
SpacetoGround

1
00:00:03,110 --> 00:00:05,092
"HOUSTON, STATION ON SPACE TO GROUND."

2
00:00:05,092 --> 00:00:07,689
WELCOME TO SPACE TO GROUND, I'M ISIDRO REYNA.

3
00:00:07,689 --> 00:00:09,610
THIS WEEK, WE CELEBRATE SCIENCE ABOARD

4
00:00:09,610 --> 00:00:11,980
THE INTERNATIONAL SPACE STATION.

5
00:00:11,980 --> 00:00:13,730
NASA'S STRATOSPHERIC AEROSOL AND

6
00:00:13,730 --> 00:00:16,209
GAS EXPERIMENT III OR SAGE III,

7
00:00:16,209 --> 00:00:17,860
CELEBRATED ITS FOURTH ANNIVERSARY OF

8
00:00:17,860 --> 00:00:19,020
ITS FIRST-LIGHT MEASUREMENTS

9
00:00:19,020 --> 00:00:21,100
ABOARD THE INTERNATIONAL SPACE STATION.

10
00:00:21,100 --> 00:00:22,780
THIS EXPERIMENT IS THE MOST RECENT

11
00:00:22,780 --> 00:00:24,410
IN A SERIES OF SAGE INSTRUMENTS

12
00:00:24,410 --> 00:00:26,100
THAT HAVE MEASURED STRATOSPHERIC GASES

13
00:00:26,100 --> 00:00:27,801

AND AEROSOLS FROM SPACE.

14
00:00:27,801 --> 00:00:30,570
LAUNCHED TO THE STATION IN FEBRUARY 2017,

15
00:00:30,570 --> 00:00:32,450
SAGE III IS HELPING SCIENTISTS MONITOR

16
00:00:32,450 --> 00:00:33,890
THE RECOVERY OF OZONE,

17
00:00:33,890 --> 00:00:35,340
RESULTING FROM THE REDUCTION IN EMISSIONS

18
00:00:35,340 --> 00:00:37,470
OF OZONE-DEPLETING SUBSTANCES.

19
00:00:37,470 --> 00:00:38,970
SAGE III HAS ALSO MEASURED

20
00:00:38,970 --> 00:00:40,201
THE INTRUSION OF AEROSOLS INTO

21
00:00:40,201 --> 00:00:42,140
THE STRATOSPHERE FROM INTENSE WILDFIRES

22
00:00:42,140 --> 00:00:43,720
IN AUSTRALIA AND CALIFORNIA

23
00:00:43,720 --> 00:00:45,490
AND FROM VOLCANIC ERUPTIONS.

24
00:00:45,490 --> 00:00:48,239
THE SAGE FAMILY OF INSTRUMENTS STARTED IN
1979

25
00:00:48,239 --> 00:00:50,329
AND IS ONE OF NASA’S LONGEST-RUNNING

26
00:00:50,329 --> 00:00:51,920
EARTH-OBSERVING PROGRAMS.

27
00:00:51,920 --> 00:00:53,550
DATA FROM SAGE II HELPED CONFIRM

28
00:00:53,550 --> 00:00:55,739
HUMAN-DRIVEN CHANGES TO THE OZONE LAYER,

29
00:00:55,739 --> 00:00:58,970
WHICH CONTRIBUTED TO THE 1987 MONTREAL PROTOCOL

30
00:00:58,970 --> 00:01:00,480
THAT BANNED SOME OF THE MOST DESTRUCTIVE

31
00:01:00,480 --> 00:01:03,300
INDUSTRIALLY-PRODUCED OZONE-DEPLETING CHEMICALS.

32
00:01:03,787 --> 00:01:05,760
NASA'S SPACEX CREW-1 ASTRONAUTS

33
00:01:05,760 --> 00:01:08,260
ABOARD THE SPACE STATION WILL MARK ANOTHER
FIRST

34
00:01:08,260 --> 00:01:10,560
FOR COMMERCIAL SPACEFLIGHT ON APRIL 5TH,

35
00:01:10,560 --> 00:01:12,101
WHEN THE FOUR ASTRONAUTS WILL

36
00:01:12,101 --> 00:01:14,780
RELOCATE THE CREW DRAGON SPACECRAFT.

37
00:01:14,780 --> 00:01:16,570
NASA ASTRONAUTS MICHAEL HOPKINS,

38
00:01:16,570 --> 00:01:18,450
VICTOR GLOVER, AND SHANNON WALKER,

39
00:01:18,450 --> 00:01:20,840
ALONG WITH JAXA ASTRONAUT SOICHI NOGUCHI,

40
00:01:20,840 --> 00:01:22,630
WILL UNDOCK CREW DRAGON RESILIENCE

41
00:01:22,630 --> 00:01:25,060
FROM THE FORWARD PORT OF THE STATION'S HARMONY
MODULE

42
00:01:25,060 --> 00:01:27,119
AND DOCK TO THE SPACE-FACING PORT.

43
00:01:27,119 --> 00:01:28,880
THIS WILL BE THE FIRST PORT RELOCATION

44
00:01:28,880 --> 00:01:30,780
OF A CREW DRAGON SPACECRAFT.

45
00:01:30,780 --> 00:01:32,450
THE RELOCATION WILL FREE HARMONY'S

46
00:01:32,450 --> 00:01:34,960
FORWARD PORT FOR THE DOCKING OF CREW DRAGON
ENDEAVOUR,

47
00:01:34,960 --> 00:01:36,310
SET TO CARRY FOUR CREW MEMBERS TO

48
00:01:36,310 --> 00:01:39,100
THE STATION ON NASA'S SPACEX CREW-2 MISSION.

