



1
00:00:10,870 --> 00:00:08,549
nasa's first step back to the moon will

2
00:00:12,629 --> 00:00:10,880
become a reality with the liftoff of the

3
00:00:14,789 --> 00:00:12,639
lunar reconnaissance orbiter

4
00:00:17,510 --> 00:00:14,799
and its companion the lunar crater

5
00:00:20,070 --> 00:00:17,520
observation and sensing satellite

6
00:00:22,070 --> 00:00:20,080
lro and lcross will launch aboard a

7
00:00:23,910 --> 00:00:22,080
united launch alliance atlas v

8
00:00:25,910 --> 00:00:23,920
rocket from cape canaveral air force

9
00:00:27,910 --> 00:00:25,920
station in florida

10
00:00:29,189 --> 00:00:27,920
built by nasa's goddard space flight

11
00:00:31,750 --> 00:00:29,199
center in maryland

12
00:00:33,510 --> 00:00:31,760
lro arrived at the payload processing

13
00:00:35,830 --> 00:00:33,520

facility of astrotech space

14

00:00:38,150 --> 00:00:35,840

operations in titusville florida on

15

00:00:40,790 --> 00:00:38,160

february 13th

16

00:00:41,510 --> 00:00:40,800

following on Iro's heels elk cross

17

00:00:43,430 --> 00:00:41,520

arrived at

18

00:00:45,990 --> 00:00:43,440

astrotech from northrop grumman's

19

00:00:48,150 --> 00:00:46,000

facility in redondo beach california on

20

00:00:51,189 --> 00:00:48,160

february 19th

21

00:00:54,069 --> 00:00:51,199

on february 20th the atlas v centaur

22

00:00:55,750 --> 00:00:54,079

second stage arrived in florida followed

23

00:00:58,549 --> 00:00:55,760

by the first stage on march

24

00:01:00,150 --> 00:00:58,559

3rd both were delivered by a russian

25

00:01:03,750 --> 00:01:00,160

cargo plane that landed at cape

26

00:01:06,149 --> 00:01:03,760

canaveral air force station skid strip

27

00:01:08,070 --> 00:01:06,159

in march Iro underwent black light

28

00:01:10,390 --> 00:01:08,080

inspections to detect any possible

29

00:01:13,350 --> 00:01:10,400

particulate micro contamination

30

00:01:14,070 --> 00:01:13,360

my new cracks or fluid leaks and by

31

00:01:17,350 --> 00:01:14,080

april

32

00:01:19,350 --> 00:01:17,360

Iro had its solar arrays installed

33

00:01:21,670 --> 00:01:19,360

in the meantime the systems and science

34

00:01:24,630 --> 00:01:21,680

instruments of Icross were prepared and

35

00:01:26,870 --> 00:01:24,640

tested for the rigors of this mission

36

00:01:28,230 --> 00:01:26,880

in late april the rocket's first stage

37

00:01:29,910 --> 00:01:28,240

or booster stage

38

00:01:31,990 --> 00:01:29,920

was transported to the vertical

39

00:01:35,510 --> 00:01:32,000

integration facility at launch complex

40

00:01:37,749 --> 00:01:35,520

41 on cape canaveral air force station

41

00:01:38,870 --> 00:01:37,759

the centaur second stage also known as

42

00:01:40,789 --> 00:01:38,880

the upper stage

43

00:01:43,670 --> 00:01:40,799

was later moved out of the hangar and

44

00:01:47,030 --> 00:01:43,680

hoisted atop the booster stage

45

00:01:49,030 --> 00:01:47,040

by may 15 the atlas v centaur stack was

46

00:01:51,749 --> 00:01:49,040

ready to be moved to the launch pad for

47

00:01:53,670 --> 00:01:51,759

a wet dress rehearsal or countdown test

48

00:01:54,870 --> 00:01:53,680

this means the vehicle was fully loaded

49

00:01:58,149 --> 00:01:54,880

with liquid hydrogen

50

00:02:02,230 --> 00:01:58,159

liquid oxygen and rp-1 propellants and

51
00:02:04,469 --> 00:02:02,240
tested on may 28th the spacecraft was

52
00:02:07,670 --> 00:02:04,479
transported to launch complex 41

53
00:02:10,150 --> 00:02:07,680
for mating with the atlas v rocket with

54
00:02:12,790 --> 00:02:10,160
these pre-launch milestones complete

55
00:02:13,990 --> 00:02:12,800
Iro and I cross are now ready to journey

56
00:02:16,630 --> 00:02:14,000
to the moon

57
00:02:18,390 --> 00:02:16,640
Iro to find safe landing sites and

58
00:02:20,790 --> 00:02:18,400
available resources

59
00:02:22,229 --> 00:02:20,800
and Icross to plunge into one of the

60
00:02:24,790 --> 00:02:22,239
polar caps to expose

61
00:02:26,869 --> 00:02:24,800
possible evidence of water ice the

62
00:02:28,229 --> 00:02:26,879
tucson will help pave the way for humans