



1
00:00:05,890 --> 00:00:06,890
Eight

2
00:00:06,890 --> 00:00:07,890
seven

3
00:00:07,890 --> 00:00:08,890
six

4
00:00:08,890 --> 00:00:09,890
go for main engine start

5
00:00:09,890 --> 00:00:10,890
four

6
00:00:10,890 --> 00:00:11,890
three

7
00:00:11,890 --> 00:00:12,890
two

8
00:00:12,890 --> 00:00:13,890
one

9
00:00:13,890 --> 00:00:17,170
zero and liftoff of Space Shuttle Endeavour,

10
00:00:17,170 --> 00:00:23,359
expanding the International Space Station
while creating a classroom in space.

11
00:00:23,359 --> 00:00:28,240
After a spectacular liftoff from Kennedy Space
Center in August of 2007,

12
00:00:28,240 --> 00:00:33,160
Space Shuttle Endeavour settled into orbit
and a 20-year dream was realized by

13
00:00:33,160 --> 00:00:37,760
teacher-turned-astronaut Barbara Morgan, one
of the seven crew members.

14
00:00:37,760 --> 00:00:42,600
Mission STS-118's crew also included Commander
Scott Kelly,

15
00:00:42,600 --> 00:00:44,090
Pilot Charlie Hobaugh,

16
00:00:44,090 --> 00:00:45,399
and Mission Specialists

17
00:00:45,399 --> 00:00:46,660
Tracy Caldwell,

18
00:00:46,660 --> 00:00:47,949
Rick Mastracchio,

19
00:00:47,949 --> 00:00:49,090
Alvin Drew

20
00:00:49,090 --> 00:00:52,070
and Dave Williams with the Canadian Space
Agency.

21
00:00:52,070 --> 00:00:57,359
On the first day in space, Endeavour received
a careful and extensive inspection

22
00:00:57,359 --> 00:01:02,230
of its thermal protection system with the
orbiter boom sensor system.

23
00:01:02,230 --> 00:01:06,540
Before docking, Kelly piloted Endeavour through
its backflip maneuver to enable

24
00:01:06,540 --> 00:01:11,320
the station crew members to photograph the tiles on the orbiter's belly.

25
00:01:11,320 --> 00:01:15,590
The inspection revealed a small ding that after careful analysis,

26
00:01:15,590 --> 00:01:20,799
mission managers and crew members decided would not hamper a safe flight home.

27
00:01:20,799 --> 00:01:25,399
With docking completed, the hatches opened between the orbiter and station.

28
00:01:25,399 --> 00:01:30,409
Floating at 17,000 miles per hour and more than 200 miles above the Earth, the

29
00:01:30,409 --> 00:01:36,360
Expedition 15 crew welcomed their seven guests. First-time spacewalkers

30
00:01:36,360 --> 00:01:40,829
Mastracchio and Williams ventured out of the station to install the car-sized,

31
00:01:40,829 --> 00:01:46,469
4,000-pound Starboard 5 truss segment with the help of the Canadarm operated by

32
00:01:46,469 --> 00:01:48,860
Hobaugh and Anderson.

33
00:01:48,860 --> 00:01:52,130
Williams and Mastracchio completed their second spacewalk

34
00:01:52,130 --> 00:01:57,479
after installing a 600-pound gyroscope which
controls station orientation,

35
00:01:57,479 --> 00:02:02,770
replacing one of four that failed in October
of 2006.

36
00:02:02,770 --> 00:02:06,579
Endeavour was the first orbiter to try out
a new system designed to let the

37
00:02:06,579 --> 00:02:10,860
orbiter use electrical power from the station
and allow the vehicle to stay in

38
00:02:10,860 --> 00:02:13,850
space for an extended period of time.

39
00:02:13,850 --> 00:02:18,180
As part of her duties as mission specialist,
Morgan carried millions of basil

40
00:02:18,180 --> 00:02:22,819
seeds into orbit and aboard the space station
as part of an experiment.

41
00:02:22,819 --> 00:02:27,180
Some remained to grow in low gravity; the
rest returned to Earth and will be

42
00:02:27,180 --> 00:02:31,550
divided into science kits for students to
study.

43
00:02:31,550 --> 00:02:36,240
Another first on this mission was accomplished
when the astronauts installed the

44

00:02:36,240 --> 00:02:40,930
7,000-pound external stowage platform using
only the robotic arms of the station

45
00:02:40,930 --> 00:02:43,000
and the shuttle.

46
00:02:43,000 --> 00:02:47,230
The platform will be used for storing extra
parts and equipment outside the

47
00:02:47,230 --> 00:02:48,540
space station.

48
00:02:48,540 --> 00:02:53,090
A third and fourth spacewalk completed most
of the mission tasks

49
00:02:53,090 --> 00:02:57,140
before flight control decided to move Endeavour's
undocking a day earlier,

50
00:02:57,140 --> 00:03:02,470
after reviewing Hurricane Dean's possible
track toward Texas.

51
00:03:02,470 --> 00:03:06,390
The undocking process went off without a hitch.
A day later,

52
00:03:06,390 --> 00:03:10,120
mission managers in Houston gave a "go for
deorbit burn"

53
00:03:10,120 --> 00:03:15,540
and about an hour later, Endeavour glided
to a graceful touchdown at

54
00:03:15,540 --> 00:03:19,020
Kennedy Space Center's Shuttle Landing Facility

in the early afternoon of

55

00:03:19,020 --> 00:03:20,020

August 21.

56

00:03:20,020 --> 00:03:21,020

MISSION CONTROL: Roger, wheels stop,