



Space**to**Ground

1
00:00:02,706 --> 00:00:04,656
"HOUSTON, STATION
ON SPACE TO GROUND."

2
00:00:05,336 --> 00:00:07,466
WELCOME TO SPACE TO
GROUND, I'M GARY JORDAN.

3
00:00:07,786 --> 00:00:09,806
THIS WEEK, A CARGO
SPACECRAFT IS SET

4
00:00:09,856 --> 00:00:13,386
TO BEGIN ITS SECONDARY MISSION
BEFORE DUMPING 5,500 POUNDS

5
00:00:13,426 --> 00:00:14,006
OF TRASH.

6
00:00:15,196 --> 00:00:17,636
NORTHROP GRUMMAN'S CYGNUS
VEHICLE DEPARTED THE STATION

7
00:00:17,636 --> 00:00:18,216
ON FRIDAY.

8
00:00:19,136 --> 00:00:21,256
BEFORE ITS FIERY
DEMISE IN THE ATMOSPHERE

9
00:00:21,256 --> 00:00:24,896
OVER THE PACIFIC OCEAN, CYGNUS
WILL ALTER ITS ORBIT A FEW TIMES

10
00:00:24,986 --> 00:00:26,946
TO DEPLOY SEVERAL
TYPES OF SATELLITES

11
00:00:27,076 --> 00:00:28,316

FROM DIFFERENT DEPLOYERS.

12

00:00:28,956 --> 00:00:31,286
THE SLINGSHOT DEPLOYER
WILL RELEASE SOME STUDENT

13

00:00:31,286 --> 00:00:32,416
AND COMMERCIAL SATELLITES,

14

00:00:32,506 --> 00:00:35,526
WHILE THE NANORACKS DEPLOYER
WILL RELEASE THE KICKSAT-2,

15

00:00:35,526 --> 00:00:38,646
WHICH WILL DEPLOY 100 MUCH
SMALLER SATELLITES CALLED

16

00:00:38,796 --> 00:00:40,956
FEMTOSATELLITES WEIGHING
LESS THAN THREE

17

00:00:40,956 --> 00:00:42,016
AND A HALF OUNCES EACH.

18

00:00:42,736 --> 00:00:45,036
CYGNUS IS SCHEDULED TO
RE-ENTER THE EARTH'S ATMOSPHERE

19

00:00:45,036 --> 00:00:48,516
IN LATE FEBRUARY TO CONCLUDE
ITS MISSION IN SPACE.

20

00:00:48,696 --> 00:00:51,816
CANADIAN SPACE AGENCY ASTRONAUT
DAVID SAINT-JACQUES TOOK A SPIN

21

00:00:51,866 --> 00:00:54,176
AT AN EXPERIMENT THAT
LOOKS AT FLUID BEHAVIOR.

22

00:00:55,306 --> 00:00:57,186

THE FLUIDICS EXPERIMENT
IS DESIGNED TO LOOK

23

00:00:57,186 --> 00:00:59,946

AT A FEW ASPECTS ON HOW
LIQUIDS MOVE IN MICROGRAVITY.

24

00:01:00,506 --> 00:01:02,926

THE HARDWARE CONSISTS OF
SOME TRANSPARENT SPHERES

25

00:01:03,026 --> 00:01:05,166

AND A CENTRIFUGE
SPECIALLY DESIGNED TO LOOK

26

00:01:05,166 --> 00:01:07,226

AT WAVE TURBULANCE
AND LIQUID SLOSHING.

27

00:01:07,856 --> 00:01:09,776

UNDERSTANDING HOW THESE
PHENOMENA ARE DIFFERENT

28

00:01:09,826 --> 00:01:11,646

IN A MICROGRAVITY
ENVIRONMENT COULD LEAD

29

00:01:11,746 --> 00:01:14,416

TO BETTER FUEL SYSTEMS FOR
SATELLITES AND EVEN AID

30

00:01:14,416 --> 00:01:17,506

IN IMPROVING CLIMATE PREDITIONS
AND RENEWABLE ENERGY ON EARTH.

31

00:01:19,756 --> 00:01:22,416

NASA AND ITS COMMERCIAL CREW
PROGRAM PROVIDERS BOEING

32
00:01:22,416 --> 00:01:24,756
AND SPACEX SET NEW
TARGET LAUNCH DATES

33
00:01:25,056 --> 00:01:27,306
FOR THEIR UPCOMING
UNCREWED TEST FLIGHTS.

34
00:01:27,676 --> 00:01:29,966
WE'RE NOW TARGETING MARCH
2 FOR THE FIRST LAUNCH

35
00:01:29,966 --> 00:01:33,516
OF SPACEX'S CREW DRAGON ON ITS
UNCREWED DEMO-1 TEST FLIGHT.

36
00:01:34,256 --> 00:01:36,916
BOEING'S UNCREWED ORBITAL
FLIGHT TEST IS BEING TARGETED

37
00:01:36,986 --> 00:01:38,506
FOR LAUNCH NO EARLIER
THAN APRIL.

38
00:01:39,266 --> 00:01:41,306
YOU CAN FIND OUT MORE AND KEEP
UP WITH ALL OF THE PROGRESS

39
00:01:41,366 --> 00:01:43,496
OVER AT [NASA.GOV/COMMERCIALCREW](https://www.nasa.gov/commercialcrew).

40
00:01:44,776 --> 00:01:46,326
THIS WEEK'S QUESTION
COMES FROM NICOLE

41
00:01:46,386 --> 00:01:47,916
AT RJO INTERMEDIATE SCHOOL.

42
00:01:48,626 --> 00:01:51,046

SHE ASKS: HOW DO ASTRONAUTS
BREATHE IN A SPACE SHIP?

43

00:01:51,456 --> 00:01:52,176
GREAT QUESTION, NICOLE.

44

00:01:52,596 --> 00:01:55,426
NASA ASTRONAUT ANNE MCCLAIN WAS
ASKED THE SAME THING THIS WEEK

45

00:01:55,486 --> 00:01:57,696
BY ELEMENTARY SCHOOL
STUDENTS IN EL DORODO HILLS,

46

00:01:57,696 --> 00:01:59,886
CALIFORNIA DURING A LIVE
EVENT WITH THE SPACE STATION.

47

00:01:59,966 --> 00:02:03,126
WE'LL LET HER TAKE THIS
ONE: "THE ENGINEERS

48

00:02:03,126 --> 00:02:05,176
ON THE GROUND HAVE
DONE AN AMAZING JOB

49

00:02:05,176 --> 00:02:08,946
OF CREATING THE SPACE THAT
FEELS A LOT LIKE EARTH SO OTHER

50

00:02:08,946 --> 00:02:13,076
THAN FLOATING, OUR TEMPERATURES
AND OUR AIR IS ALMOST EXACTLY

51

00:02:13,076 --> 00:02:15,986
LIKE WE HAVE ON EARTH, AND
THAT'S ACTUALLY BECAUSE IN ORDER

52

00:02:15,986 --> 00:02:18,886
TO LIVE, WE NEED CERTAIN

THINGS IN OUR AIR LIKE OXYGEN."