49
00:01:39,100 --> 00:01:41,840
THE CREW-1 ASTRONAUTS ARE SCHEDULED TO DEPART
THE STATION

50
00:01:41,840 --> 00:01:43,979
AND RETURN TO EARTH ON APRIL 28,

51
00:01:43,979 --> 00:01:46,689
LEAVING THE SPACE-FACING PORT OF HARMONY VACANT.

52
00:01:46,689 --> 00:01:48,350
A DRAGON CARGO SPACECRAFT

53
00:01:48,350 --> 00:01:50,130
CARRYING SEVERAL TONS OF SUPPLIES

54
00:01:50,130 --> 00:01:51,880
AND THE FIRST SET OF NEW SOLAR ARRAYS

55
00:01:51,880 --> 00:01:53,560
FOR THE SPACE STATION IS SCHEDULED

56
00:01:53,560 --> 00:01:54,610
TO LAUNCH THIS SUMMER,

57
00:01:54,610 --> 00:01:56,770
AND REQUIRES THE SPACE-FACING PORT POSITION

58
00:01:56,770 --> 00:01:59,220
TO ENABLE ROBOTIC EXTRACTION OF THE ARRAYS

59
00:01:59,220 --> 00:02:02,020
FROM DRAGON'S TRUNK USING CANADARM2.

60
00:02:02,020 --> 00:02:03,630
LIVE COVERAGE WILL BEGIN AT 6 A.M.

61
00:02:03,630 --> 00:02:05,304
EASTERN ON NASA TELEVISION,

62

00:02:05,304 --> 00:02:07,499
THE NASA APP, AND THE AGENCY'S WEBSITE.

63
00:02:08,327 --> 00:02:10,530
"STATION, THIS IS DR. FRANCIS COLLINS

64
00:02:10,530 --> 00:02:12,253
WITH NATIONAL INSTITUTES OF HEALTH.

65
00:02:12,253 --> 00:02:13,427
HOW DO YOU HEAR ME?"

66
00:02:13,950 --> 00:02:16,260
DURING A RECENT IN-FLIGHT CONVERSATION,

67
00:02:16,260 --> 00:02:19,370
NASA ASTRONAUT AND MICROBIOLOGIST DR. KATE RUBINS

68
00:02:19,370 --> 00:02:20,700
HAD THE OPPORTUNITY TO TALK WITH

69
00:02:20,700 --> 00:02:22,150
ONE OF HER SCIENCE HEROES,

70
00:02:22,150 --> 00:02:26,160
DR. FRANCIS COLLINS, DIRECTOR OF THE NATIONAL
INSTITUTES OF HEALTH.

71
00:02:26,545 --> 00:02:28,087
'AND YOU'RE DOING GREAT WORK UP THERE,

72
00:02:28,087 --> 00:02:30,510
AND WE'RE ALL FASCINATED, BY THE WAY,

73
00:02:30,510 --> 00:02:32,870
WHICH SCIENCE IS BEING CONDUCTED RIGHT THERE

74
00:02:32,870 --> 00:02:35,060

ON THE INTERNATIONAL SPACE STATION.

75
00:02:35,060 --> 00:02:36,950
AND I HOPE PEOPLE WHO ARE WATCHING THIS,

76
00:02:36,950 --> 00:02:38,230
DREAMING A LITTLE BIT THEMSELVES,

77
00:02:38,230 --> 00:02:40,760
COULD IMAGINE DOING SOMETHING LIKE THIS.

78
00:02:40,760 --> 00:02:41,790
IT'S A PATH FORWARD.

79
00:02:41,790 --> 00:02:44,450
THIS IS THE BEST TIME, TELL ME IF YOU AGREE,

80
00:02:44,450 --> 00:02:47,209
TO BE A SCIENTIST IN THE HISTORY OF THE PLANET,

81
00:02:47,209 --> 00:02:49,370
BECAUSE SO MANY THINGS ARE POSSIBLE."

82
00:02:49,842 --> 00:02:51,980
"NOT ONLY IS IT AN EXCITING GENERAL TIME

83
00:02:51,980 --> 00:02:53,629
IN THE SPACE STATION HISTORY,

84
00:02:53,629 --> 00:02:57,130
I'M HAVING FUN ACTUALLY TODAY RIGHT NOW.

85
00:02:57,130 --> 00:02:59,190
THERE'S JUST, THERE'S A LOT GOING ON UP HERE

86
00:02:59,190 --> 00:03:02,120
AND I REALLY DO THINK THAT SCIENCE HAS AN
INCREDIBLE CAREER,

87
00:03:02,120 --> 00:03:04,160
WHERTHER YOU DOING IN SPACE OR ON THE GROUND.

88
00:03:04,160 --> 00:03:08,230
IF PEOPLE ARE INTERESTED IN THIS, THE PLEASURE
AND,

89
00:03:08,230 --> 00:03:10,819
AND THE GRATIFICATION OF BEING A SCIENTIST
EVERYDAY

90
00:03:10,819 --> 00:03:14,101
IT'S, IT'S TRULY AMAZING TO GET UP AND DISCOVER
NEW THINGS."

91
00:03:14,755 --> 00:03:16,220
THAT’S SPACE TO GROUND FOR THIS WEEK.