
SpacetoGround

1
00:00:02,616 --> 00:00:06,186
"WE HAVE A BEAUTIFUL LOOKING
FLOW CELL, AND WE CAN TELL

2
00:00:06,296 --> 00:00:08,686
BY ALL THE DATA COMING IN
THAT RNA IS BEING SEQUENCE,

3
00:00:08,996 --> 00:00:11,806
SO THANK YOU AND CONGRATS AGAIN
FOR BEING THE FIRST PERSON

4
00:00:11,806 --> 00:00:13,800
TO SEQUENCE RNA IN
SPACE".

5
00:00:14,680 --> 00:00:16,680
WELCOME TO SPACE TO GROUND, I'M ISIDRO REYNA.

6
00:00:17,006 --> 00:00:18,956
A HISTORIC MILESTONE
WAS ACHIEVED THIS WEEK

7
00:00:18,956 --> 00:00:20,496
ON THE INTERNATIONAL
SPACE STATION.

8
00:00:21,086 --> 00:00:24,546
NASA ASTRONAUT RICKY ARNOLD
SUCCESFULLY SEQUENCED RNA

9
00:00:24,546 --> 00:00:27,646
ONBOARD THE STATION AS PART
OF THE BIOMOLECULE EXTRACTION

10
00:00:27,646 --> 00:00:29,426
AND SEQUENCING TECHNOLOGY
EXPERIMENT.

11

00:00:29,966 --> 00:00:32,936
THIS HAS THE POTENTIAL TO BE
A GAME-CHANGER FOR RESEARCH

12
00:00:32,936 --> 00:00:33,816
INTO CREW HEALTH,

13
00:00:33,856 --> 00:00:36,626
AND UNDERSTANDING HOW ORGANISMS
RESPOND TO SPACEFLIGHT.

14
00:00:36,706 --> 00:00:39,456
THE INVESTIGATION STUDIES
THE USE OF SEQUENCING

15
00:00:39,526 --> 00:00:40,606
FOR THE IDENTIFICATION

16
00:00:40,606 --> 00:00:43,666
OF UNKNOWN MICROBIAL
ORGANISMS LIVING ON STATION,

17
00:00:43,666 --> 00:00:45,406
AND FOR UNDERSTANDING
HOW HUMANS,

18
00:00:45,736 --> 00:00:47,626
PLANTS AND MICROBES
ADAPT TO LIVING

19
00:00:47,626 --> 00:00:48,836
ON THE ORBITING LABORATORY.

20
00:00:49,236 --> 00:00:51,196
THIS KNOWLEDGE CAN
PROVIDE BETTER INSIGHT

21
00:00:51,196 --> 00:00:52,636
INTO THE DEVELOPMENT
OF REQUIREMENTS

22
00:00:52,636 --> 00:00:55,286
AND PROCEDURES NECESSARY
FOR HUMAN EXPLORATION,

23
00:00:55,506 --> 00:00:58,106
BOTH ON THE STATION AND
IN FUTURE EXPLORATION.

24
00:00:58,296 --> 00:01:01,336
THE INTERNATIONAL SPACE
STATION'S CABIN PRESSURE IS

25
00:01:01,336 --> 00:01:04,716
HOLDING STEADY AFTER THE CREW
CONDUCTED REPAIR WORK ON ONE

26
00:01:04,716 --> 00:01:07,936
OF TWO RUSSIAN SOYUZ SPACECRAFT
ATTACHED TO THE COMPLEX.

27
00:01:08,466 --> 00:01:10,086
THE REPAIR WAS MADE
TO ADDRESS A LEAK

28
00:01:10,326 --> 00:01:12,786
THAT HAD CAUSED A MINOR
REDUCTION OF STATION PRESSURE.

29
00:01:13,256 --> 00:01:14,876
THE CREW WAS NEVER
IN ANY DANGER.

30
00:01:15,296 --> 00:01:17,376
AFTER A MORNING OF
INVESTIGATIONS,

31
00:01:17,676 --> 00:01:20,406
THE CREW REPORTED THAT THE
LEAK WAS ISOLATED TO A HOLE

32
00:01:20,406 --> 00:01:22,086
ABOUT TWO MILLIMETERS
IN DIAMETER

33
00:01:22,346 --> 00:01:24,566
IN THE ORBITAL COMPARTMENT,
OR UPPER SECTION,

34
00:01:24,876 --> 00:01:27,426
OF THE SOYUZ MS-09 SPACECRAFT.

35
00:01:27,926 --> 00:01:30,726
FLIGHT CONTROLLERS IN HOUSTON
AND MOSCOW WORKED TOGETHER

36
00:01:30,726 --> 00:01:32,656
WITH THE CREW TO
EFFECT A REPAIR OPTION

37
00:01:32,906 --> 00:01:36,316
IN WHICH SOYUZ COMMANDER
SERGEY PROKOPYEV USED EPOXY

38
00:01:36,316 --> 00:01:39,336
ON A GAUZE WIPE TO PLUG THE HOLE
IDENTIFIED AS THE LEAK SOURCE.

39
00:01:39,876 --> 00:01:42,966
FLIGHT CONTROLLERS CONTINUE TO
MONITOR STATION'S CABIN PRESSURE

40
00:01:43,206 --> 00:01:44,196
IN THE WAKE OF THE REPAIR.