



Space**to**Ground

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

2
00:00:05,296 --> 00:00:07,476
WELCOME TO SPACE TO
GROUND, I'M DAN HUOT.

3
00:00:07,776 --> 00:00:10,946
THREE CREWMEMBERS WRAPPED UP
THEIR YEAR BY SAYING FAREWELL

4
00:00:11,016 --> 00:00:13,126
TO SPACE AND HELLO
TO PLANET EARTH.

5
00:00:14,426 --> 00:00:16,406
NASA'S SERENA ANON-CHANCELLOR

6
00:00:16,406 --> 00:00:20,216
AND HER EXPEDITION 57
COHORTS ALEXANDER GERST OF ESA

7
00:00:20,516 --> 00:00:23,936
AND SERGEY PROKOPYEV OF
ROSCOSMOS PACKED UP THEIR THINGS

8
00:00:24,236 --> 00:00:28,576
AND LEFT THE INTERNATIONAL SPACE
STATION AFTER 197 DAYS IN SPACE.

9
00:00:29,266 --> 00:00:31,636
BEFORE THEY LEFT, ALEX
HANDED OVER COMMAND

10
00:00:31,636 --> 00:00:35,576
TO RUSSIAN COSMONAUT OLEG
KONONENKO FOR EXPEDITION 58.

11

00:00:35,576 --> 00:00:38,016

"WHEN WE CLOSE THAT
HATCH TOMORROW,

12

00:00:38,316 --> 00:00:40,196

WE WILL BE BOTH HAPPY AND SAD.

13

00:00:40,196 --> 00:00:45,236

WE WILL LEAVE THIS PLACE WITH
A LAUGHING AND A CRYING EYE,

14

00:00:45,486 --> 00:00:49,376

MOSTLY BECAUSE WE MISS YOU, OUR
FRIENDS UP HERE, BUT ALSO THIS,

15

00:00:49,546 --> 00:00:51,556

THIS FANTASTIC MAGICAL PLACE."

16

00:00:52,536 --> 00:00:56,356

THEY LOADED INTO THE SOYUZ
MS-09 SPACECRAFT AND UNDOCKED

17

00:00:56,426 --> 00:00:58,296

FOR THE SEVERAL HOUR
JOURNEY HOME.

18

00:00:58,966 --> 00:01:01,806

AS IS TYPICAL DURING THE
WINTER MONTHS IN KAZAKHSTAN,

19

00:01:01,996 --> 00:01:04,956

FREEZING TEMPERATURES AND SNOW
GREETED THE CREW ON THE GROUND

20

00:01:05,256 --> 00:01:08,266

AS TEAMS FROM ALL THREE
SPACE AGENCIES ASSISTED

21

00:01:08,586 --> 00:01:11,276

IN RECOVERING THE CREW

AFTER A SUCCESSFUL LANDING.

22
00:01:12,006 --> 00:01:15,446
ONE SHORT HELICOPTER RIDE LATER,
THEY LOADED UP ONTO PLANES

23
00:01:15,446 --> 00:01:19,046
AND HEADED BACK TO HOME BASE
IN THE U.S, GERMANY AND RUSSIA.

24
00:01:19,706 --> 00:01:22,756
AND WHILE THIS WAS THE FIRST
FLIGHT FOR SERENA AND SERGEY,

25
00:01:22,756 --> 00:01:25,416
THIS WAS ALEX'S SECOND
LONG-DURATION STINT

26
00:01:25,416 --> 00:01:28,766
ON THE STATION AND MADE HIM
THE NEW RECORD HOLDER FOR TIME

27
00:01:28,766 --> 00:01:33,276
IN SPACE AMONG EUROPEAN
ASTRONAUTS WITH 362 DAYS TOTAL.

28
00:01:34,616 --> 00:01:37,586
PHASE THREE OF AN INNOVATIVE
TECH DEMO TEACHING US HOW

29
00:01:37,586 --> 00:01:39,676
TO FUEL UP IN SPACE IS UNDERWAY.

30
00:01:40,466 --> 00:01:43,436
GROUND CONTROLLERS USED THE
SPACE STATION'S ROBOTIC ARM

31
00:01:43,436 --> 00:01:47,106
TO EXTRACT THE ROBOTIC
REFUELING MISSION-3 AND AFFIXED

32

00:01:47,106 --> 00:01:49,966
TO ITS TEST LOCATION
ABOARD STATION THIS WEEK.

33

00:01:50,466 --> 00:01:52,816
THE LATEST EVOLUTION OF
THIS PAYLOAD WILL LOOK

34

00:01:52,816 --> 00:01:55,536
TO COMPLETE AN IMPORTANT
FIRST: STORING

35

00:01:55,536 --> 00:01:58,456
AND TRANSFERRING
CRYOGENIC FLUID IN SPACE.

36

00:01:58,976 --> 00:02:02,206
CRYOGENIC FLUIDS ARE
IMPORTANT FUELS AND COOLANTS

37

00:02:02,206 --> 00:02:04,966
FOR SPACECRAFT, AND DEVELOPING
THE TOOLS AND TECHNIQUES

38

00:02:05,006 --> 00:02:07,136
TO TOP OFF SATELLITES
AND SPACECRAFT WHILE

39

00:02:07,136 --> 00:02:09,606
IN OUTER SPACE WILL
BE A CRITICAL SKILL

40

00:02:09,606 --> 00:02:13,126
FOR PROLONGING THE LIFETIME OF
VEHICLES AND SUPPORTING CREWS

41

00:02:13,126 --> 00:02:15,606
THAT EMBARK ON MISSIONS
FAR BEYOND EARTH.

