



1  
00:00:01,210 --> 00:00:06,480  
Music

2  
00:00:06,480 --> 00:00:12,920  
Space shuttle Discovery, the veteran spacecraft of NASA's shuttle fleet, waited on Launch Pad 39A at

3  
00:00:12,920 --> 00:00:19,010  
NASA's Kennedy Space Center in Florida, to take its final bow, prepared to soar into space for its

4  
00:00:19,010 --> 00:00:22,160  
39th and final mission.

5  
00:00:22,160 --> 00:00:26,860  
Commander Steve Lindsey, on his fifth shuttle flight and third on Discovery,

6  
00:00:26,860 --> 00:00:31,980  
lead the way out of the Operations and Checkout building where the astronauts donned their orange

7  
00:00:31,980 --> 00:00:33,660  
flight suits.

8  
00:00:33,660 --> 00:00:40,440  
Striding down the ramp and waving to a cheering crowd with Lindsey were Pilot Eric Boe, Mission

9  
00:00:40,440 --> 00:00:46,040  
Specialists Alvin Drew, Steve Bowen, Nicole Stott and Michael Barratt.

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00:00:46,040 --> 00:00:50,520  
In an extraordinary gesture of respect for each other and the vehicle that would take them into

11  
00:00:50,520 --> 00:00:56,460  
space, the crew stopped for a quiet moment and huddled together before their momentous journey.

12  
00:00:56,460 --> 00:01:06,540  
NASA Commentator Mike Curie: Go for main engine start. We have main engine start, 2, 1, booster

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00:01:06,540 --> 00:01:13,350

ignition, and the final liftoff of Discovery, a tribute to the dedication, hard work and pride of

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00:01:13,350 --> 00:01:17,590

America's space shuttle team. The shuttle has cleared the tower.

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00:01:17,590 --> 00:01:23,640

Space shuttle Discovery majestically lifted off the pad at 4:53 p.m. Eastern Time February 24, on

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00:01:23,640 --> 00:01:30,480

its STS-133 mission to the International Space Station, its final flight.

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00:01:30,480 --> 00:01:35,640

As the shuttle closed within 600 feet of the space station, it performed its rendezvous pitch

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00:01:35,640 --> 00:01:38,220

maneuver, or back flip.

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00:01:38,220 --> 00:01:43,660

Discovery was the first spacecraft to perform this maneuver on its Return to Flight, STS-114

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00:01:43,660 --> 00:01:45,090

mission.

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00:01:45,090 --> 00:01:49,940

The back flip gives ground teams in Houston a chance to look over the heat shield to confirm it is

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00:01:49,940 --> 00:01:53,150

in good condition before docking.

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00:01:53,150 --> 00:01:58,170

For the 13th time in its flight history, Discovery was guided gently toward the station's

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00:01:58,170 --> 00:02:00,140

docking port.

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00:02:00,140 --> 00:02:05,590

A warm welcome from the Expedition 26 crew greeted the Discovery crew as they glided into the

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00:02:05,590 --> 00:02:08,710

orbiting outpost through the hatch.

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00:02:08,710 --> 00:02:14,050

The first activity for some of the crew the next day was the installation of the Express Logistics

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00:02:14,050 --> 00:02:20,320

Carrier -4, or ELC-4, onto the station's S-3 truss section.

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00:02:20,320 --> 00:02:25,600

Pilot Eric Boe and Mission Specialist Alvin Drew controlled the arm from the flight deck of the

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00:02:25,600 --> 00:02:30,580

shuttle while Mission Specialists Michael Barratt and Nicole Stott manned the controls of the

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00:02:30,580 --> 00:02:37,640

Canadarm2 from inside the cupola module, to grapple the carrier and move it into position.

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00:02:37,640 --> 00:02:43,130

Drew and Bowen spent the next night camping out in the Quest airlock after breathing pure oxygen to

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00:02:43,130 --> 00:02:48,380

cleanse their blood of nitrogen, in preparation for their first spacewalk.

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00:02:48,380 --> 00:02:54,230

After stepping out into space, Bowen, perched at the end of the station's robotic arm, said he got

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00:02:54,230 --> 00:02:59,860

the view of a lifetime before he began working on replacing the ammonia pump.

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00:02:59,860 --> 00:03:05,110

Bowen, who replaced Tim Kopra on the mission after a bicycle accident kept him earthbound, was in

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00:03:05,110 --> 00:03:10,140

constant contact with Kopra who was at Mission Control, helping out from the ground, answering

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00:03:10,140 --> 00:03:13,360

questions and providing input.

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00:03:13,360 --> 00:03:17,170

Back inside the station from his first spacewalk, Drew looked like a kid that

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00:03:17,170 --> 00:03:20,030

just came back from a theme park.

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00:03:20,030 --> 00:03:20,890

Mission Specialist Nicole Stott: How was it?

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00:03:20,890 --> 00:03:24,210

Mission Specialist Alvin Drew: It was awesome, oh man that was great, the views were outstanding!

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00:03:24,210 --> 00:03:26,880

Mission Specialist Nicole Stott: You looked fantastic out there, you looked totally natural.

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00:03:26,880 --> 00:03:29,310

Mission Specialist Alvin Drew: I was faking it really well.

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00:03:29,310 --> 00:03:31,920

Mission Specialist Nicole Stott: Faking a little bit? Alright, go get some food.

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00:03:31,920 --> 00:03:37,880

On Tuesday, Stott and Barratt grappled and lifted the Permanent Multipurpose Module, or PMM,

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00:03:37,880 --> 00:03:43,880

loaded with equipment and supplies, including Robonaut 2, out of Discovery's payload bay using the

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00:03:43,880 --> 00:03:49,170

station's 58-foot robotic arm and installed it to the Earth-facing port of the Unity node --

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00:03:49,170 --> 00:03:53,460

completing the assembly of the ISS.

