1
00:00:07,490 --> 00:00:08,690
Meet OSIRIS-REx.

2
00:00:09,260 --> 00:00:14,100
Just days away now from launching into space
on a first ever mission by NASA to study and

3
00:00:14,110 --> 00:00:16,850
return a sample of an asteroid in deep space.

4
00:00:21,039 --> 00:00:25,870
You are among the group of scientists and
engineers encapsulating the spacecraft

5
00:00:25,870 --> 00:00:28,640
in its payload fairing at Kennedy Space Center in

6
00:00:28,640 --> 00:00:30,609
Florida.

7
00:00:30,609 --> 00:00:36,070
Blasting off into space on a rocket is a rough
ride and every spacecraft needs to be protected

8
00:00:36,070 --> 00:00:39,970
in a payload fairing to survive the journey
through the earth's atmosphere.

9
00:00:41,700 --> 00:00:47,780
Without a fairing, at speeds over 11,000 miles
per hour the air friction would rip OSIRIS-REx

10
00:00:47,790 --> 00:00:48,790
to pieces.

11
00:00:48,790 --> 00:00:53,450
Once above the atmosphere, the fairing will be jettisoned.

12

00:01:00,760 --> 00:01:06,180
With the fairing in place, OSIRIS-REx is ready
to start its 7-year mission to study up close

13
00:01:06,180 --> 00:01:11,860
the asteroid Bennu AND return a sample of
its surface back to scientists here on earth.

14
00:01:14,580 --> 00:01:19,460
The first part of the journey is to Space
Launch Complex-41 where OSIRIS-REx will be

15
00:01:19,460 --> 00:01:22,680
mated to the ULA's Atlas V rocket.

16
00:01:23,070 --> 00:01:26,730
One of NASA's finest and most dependable rides to space.

17
00:01:31,310 --> 00:01:34,550
The Atlas V rocket has two stages to get OSIRIS-REx

18
00:01:34,620 --> 00:01:35,400
to its destination.

19
00:01:36,520 --> 00:01:39,500
The first stage begins the journey off the launch pad,

20
00:01:39,540 --> 00:01:41,660
and, for this particular mission, needs assistance

21
00:01:41,660 --> 00:01:44,480
from an additional strap on booster.

22
00:01:44,880 --> 00:01:47,700
A few minutes into the flight, the first stage drops away.

23
00:01:48,600 --> 00:01:52,439
From there, the Centaur second stage completes the ride into space,

24
00:01:52,440 --> 00:01:55,120
getting OSIRIS-REx on its way to its target.

25
00:01:59,770 --> 00:02:01,729
Where did we come from?

26
00:02:01,729 --> 00:02:03,789
What is our destiny?

27
00:02:03,789 --> 00:02:07,429
OSIRIS-REx seeks answers these and other questions.

28
00:02:07,429 --> 00:02:12,590
Asteroid Bennu, a leftover fragment from our
solar system’s formation, can teach us

29
00:02:12,590 --> 00:02:17,910
about the history of the sun, planets and
may contain clues to the origins of life.

30
00:02:17,910 --> 00:02:22,540
Bringing a sample back to earth allows to
scientists to study the chemical composition

31
00:02:22,540 --> 00:02:27,200
of the asteroid to see if it contains any
of the building blocks necessary for life

32
00:02:27,700 --> 00:02:29,500
on earth.

33
00:02:33,640 --> 00:02:37,920
You're looking at the Atlas rocket on Space Launch Complex 41.

34
00:02:38,300 --> 00:02:41,640
The rocket is 189 feet tall, about 19 stories,

35
00:02:41,640 --> 00:02:45,440

and weighs more than 700,000 pounds fully fueled.

36
00:02:46,080 --> 00:02:51,820
And with the combination of the RD-180 engine and the strap on solid rocket booster

37
00:02:52,820 --> 00:02:57,940
The Atlas will lift off courtesy of 1.2 million pounds of thrust.

38
00:02:59,960 --> 00:03:04,680
Mike Curie, NASA Launch Commentator
Ten seconds….nine….eight…seven….six…..

39
00:03:04,680 --> 00:03:09,600
five…..four…..three….two….one

40
00:03:12,140 --> 00:03:21,160
And liftoff of OSIRIS-REx
Its seven-year mission to boldly go to the asteroid Bennu and back.

41
00:03:26,660 --> 00:03:31,720
five…..four…..three….two….one

42
00:03:34,460 --> 00:03:37,280
And liftoff of OSIRIS-REx

43
00:03:49,880 --> 00:03:53,280
three….two….one

44
00:03:55,400 --> 00:03:57,720
And liftoff of OSIRIS-REx

45
00:03:58,720 --> 00:04:04,560
Its seven-year mission to boldly go to the asteroid Bennu and back.

46
00:04:18,080 --> 00:04:22,420
The Atlas has begun a pitch and yaw maneuver to steer to its planned path,

47
00:04:22,420 --> 00:04:25,040

28.5 degrees inclination from the equator.