



Space to Ground

1

00:00:03,429 --> 00:00:05,990

WELCOME TO SPACE TO GROUND, I'M LEAH CHESHIER.

2

00:00:05,990 --> 00:00:11,370

THIS WEEK, ASTRONAUTS CONTINUED SPECIALIZED SPACEWALKS TO REPAIR A COSMIC RAY DETECTOR.

3

00:00:11,370 --> 00:00:13,920

HELPING US UNDERSTAND BEYOND WHAT WE CAN SEE.

4

00:00:15,160 --> 00:00:21,520

ON NOVEMBER 22, NASA ASTRONAUT ANDREW MORGAN AND EUROPEAN SPACE AGENCY ASTRONAUTS

5

00:00:21,530 --> 00:00:24,270

SUITED UP TO SPEND A DAY IN THE VACUUM OF SPACE.

6

00:00:24,270 --> 00:00:29,930

THE DUO COMPLETED THE SECOND OF FOUR PLANNED SPACEWALKS TO REPAIR THE ALPHA MAGNETIC SPECTROMETER.

7

00:00:29,930 --> 00:00:34,520

AN EXPERIMENT THAT SIFTS THROUGH COSMIC RAY PARTICLES AND DETERMINES THEIR CHARACTERISTICS.

8

00:00:34,520 --> 00:00:39,010

THE ASTRONAUTS USED TOOLS DEVELOPED SPECIFICALLY TO COMPLETE OUT-OF-THE-ORDINARY TASKS.

9

00:00:39,010 --> 00:00:42,120

TASKS, LIKE CUTTING THROUGH STAINLESS STEEL TUBES.

10

00:00:42,120 --> 00:00:47,270

THE ASTRONAUTS WILL CONDUCT TWO MORE SPACEWALKS TO CONTINUE REPAIRS ON THE AMS, WHICH WILL

11

00:00:47,270 --> 00:00:51,059

ADDITIONAL YEARS OF RESEARCH INTO THE SECRETS OF OUR UNIVERSE.

12

00:00:51,059 --> 00:00:56,059

BOEING'S STARLINER SPACECRAFT WAS ON A ROLL THIS WEEK, PREPARING FOR ITS MAIDEN VOYAGE.

13

00:00:56,059 --> 00:00:59,430

TO THE INTERNATIONAL SPACE STATION IN DECEMBER.

14

00:00:59,430 --> 00:01:03,880

AS ONE OF OUR COMMERCIAL CREW PARTNERS, BOEING IS APPROACHING THE FIRST FLIGHT OF I

15

00:01:03,880 --> 00:01:09,260

CREW VEHICLE, WHICH ROLLED OUT TO ITS LAUNCH PAD AT KENNEDY SPACE CENTER ON NOVEM

16

00:01:09,260 --> 00:01:13,570

STARLINER WILL FIRST MAKE AN UNCREWED FLIGHT TO THE SPACE STATION IN DECEMBER AND F

17

00:01:13,570 --> 00:01:17,680

TO EARTH TO TEST ALL ITS SYSTEMS BEFORE TRANSPORTING ASTRONAUTS NEXT YEAR.

18

00:01:17,680 --> 00:01:22,560

THE COMMERCIAL CREW PROGRAM WILL ALLOW NASA THE CAPABILITY TO LAUNCH ASTRONAUTS

19

00:01:22,560 --> 00:01:27,030

STATION FROM AMERICAN SOIL, THE FIRST FLIGHTS TO DO SO SINCE THE RETIREMENT OF THE SP

20

00:01:27,030 --> 00:01:28,560

SHUTTLE IN 2011.

21

00:01:29,620 --> 00:01:33,620

THIS WEEK'S QUESTION IS FROM MICHELE'S
YEAR THREE STUDENTS, WHO ASK ABOUT THE SPACE

22

00:01:33,630 --> 00:01:39,290

STATION'S SPEED AND IF EARTH IS IN VIEW
WHILE ASTRONAUTS ARE OUTSIDE THE HATCH.

23

00:01:39,290 --> 00:01:44,900

THE SPACE STATION ORBITS EARTH AT AROUND 17,500 MILES PER HOUR, TREATING ASTRONAUTS

24

00:01:44,900 --> 00:01:48,630

TO ABOUT 16 SUNRISES AND SUNSETS EACH DAY.

25

00:01:48,630 --> 00:01:53,820

WHEN THOSE ASTRONAUTS GO ON A SPACEWALK, THEY
GET A MAGNIFICENT VIEW OF THE EARTH BELOW,

26

00:01:53,820 --> 00:01:57,979

AND IF YOU WATCH THE BROADCAST, YOU TOO MIGHT CATCH A GLIMPSE OF OUR HOME PLANET F

27

00:01:57,979 --> 00:02:00,280

HELMET CAMERA.