1
00:00:03,870 --> 00:00:05,620
\h Music

2
00:00:05,620 --> 00:00:11,330
\h MARK KELLY/STS-134 COMMANDER: "It's a bittersweet privilege to be taking Endeavour on its last fli

3
00:00:11,330 --> 00:00:17,050
\h delivering the last major piece to the ISS."

4
00:00:17,050 --> 00:00:20,370
\h BRUCE MELNICK/STS-41 and STS-49: "I was there before we put the wings on it. It was just...

5
00:00:20,370 --> 00:00:23,600
\h So it was almost like it was my baby."

6
00:00:23,600 --> 00:00:24,930
\h BOB CABANA/DIRECTOR, KENNEDY
SPACE CENTER: "That space station
assembly mission

7
00:00:24,930 --> 00:00:26,740
\h was perfect from start to finish.

8
00:00:26,740 --> 00:00:31,730
\h And a lot of that was Endeavour. It just... phenomenal vehicle."

9
00:00:31,730 --> 00:00:32,960
\h MICHAEL PARRISH/USA VEHICLE
OPERATIONS CHIEF, ENDEAVOUR: "The eagle represents

10
00:00:32,960 --> 00:00:34,500
\h the United States of America.

11
00:00:34,500 --> 00:00:42,180
\h It's something that we're proud of. See now, that's our bird. That's the eagle."

12
00:00:42,180 --> 00:00:48,120
\h After nearly two decades of achievements in space, Endeavour makes one last reach for the stars on

13
00:00:48,120 --> 00:00:50,950
\h its 25th and final mission.

14
00:00:50,950 --> 00:00:56,400
\h Endeavour is traveling to the International Space Station with six veteran space fliers:

15
00:00:56,400 --> 00:01:01,800
\h Commander Mark Kelly, Pilot Greg H. Johnson, and Mission Specialists Mike Fincke,

16
00:01:01,800 --> 00:01:09,430
\h Drew Feustel, Greg Chamitoff and Roberto Vittori from Italy, representing the European Space Agency.

17
00:01:09,430 --> 00:01:13,200
\h MARK KELLY/STS-134 COMMANDER: "Well, I'm the commander of STS-134. We've got a whole list o

18
00:01:13,200 --> 00:01:19,990
\h objectives, probably 30 things on the list, but the big objective is to get the Alpha Magnetic Spectromete

19
00:01:19,990 --> 00:01:23,640
\h installed on the outside of the space station."

20
00:01:23,640 --> 00:01:31,100
\h The 15,000-pound AMS is a massive particle physics detector that will attach to the International Space

21
00:01:31,100 --> 00:01:37,350
\h Its job: to search through cosmic rays, looking for proof of dark matter and anti-matter.

22
00:01:37,350 --> 00:01:40,030
\h GREG CHAMITOFF/STS-134 MISSION SPECIALIST: "In my mind this is like the Hubble Space Telesc

23
00:01:40,030 --> 00:01:45,980
\h It has the same type of potential for revolutionizing our understanding of the universe."

24
00:01:45,980 --> 00:01:51,720
\h They're also delivering critical spare parts to help keep the station up and running for years to come,

25

00:01:51,720 --> 00:01:55,480
\h along with the shuttle's Orbiter Boom Sensor System.

26
00:01:55,480 --> 00:02:00,140
\h Feustel, Fincke and Chamitoff will rotate through four spacewalks --

27
00:02:00,140 --> 00:02:05,480
\h the last performed by shuttle crew members for the remainder of the Space Shuttle Program.

28
00:02:05,480 --> 00:02:11,750
\h And when Endeavour makes its final touchdown on the runway, it will end a storied flying career

29
00:02:11,750 --> 00:02:16,130
\h for the youngest of NASA's shuttle orbiters.

30
00:02:16,130 --> 00:02:18,900
\h Even Endeavour's beginnings were unique.

31
00:02:18,900 --> 00:02:21,970
\h It was built as a replacement for space shuttle Challenger,

32
00:02:21,970 --> 00:02:26,510
\h and named for the first ship commanded by explorer James Cook.

33
00:02:26,510 --> 00:02:32,290
\h At the time of the Challenger accident, astronaut Barbara Morgan was part of the Teacher in Space Pro

34
00:02:32,290 --> 00:02:39,030
\h serving as back-up to teacher Christa McAuliffe, who launched aboard Challenger on that fateful day in

35
00:02:39,030 --> 00:02:41,840
\h BARBARA MORGAN/STS-118 Mission Specialist "I think Endeavour in particular, because she was nar

36
00:02:41,840 --> 00:02:47,470
\h schoolchildren all over the country, that really shows a carrying on and a moving forward,

37
00:02:47,470 --> 00:02:54,170
\h and how open-ended and never-ending that future can be."

38
00:02:54,170 --> 00:02:59,830
\h Like all shuttle orbiters before it, Endeavour was built by Rockwell in Palmdale, California.

