



Space to Ground

1

00:00:03,230 --> 00:00:05,120

WELCOME TO SPACE TO GROUND, I AM GARY JORDAN.

2

00:00:05,120 --> 00:00:10,220

THREE RESIDENTS OF THE INTERNATIONAL SPACE STATION HAVE SAFELY RETURNED TO PLANET EARTH.

3

00:00:11,560 --> 00:00:16,800

NASA ASTRONAUT ANNE MCCLAIN, DAVID SAINT-JACQUES OF THE CANADIAN SPACE AGENCY AND

4

00:00:16,810 --> 00:00:22,109

OF ROSCOSMOS LANDED IN THE KAZAKH STEPPE ON MONDAY NIGHT, U.S. TIME, TO COMPLETE A 204-DAY

5

00:00:22,109 --> 00:00:25,070

MISSION ABOARD THE ORBITING LABORATORY.

6

00:00:25,070 --> 00:00:31,310

SINCE LAUNCHING DECEMBER 3RD, THE TRIO ORBITED THE EARTH 3,264 TIMES, TRAVELED WELL OVER

7

00:00:31,310 --> 00:00:36,530

86 MILLION MILES, AND WORKED ON HUNDREDS OF SCIENTIFIC EXPERIMENTS IN AREAS SUCH AS HUMAN

8

00:00:36,530 --> 00:00:39,220

BIOLOGY, DNA-EDITING, AND 3D PRINTING.

9

00:00:40,320 --> 00:00:44,539

COMMAND OF THE INTERNATIONAL SPACE STATION WAS HANDED OVER FROM KONENENKO TO ALEXEY OVCHININ,

10

00:00:44,539 --> 00:00:47,859

WHO WILL HOLD THE POSITION UNTIL HE RETURNS TO EARTH IN OCTOBER.

11

00:00:47,859 --> 00:00:51,879

THE DEPARTING CREW THEN SAID THEIR FAREWELLS BEFORE CLOSING THE HATCH AND PREPARING FOR

12

00:00:51,879 --> 00:00:55,859

THE THREE HOUR TWENTY-TWO MINUTE JOURNEY FROM UNDOCKING TO TOUCHDOWN.

13

00:00:55,860 --> 00:01:00,460

MCCLAIN AND SAINT-JACQUES THEN RETURNED TO HOUSTON, TEXAS, AND KONENENKO TO STAR CITY, RUSSIA.

14

00:01:01,610 --> 00:01:04,720

WHEN YOUR FRIENDS ARE PACKING UP FOR THEIR TRIP HOME, DO YOU EVER SAY, "HEY, BEFORE

15

00:01:04,730 --> 00:01:08,160

I SAY GOODBYE LET ME JUST SEQUENCE THIS DNA REAL FAST."

16

00:01:08,160 --> 00:01:09,160

NO?

17

00:01:09,160 --> 00:01:11,500

I GUESS GOODBYES ARE A BIT DIFFERENT FROM A SPACE STATION.

18

00:01:12,800 --> 00:01:17,260

JUST A FEW HOURS BEFORE HER CREWMATES DEPARTED THE ORBITING LABORATORY, NASA AST

19

00:01:17,260 --> 00:01:22,020

RETRIEVED SOME SAMPLES FROM THE STATION'S FREEZER AND SEQUENCED DNA FOR THE GENES IN

20

00:01:22,020 --> 00:01:23,950

SPACE INVESTIGATION.

21

00:01:23,950 --> 00:01:29,240

THE DNA SEQUENCER IS A POWERFUL TOOL ON A SMALL DEVICE THAT CAN IDENTIFY COMPLEX BIOLOGICAL

22

00:01:29,240 --> 00:01:30,240

STRUCTURES.

23

00:01:30,240 --> 00:01:34,820

THE TOOL WAS USED FOR THE GENES IN SPACE 06 INVESTIGATION, WHICH LOOKS AT DNA DAMAGE AND

24

00:01:34,820 --> 00:01:36,560

REPAIR MECHANISMS IN SPACE.

25

00:01:36,560 --> 00:01:41,380

THE SEQUENCER HELPS TO CHECK THE DNA AFTER THE REPAIR PROCESS AND LOOK FOR ANY ERRORS.

26

00:01:42,310 --> 00:01:46,420

THIS WEEK'S QUESTION COMES FROM HEATH, WHO ASKS HOW SOON THE CREW IS REUNITED WITH THEIR

27

00:01:46,420 --> 00:01:48,200

FAMILIES AFTER LANDING.

28

00:01:48,200 --> 00:01:50,540

AS YOU CAN IMAGINE, IT DEPENDS WHERE YOUR FAMILY IS.

29

00:01:50,540 --> 00:01:54,680

DAN HUOT ANSWERED THIS QUESTION DURING OUR LIVE COVERAGE OF THE CREW'S DEPARTURE FROM

30

00:01:54,680 --> 00:01:55,780

THE SPACE STATION.

31

00:01:55,780 --> 00:01:58,600

"THAT ACTUALLY DIFFERS FOR EACH OF THE CREW MEMBERS.

32

00:01:58,600 --> 00:02:03,030

SO THE CREW WILL TOUCH DOWN, AND THEN IT'S USUALLY ABOUT 2 HOURS AFTER LANDING UNTIL

33

00:02:03,030 --> 00:02:08,660

THEY'RE BACK AT THE STAGING AIRPORT IN KAZAKHSTAN, AND THEN FOR RUSSIAN COSMONAUT C

34

00:02:08,660 --> 00:02:14,000

IT'S ONLY A FOUR AND A HALF HOUR FLIGHT BACK
UP TO THE GAGARIN COSMONAUT TRAINING CENTER,

35

00:02:14,000 --> 00:02:20,040

AND FOR ANNE AND DAVID IT WILL BE ABOUT EIGHTEEN AND A HALF HOURS OR SO DOOR-TO-DOOR

36

00:02:20,040 --> 00:02:23,120

BACK HERE TO HOUSTON, SO IT IS PRETTY QUICK."

37

00:02:23,920 --> 00:02:28,180

KEEP SENDING IN YOUR QUESTIONS TO OUR LIVE
BROADCASTS, AND HERE ON SPACE TO GROUND USING