



1
00:00:12,330 --> 00:00:10,110
the astronauts of sts-125 could not wait

2
00:00:14,070 --> 00:00:12,340
to begin their mission and it showed as

3
00:00:17,310 --> 00:00:14,080
they walk to the astro van on May

4
00:00:20,310 --> 00:00:17,320
eleventh 2009 and headed to launch pad

5
00:00:23,640 --> 00:00:20,320
39a at NASA's Kennedy Space Center in

6
00:00:26,070 --> 00:00:23,650
Florida Scott Altman a veteran astronaut

7
00:00:28,019 --> 00:00:26,080
would command a team of seven on the

8
00:00:30,210 --> 00:00:28,029
last mission to service and upgrade

9
00:00:32,400 --> 00:00:30,220
nasa's hubble space telescope the

10
00:00:34,560 --> 00:00:32,410
telescope is the cornerstone of

11
00:00:39,750 --> 00:00:34,570
discovery for the agency and the

12
00:00:41,550 --> 00:00:39,760
astronauts know its importance Kennedy

13
00:00:43,740 --> 00:00:41,560

pound said to do the other thing that

14

00:00:46,560 --> 00:00:43,750

because it was easy but because it was

15

00:00:49,920 --> 00:00:46,570

hard Thank You cooter and enjoy the ride

16

00:00:51,840 --> 00:00:49,930

pal the on-time launch took advantage of

17

00:00:58,500 --> 00:00:51,850

a flawless day of sunny weather at

18

00:01:05,299 --> 00:01:02,910

liftoff of space shuttle visible to

19

00:01:08,179 --> 00:01:05,309

enhance the vision of Hubble

20

00:01:10,440 --> 00:01:08,189

this Rancher of our universe is the now

21

00:01:12,959 --> 00:01:10,450

controlling Atlantis on its way

22

00:01:14,819 --> 00:01:12,969

the astronauts quickly began setting up

23

00:01:16,679 --> 00:01:14,829

space shuttle Atlantis for its work

24

00:01:18,240 --> 00:01:16,689

ahead very reason why you have

25

00:01:22,560 --> 00:01:18,250

sunglasses on in the mid deck where

26

00:01:25,139 --> 00:01:22,570

there's no lights Mina nope no son as my

27

00:01:27,870 --> 00:01:25,149

man with Altman at the controls of

28

00:01:30,210 --> 00:01:27,880

Atlantis Megan MacArthur piloted the

29

00:01:32,639 --> 00:01:30,220

shuttle's robotic arm to grab the

30

00:01:38,639 --> 00:01:32,649

waiting Hubble Space Telescope and stand

31

00:01:41,609 --> 00:01:38,649

it inside the cargo bay has arrived on

32

00:01:43,800 --> 00:01:41,619

board Atlanta would be on the capture of

33

00:01:48,179 --> 00:01:43,810

Hubble set the stage for five spacewalks

34

00:01:49,980 --> 00:01:48,189

or EV a's by four astronauts astronauts

35

00:01:55,979 --> 00:01:49,990

john grunsfeld and drew Feustel

36

00:01:58,020 --> 00:01:55,989

performed the first spacewalk Hubble

37

00:02:00,630 --> 00:01:58,030

pulled a surprise early with a bulb

38

00:02:03,300 --> 00:02:00,640

refusing to turn to release a grounding

39

00:02:09,559 --> 00:02:03,310

strap astronaut foist I'll switch tools

40

00:02:17,420 --> 00:02:12,420

think I got it occurred there definitely

41

00:02:21,240 --> 00:02:17,430

Kirk returned and it's turning evil evil

42

00:02:22,920 --> 00:02:21,250

okay and Lana's Houston 3d we copied and

43

00:02:25,229 --> 00:02:22,930

saw that that's great news the bolts

44

00:02:28,710 --> 00:02:25,239

release allowed foist ol and Grunsfeld

45

00:02:31,379 --> 00:02:28,720

to replace the wide field camera to with

46

00:02:33,809 --> 00:02:31,389

a more advanced model it was like giving

47

00:02:37,080 --> 00:02:33,819

Hubble a better set of eyes for its next

48

00:02:39,120 --> 00:02:37,090

generation of observations the spacewalk

49

00:02:41,849 --> 00:02:39,130

gave Hubble a new camera and fine

50

00:02:44,190 --> 00:02:41,859

guidance sensors just as planned the

51
00:02:46,710 --> 00:02:44,200
astronauts took out another older unit

52
00:02:50,550 --> 00:02:46,720
known as co-star which was placed inside

53
00:02:53,520 --> 00:02:50,560
Hubble in 1993 to repair the spherical

54
00:02:55,349 --> 00:02:53,530
aberration on the main mirror modern

55
00:02:57,750 --> 00:02:55,359
instruments no longer need the

56
00:03:00,539 --> 00:02:57,760
corrective device in its place

57
00:03:03,240 --> 00:03:00,549
astronauts installed the cosmic origins

58
00:03:05,940 --> 00:03:03,250
spectrograph again enhancing Hubble's

59
00:03:08,400 --> 00:03:05,950
vision by giving it a new way to observe

60
00:03:12,020 --> 00:03:08,410
the formation of elements essential for

61
00:03:14,610 --> 00:03:12,030
life such as carbon and iron

62
00:03:17,370 --> 00:03:14,620
spacewalkers used newly developed tools

63
00:03:19,559 --> 00:03:17,380

to replace parts inside Hubble that were

64

00:03:22,320 --> 00:03:19,569

not intended to be replaced in orbit

65

00:03:26,790 --> 00:03:22,330

such as electrical cards

66

00:03:29,580 --> 00:03:26,800

third one is out I heard that I can take

67

00:03:31,920 --> 00:03:29,590

them while the spacewalkers worked

68

00:03:34,260 --> 00:03:31,930

outside the team inside the shuttle

69

00:03:36,990 --> 00:03:34,270

watched carefully moving the arm

70

00:03:40,560 --> 00:03:37,000

steering Atlantis and coordinating the

71

00:03:43,200 --> 00:03:40,570

extensive list of tasks with their

72

00:03:45,570 --> 00:03:43,210

servicing work complete Grunsfeld and

73

00:03:49,070 --> 00:03:45,580

astronomer before becoming an astronaut

74

00:03:52,830 --> 00:03:49,080

summed up the work with the satellite

75

00:03:54,810 --> 00:03:52,840

about Connecticut prep for dalits after

76

00:03:57,420 --> 00:03:54,820

preliminary testing from Earth showed

77

00:03:59,520 --> 00:03:57,430

the new instruments working well megan

78

00:04:02,490 --> 00:03:59,530

macarthur released hubble to fly by

79

00:04:08,310 --> 00:04:02,500

itself again a guy second ring which is

80

00:04:11,060 --> 00:04:08,320

an auto three two one release Hubble is

81

00:04:13,620 --> 00:04:11,070

expected to operate for many more years

82

00:04:15,470 --> 00:04:13,630

continuing to cast its gaze on the

83

00:04:18,660 --> 00:04:15,480

farthest objects in the universe and

84

00:04:21,770 --> 00:04:18,670

also pinpoint newly discovered planets

85

00:04:24,840 --> 00:04:21,780

outside our solar system along the way

86

00:04:27,510 --> 00:04:24,850

the astronauts on the other hand turn

87

00:04:29,430 --> 00:04:27,520

their gazes back to earth and a spell of

88

00:04:31,350 --> 00:04:29,440

wet weather in Florida that forced