39
00:02:59,830 --> 00:03:04,220
\h That's where astronaut Bruce Melnick's bond with Endeavour began.

40
00:03:04,220 --> 00:03:07,570
\h BRUCE MELNICK/Astronaut, STS-41 and STS-49: "My first job as an astronaut, even before I was a qu

41
00:03:07,570 --> 00:03:13,430
\h astronaut, was to represent the astronaut office out in Palmdale, where Endeavour was being built.

42
00:03:13,430 --> 00:03:19,500
\h So I got to see her being built from scratch to finish, got to see the wings put on, and it's amazing."

43
00:03:19,500 --> 00:03:25,560
\h The nation's brand-new space shuttle was delivered to Kennedy Space Center on May 7, 1991 --

44
00:03:25,560 --> 00:03:28,500
\h exactly one year before its maiden flight.

45
00:03:28,500 --> 00:03:30,570
\h MICHAEL PARRISH/USA VEHICLE OPERATIONS CHIEF, ENDEAVOUR: "It was great to see Endeav

46
00:03:30,570 --> 00:03:34,640
\h We knew why it was coming... because it was replacing Challenger.

47
00:03:34,640 --> 00:03:38,880
\h So it was going to be the new fleet leader and the new kid on the block."

48
00:03:38,880 --> 00:03:45,590
\h Melnick was on Endeavour's first flight, STS-49. The seven-person crew faced an ambitious,

49
00:03:45,590 --> 00:03:49,630
\h eight-day mission to repair the stranded Intelsat VI satellite.

50

00:03:49,630 --> 00:03:52,950
\h MELNICK: "I'll never forget when Dan Brandenstein, who was the chief astronaut at the time,

51
00:03:52,950 --> 00:03:57,840
\h asked me if I wanted to be on the first flight of Endeavour.

52
00:03:57,840 --> 00:04:02,800
\h I mean, you could hear me hooting and hollering, because that was going to be the premiere mission at

53
00:04:02,800 --> 00:04:07,430
\h Endeavour made history again during the last shuttle mission of 1993,

54
00:04:07,430 --> 00:04:12,860
\h when seven astronauts upgraded the Hubble Space Telescope -- and improved its vision.

55
00:04:12,860 --> 00:04:18,070
\h It was an extremely complex flight, involving five back-to-back spacewalks.

56
00:04:18,070 --> 00:04:21,180
\h And in the end, all the hard work paid off.

57
00:04:21,180 --> 00:04:26,260
\h The telescope's new, second-generation Wide Field and Planetary Camera beamed back grand

58
00:04:26,260 --> 00:04:29,110
\h images taken with dazzling clarity.

59
00:04:29,110 --> 00:04:33,690
\h And Endeavour helped to carry the load in the construction of the International Space Station --

60
00:04:33,690 --> 00:04:39,140
\h including the very first shuttle flight to the fledgling outpost, STS-88.

61
00:04:39,140 --> 00:04:44,370
\h Endeavour delivered the American Unity module, and astronauts connected it to the Russian Zarya

62
00:04:44,370 --> 00:04:48,360
\h module already in place -- and the station was born.

63
00:04:48,360 --> 00:04:52,730
\h Kennedy Space Center Director Bob Cabana commanded that cornerstone flight.

64
00:04:52,730 --> 00:04:56,540
\h BOB CABANA/DIRECTOR, KENNEDY SPACE CENTER: "I have to admit, you know, because I got to

65
00:04:56,540 --> 00:05:01,370
\h Endeavour on that first space station assembly mission, I'm a little partial to Endeavour."

66
00:05:01,370 --> 00:05:08,580
\h But less than three years later, the nation was stunned by the terrorist attacks of Sept. 11, 2001.

67
00:05:08,580 --> 00:05:12,230
\h On December 5, all eyes turned to Kennedy Space Center, where Endeavour

68
00:05:12,230 --> 00:05:16,460
\h waited to make the first flight after the tragedy.

69
00:05:16,460 --> 00:05:19,530
\h DOMINIC GORIE/STS-108 COMMANDER: "Mike, first, we'd like to say thank you to the entire KSC tea

70
00:05:19,530 --> 00:05:24,590
\h for getting Endeavour in great shape. And secondly, from the entire crew, we're all well aware that

71
00:05:24,590 --> 00:05:30,630
\h for over 200 years, and certainly over the last two months, freedom rings loud and clear across this cou

72
00:05:30,630 --> 00:05:35,270
\h But right here and right now, it's time to let freedom roar. Let's light 'em up."

73
00:05:35,270 --> 00:05:39,870
\h LAUNCH COMMENTATOR: "Two, one... we have booster ignition and liftoff of the space shuttle Endea

74
00:05:39,870 --> 00:05:44,470
\h pushing our goals skyward and using our station in space."

75

00:05:44,470 --> 00:05:50,590
\h Endeavour lifted the nation's spirits with a spectacular launch... at the twilight's last gleaming.