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00:03:53,460 --> 00:03:58,240

After the spacewalk, Mission Control radioed the joint crew members that mission managers had

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00:03:58,240 --> 00:04:02,920

approved an extra day for the shuttle mission to set up the interior of the new Permanent

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00:04:02,920 --> 00:04:05,100

Multipurpose Module.

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00:04:05,100 --> 00:04:10,720

Lindsey and station Commander Scott Kelly opened the hatch on the PMM and after a brief christening

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00:04:10,720 --> 00:04:17,030

ceremony all of the crew members floated into the 21-foot long module.

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00:04:17,030 --> 00:04:23,140

Robonaut-2, still encased in its travel box was gingerly moved out of the PMM to its storage area

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00:04:23,140 --> 00:04:26,170

and secured in place for future use.

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00:04:26,170 --> 00:04:29,620

Josh Byerly/ Mission Control: Discovery and ISS: Please stand by for the President.

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00:04:29,620 --> 00:04:31,080

President Barack Obama: Hello everybody!

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00:04:31,080 --> 00:04:32,670

Expedition 26 Commander Scott Kelly: Hello Mr. President, welcome aboard the

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00:04:32,670 --> 00:04:34,600

International Space Station.

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00:04:34,600 --> 00:04:39,650

President Barack Obama: Well, look I wanted to call and just say how personally proud I am of you

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00:04:39,650 --> 00:04:41,380

and all that you're accomplishing.

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00:04:41,380 --> 00:04:46,410

A special long-distance phone call was made from President Barack Obama to the twelve members on

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00:04:46,410 --> 00:04:49,840

board the station congratulating them on their accomplishments.

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00:04:49,840 --> 00:04:55,390

The entire crew was occupied transferring and stowing thousands of pounds of equipment, setting up

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00:04:55,390 --> 00:04:58,560

racks and science equipment.

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00:04:58,560 --> 00:05:02,980

After eight busy but satisfying days aboard the station, it was time for the Discovery crew to

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00:05:02,980 --> 00:05:08,550

leave. Kelly wished them fair sailing, a safe trip back to Earth and a warm goodbye to

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00:05:08,550 --> 00:05:14,040

space shuttle Discovery and appreciation for its outstanding support of the station.

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00:05:14,040 --> 00:05:19,290

Fond farewells shared, hatches closed, the shuttle undocked with the traditional ringing of the

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00:05:19,290 --> 00:05:20,650

ship's bell.

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00:05:20,650 --> 00:05:23,380

Bell Ringing

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00:05:23,380 --> 00:05:25,810

Commander Steve Lindsey: Discovery departing.

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00:05:25,810 --> 00:05:29,290

Bell Ringing

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00:05:29,290 --> 00:05:35,810

Commander Lindsey spoke about this final day in space, final voyage for Discovery and its remarkable history.

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00:05:35,810 --> 00:05:39,730

Commander Steve Lindsey: On this final day on orbit when I think about Discovery, I think about all

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00:05:39,730 --> 00:05:45,880

that. I think about all the people that went before us on this vehicle, but mostly what I think

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00:05:45,880 --> 00:05:50,550

about are the thousands and thousands of people across the space shuttle program in these past 30

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00:05:50,550 --> 00:05:56,180

years who designed this vehicle, built this vehicle, have taken care of this vehicle and operated

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00:05:56,180 --> 00:06:00,970

this vehicle, not just from the cockpit, but also those who operated this vehicle from the ground

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00:06:00,970 --> 00:06:04,350

and that is her greatest legacy to me.

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00:06:04,350 --> 00:06:12,000

A last and a first took place on the same mission when the crew's wake-up song was performed live

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00:06:12,000 --> 00:06:18,130

from Mission Control in Houston by Big Head Todd and the Monsters, singing their song "Blue Sky" on

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00:06:18,130 --> 00:06:23,310

Discovery's last day in space.

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00:06:23,310 --> 00:06:28,330

Good news from Mission Control informed the crew that they were cleared for a deorbit burn on the

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00:06:28,330 --> 00:06:32,520

first landing opportunity at NASA's Kennedy Space Center in Florida.

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00:06:32,520 --> 00:06:36,490

The day was clear as a bell and picture-perfect as Discovery broke through the atmosphere from a

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00:06:36,490 --> 00:06:42,190

brilliant blue sky -- trailing the twin sonic booms, heralding its approach.

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00:06:42,190 --> 00:06:43,960

Twin sonic booms sound

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00:06:43,960 --> 00:06:49,800

Landing for the final time on Runway 15 at Kennedy's Shuttle Landing Facility at 11:57 a.m.

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00:06:49,800 --> 00:06:55,670

Eastern Time March 9, Discovery completed a flawless 13-day mission.

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00:06:55,670 --> 00:07:02,280

To its credit, space shuttle Discovery logged an incredible 39 missions, a total of 365 days in

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00:07:02,280 --> 00:07:08,270

space, traveling 148.2 million miles by the end of its remarkable history.

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00:07:08,270 --> 00:07:13,390

Commander Steve Lindsey: And Houston, Discovery, for the final time, wheel stop.

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00:07:13,390 --> 00:07:20,070

I'm extremely proud of this crew here. My crew did a fantastic job, the ground teams did a

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00:07:20,070 --> 00:07:25,950

fantastic job, we accomplished every objective we set out to do then and plus a whole bunch more.