



# Space **to** Ground



1  
00:00:03,046 --> 00:00:05,506  
"MAIN ENGINES START, SIX  
ENGINES UP AND RUNNING."

2  
00:00:06,156 --> 00:00:08,776  
"AND LIFTOFF, LIFTOFF  
OF THE PROTON ROCKET

3  
00:00:08,776 --> 00:00:10,096  
AND THE ZAYRA CONTROL MODULE,

4  
00:00:10,096 --> 00:00:13,126  
THE INTERNATIONAL SPACE  
STATION IS UNDERWAY."

5  
00:00:13,256 --> 00:00:15,366  
WELCOME TO SPACE TO  
GROUND, I'M ISIDRO REYNA.

6  
00:00:15,776 --> 00:00:18,656  
HAPPY 20TH ANNIVERSARY TO THE  
INTERNATIONAL SPACE STATION!

7  
00:00:19,506 --> 00:00:21,676  
THIS WEEK MARKS THE  
ANNIVERSARY OF THE BEGINNING

8  
00:00:21,676 --> 00:00:23,546  
OF THE WORLD'S ORBITING  
LABORATORY.

9  
00:00:23,846 --> 00:00:24,616  
IT WAS ON NOV.

10  
00:00:24,706 --> 00:00:28,956  
20, 1998, THAT A RUSSIAN PROTON  
ROCKET LIFTED THE FIRST MODULE,

11  
00:00:29,246 --> 00:00:32,476

ZARYA, INTO SPACE FOLLOWED  
TWO WEEKS LATER BY UNITY,

12

00:00:32,476 --> 00:00:33,966  
THE FIRST U.S. SEGMENT CARRIED

13

00:00:33,966 --> 00:00:36,696  
BY SPACE SHUTTLE  
ENDEAVOUR ON STS-88.

14

00:00:37,216 --> 00:00:40,336  
SINCE THEN, MORE THAN 200  
ASTRONAUTS AND COSMONAUTS

15

00:00:40,516 --> 00:00:43,696  
FROM 18 COUNTRIES HAVE VISITED  
THE STATION AND CONTRIBUTED

16

00:00:43,696 --> 00:00:45,806  
TO MORE THAN 2,500  
INVESTIGATIONS.

17

00:00:46,346 --> 00:00:48,066  
GREAT RESEARCH, INNOVATION,

18

00:00:48,286 --> 00:00:50,026  
FUNDAMENTAL SCIENTIFIC  
DISCOVERY,

19

00:00:50,276 --> 00:00:52,166  
AND TESTING OF EXPLORATION  
CONCEPTS

20

00:00:52,166 --> 00:00:54,666  
AND TECHNOLOGY WILL  
CONTINUE ABOARD THE STATION

21

00:00:54,886 --> 00:00:55,826  
AS IT PAVES THE WAY

22

00:00:55,826 --> 00:00:58,596  
FOR COMMERCIAL INDUSTRY  
IN LOW-EARTH ORBIT.

23

00:00:58,596 --> 00:01:02,146  
THE STATION CREW HAD THIS TO SAY  
ABOUT THIS HISTORIC MILESTONE.

24

00:01:02,176 --> 00:01:07,776  
"ISS IS A SHIP THAT TEACHES US  
HOW TO FLY BEYOND THE HORIZON.

25

00:01:08,556 --> 00:01:11,466  
WE ARE LITERALLY THE  
FIRST GENERATION OF FISH

26

00:01:11,816 --> 00:01:13,586  
THAT LEFT EARTH'S HOMELY OCEAN.

27

00:01:14,296 --> 00:01:17,136  
THE NEXT GENERATION WILL  
SET THEIR FOOT ON MARS,

28

00:01:17,436 --> 00:01:19,886  
USING THE KNOWLEDGE AND  
TECHNOLOGIES DEVELOPED

29

00:01:19,996 --> 00:01:21,516  
ON THE INTERNATIONAL  
SPACE STATION."

30

00:01:22,556 --> 00:01:25,496  
THIS WEEK THE CREW ENJOYED A  
TRADITIONAL THANKSGIVING FEAST,

31

00:01:25,956 --> 00:01:27,016  
IN MICROGRAVITY.

32

00:01:27,716 --> 00:01:31,556

"WE GOT EVERYTHING FROM TURKEY  
TO CANDIED YAMS TO STUFFING

33

00:01:31,606 --> 00:01:34,316  
TO SPECIAL SPICY POUND CAKE,  
SO WE'RE VERY EXCITED."

34

00:01:35,186 --> 00:01:37,656  
WHILE THE SPACE STATION  
MAY BE A LOT LIKE HOME,

35

00:01:37,656 --> 00:01:40,526  
IN THE GALLEY KITCHEN, YOU'LL  
SEE QUITE A FEW DIFFERENCES.

36

00:01:40,526 --> 00:01:43,726  
THERE ARE NO REFRIGERATOR  
OR STOVES, SO MEALS HAVE

37

00:01:43,726 --> 00:01:47,106  
TO BE SHELF STABLE AND EASILY  
REHEATED IN SMALL WARMERS.

38

00:01:47,356 --> 00:01:49,956  
ALSO, THE GALLEY IS  
MISSING A FEW OTHER ITEMS,

39

00:01:50,206 --> 00:01:51,416  
KNIVES AND CHAIRS!

40

00:01:51,756 --> 00:01:53,346  
MOST MEALS ARE EATEN  
WITH A SPOON,

41

00:01:53,346 --> 00:01:54,696  
AND BECAUSE OF MICROGRAVITY,

42

00:01:54,916 --> 00:01:56,356  
CREW MEMBERS FLOAT  
AROUND THE TABLE.

43

00:01:57,436 --> 00:02:00,406

TWO CARGO VEHICLES ARRIVED  
TO THE STATION WITH TONS

44

00:02:00,406 --> 00:02:02,266

OF SUPPLIES FOR THE CREW.

45

00:02:02,266 --> 00:02:06,106

THE PROGRESS 71 CARGO CRAFT  
BLASTED OFF ON NOVEMBER 16TH

46

00:02:06,106 --> 00:02:09,146

FROM THE BAIKONUR COSMODROME  
LAUNCH PAD IN KAZAKHSTAN.

47

00:02:09,146 --> 00:02:11,426

THE VEHICLE WAS LOADED  
WITH ALMOST THREE TONS

48

00:02:11,426 --> 00:02:12,956

OF FOOD, FUEL AND SUPPLIES.

49

00:02:13,606 --> 00:02:15,686

THE SPACECRAFT DOCKED  
NOVEMBER 18TH.

50

00:02:16,476 --> 00:02:17,696

THE CYGNUS SPACE FREIGHTER

51

00:02:17,736 --> 00:02:19,966

FROM NORTHROP GRUMMAN  
LAUNCHED NOVEMBER 17TH

52

00:02:20,086 --> 00:02:23,176

AT THE WALLOPS FLIGHT FACILITY  
ON VIRGINIA'S ATLANTIC COAST.

53

00:02:23,956 --> 00:02:27,376

THE U.S. RESUPPLY SHIP DELIVERED  
APPROXIMATELY 7,400 POUNDS

54

00:02:27,376 --> 00:02:29,806

OF FOOD, FUEL AND  
SUPPLIES TO THE STATION.

55

00:02:30,456 --> 00:02:32,756

THE SPACECRAFT WAS  
CAPTURED NOVEMBER 19TH

56

00:02:32,920 --> 00:02:34,820

BY THE CANADARM2 ROBOTIC ARM.