 --> 00:02:13,230
CROP AREAS, CITIES AND POWER PLANTS.

47
00:02:13,230 --> 00:02:15,090
THIS WILL PROVIDE A DETAILED PICTURE OF

48
00:02:15,090 --> 00:02:18,681
ATMOSPHERIC CARBON DIOXIDE LEVELS ACROSS THE
PLANET.

49
00:02:19,246 --> 00:02:21,200
THAT’S SPACE TO GROUND FOR THIS WEEK.