76
00:05:50,590 --> 00:05:56,530
\h After two more flights, Endeavour entered an extended down time for planned maintenance and upgrad

77
00:05:56,530 --> 00:06:01,950
\h including the new "glass cockpit" and a global positioning system for landing.

78
00:06:01,950 --> 00:06:06,150
\h PARRISH: "I think the missions you remember the most are the missions that were the toughest

79
00:06:06,150 --> 00:06:07,000
\h to get there.

80
00:06:07,000 --> 00:06:11,050
\h But we met our goals on the way. You know, we powered up in time after coming out

81
00:06:11,050 --> 00:06:16,030
\h of a major powered-down period, and the major upgrades with the glass cockpit."

82
00:06:16,030 --> 00:06:22,770
\h The newly upgraded orbiter returned to service in August 2007 on the STS-118 mission.

83
00:06:22,770 --> 00:06:27,420
\h Morgan flew as a mission specialist and recalls watching an orbital sunrise.

84
00:06:27,420 --> 00:06:31,020
\h MORGAN: "I looked back up at the horizon again, and there was a crescent moon.

85
00:06:31,020 --> 00:06:36,300
\h And it literally seemed, even though you can't, it's not this easy to do, but it

86
00:06:36,300 --> 00:06:40,320
\h literally seemed all we had to do was yank on the tiller, take a right turn, and sail

87
00:06:40,320 --> 00:06:41,510
\h straight to the moon.

88
00:06:41,510 --> 00:06:46,070
\h And that's when I really understood how natural, and how right, space exploration,

89
00:06:46,070 --> 00:06:51,610
\h human space exploration, is. And Endeavour played a big part of that."

90
00:06:51,610 --> 00:06:56,630
\h STS-134 will be Endeavour's 12th flight to the International Space Station.

91
00:06:56,630 --> 00:07:00,660
\h One of its most memorable deliveries was its most recent: the cupola,

92
00:07:00,660 --> 00:07:13,880
\h with seven windows offering astronauts a room with a captivating view of their home world.

93
00:07:13,880 --> 00:07:17,880
\h After 30 years, the shuttle program is coming to a close.

94
00:07:17,880 --> 00:07:20,640
\h MELNICK: "When you look up and you see that vehicle take off the launch pad, I mean,

95
00:07:20,640 --> 00:07:25,420
\h it's just such a sense of pride, and you feel the shockwaves hitting you in the chest,

96
00:07:25,420 --> 00:07:31,220
\h and it just vibrates you, it just brings a tear to your eye that we're a part of that program.

97
00:07:31,220 --> 00:07:36,660
\h And then to see Endeavour go up -- the last ship that I flew, and I was on her maiden voyage,

98
00:07:36,660 --> 00:07:41,940
\h and she treated us so well -- to see her go into space for the last time, knowing that

99
00:07:41,940 --> 00:07:48,090
\h she's going to be retired after this flight, is going to be a real sad day."

100

00:07:48,090 --> 00:07:51,740
\h PARRISH: "The vehicles we see -- every one of the vehicles, including Endeavour,

101
00:07:51,740 --> 00:07:54,900
\h and Discovery, and Atlantis -- they're all part of us.

102
00:07:54,900 --> 00:07:59,580
\h And they all are, you know... they're alive. And they represent each and every

103
00:07:59,580 --> 00:08:02,870
\h one of us that have worked on them."

104
00:08:02,870 --> 00:08:06,540
\h The close-knit shuttle processing team is adjusting to the shuttle's end,

105
00:08:06,540 --> 00:08:10,270
\h while still maintaining laser-sharp focus on the job.

106
00:08:10,270 --> 00:08:12,230
\h DANA HUTCHERSON/NASA FLOW DIRECTOR, ENDEAVOUR "Personally, we do have to think abou

107
00:08:12,230 --> 00:08:18,200
\h our emotions aside. We have our job number one, which is to get this vehicle prepared safely

108
00:08:18,200 --> 00:08:22,880
\h for the mission at hand with the STS-134 launch."

109
00:08:22,880 --> 00:08:30,290
\h But the toughest moment will be that final wheelstop... when Endeavour returns to Earth for good.

110
00:08:30,290 --> 00:08:33,460
\h COMMANDER: "Houston, Endeavour, wheelstop."

111
00:08:33,460 --> 00:08:36,590
\h MISSION CONTROL: "Roger, wheelstop, Endeavour. Welcome home."

112
00:08:36,590 --> 00:08:39,690
\h CABANA: "I didn't want to get out of the seat! I mean, this was my spaceship!

113
00:08:39,690 --> 00:08:44,120
\h You know, that really, that was hard, getting out -- in fact of all the things I've done,

114
00:08:44,120 --> 00:08:51,200
\h that was hard, getting out of that seat and giving Endeavour back to the team. That was tough."

115
00:08:51,200 --> 00:08:56,470
\h PARRISH: "When Endeavour flies for the last time, it will show respect for everything that

116
00:08:56,470 --> 00:09:03,260
\h we've done for many, many years. We love the shuttle program and we love this vehicle.