



**Space to Ground**

1

00:00:03,280 --> 00:00:05,730

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

2

00:00:05,730 --> 00:00:10,740

THIS WEEK, ASTRONAUTS ARE DETERMINING RADIATION RISK IN SPACE WITH THE HELP OF BUBBL

3

00:00:12,140 --> 00:00:17,440

THE RADI-N2 NEUTRON FIELD STUDY USES 8 BUBBLE DETECTORS TO BETTER CHARACTERIZE THE

4

00:00:17,441 --> 00:00:22,050

ENVIRONMENT ON THE SPACE STATION, INCLUDING ONE CARRIED BY A CREW MEMBER.

5

00:00:22,050 --> 00:00:25,600

NEUTRONS CARRY NO ELECTRICAL CHARGE, SO IT'S EASIER FOR THEM TO PENETRATE THE BODY

6

00:00:25,600 --> 00:00:27,080

AND DAMAGE TISSUE.

7

00:00:27,300 --> 00:00:32,520

RADI-N2 WILL HELP DOCTORS BETTER UNDERSTAND CONECTIONS BETWEEN NEUTRON RADIATION

8

00:00:32,520 --> 00:00:37,540

DAMAGE, CATARACTS THAT AFFECT SOME ASTRONAUTS AND OTHER RADIATION-RELATED HEALTH

9

00:00:38,400 --> 00:00:42,239

ASTRONAUTS ABOARD THE SPACE STATION MIGHT NOT GET TO GRILL OUT OR GO TO A PARADE C

10

00:00:42,240 --> 00:00:45,660

INDEPENDENCE DAY, BUT THEY HAD A MESSAGE FOR THOSE OF US CELEBRATING

11

00:00:45,660 --> 00:00:47,460

THE 4TH OF JULY ON EARTH.

12

00:00:48,080 --> 00:00:53,420

"AS WE ORBIT OUR PLANET HIGH ABOVE YOU, WE  
WANT TO TAKE A MOMENT AND WISH ALL AMERICANS

13

00:00:53,420 --> 00:00:57,539

AT HOME AND AROUND THE WORLD A VERY HAPPY FOURTH OF JULY.

14

00:00:57,539 --> 00:01:03,390

THROUGH HISTORY, OUR FLAG HAS TRAVELED WITH HUMANS AND ROBOTS TO THE FARTHEST OF

15

00:01:03,390 --> 00:01:09,020

SYSTEM, AS AMERICAN INGENUITY AND LEADERSHIP HAS PUSHED THE BOUNDARIES OF WHAT'S P

16

00:01:09,020 --> 00:01:11,979

THROUGH GRIT, DETERMINATION AND IMAGINATION."

17

00:01:12,600 --> 00:01:17,520

"ON BEHALF OF THE CREW OF THE INTERNATIONAL SPACE STATION AND NASA, WE WANT TO WISH

18

00:01:17,520 --> 00:01:20,220

A FABULOUS AND SAFE INDEPENDENCE DAY."

19

00:01:20,460 --> 00:01:24,700

THIS WEEK'S QUESTION IS FROM DONNA, WHO  
WANTS TO KNOW HOW MANY ASTRONAUTS HAVE LIVED

20

00:01:24,700 --> 00:01:27,920

ABOARD THE INTERNATIONAL SPACE STATION.

21

00:01:27,920 --> 00:01:33,610

NOVEMBER 2020 MARKS THE 20TH ANNIVERSARY OF CONTINUOUS HUMAN PRESENCE ON THE SPA

22

00:01:33,610 --> 00:01:38,789

THAT MEANS IF YOU'RE 18 OR YOUNGER, THERE'S BEEN SOMEONE IN SPACE EVERY DAY OF YOUR

23

00:01:38,789 --> 00:01:44,460

IN THAT TIME, 236 DIFFERENT PEOPLE HAVE LIVED AND WORKED ABOARD THE ORBITING LABORAT