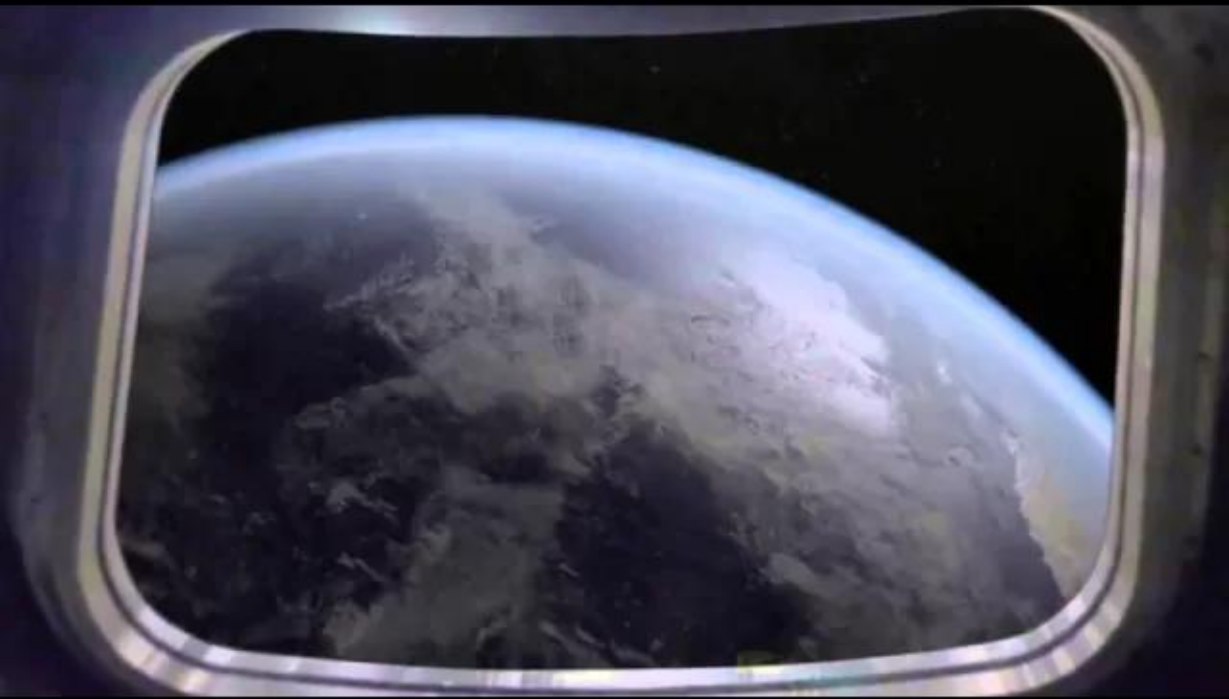

1
00:00:04,080 --> 00:00:08,540
bjbj< This is Jay Estes, I am a deputy for
flight test integration in the Orion program.

2
00:00:08,540 --> 00:00:15,980
What you see here is a Delta 4 heavy booster
being launched from the pad. This is a flight

3
00:00:15,980 --> 00:00:23,480
test that Orion is going to conduct in 2014.
It is a Delta 4 heavy unmanned booster with

4
00:00:23,480 --> 00:00:29,920
two strap-on boosters on the side. Once we
get through first stage, the strap-on boosters

5
00:00:29,920 --> 00:00:36,480
separate themselves and the central core continues
on as a second stage. Once we get to low Earth

6
00:00:36,480 --> 00:00:41,790
orbit, the second stage shuts down and separates
itself from the spacecraft and the upper stage.

7
00:00:41,790 --> 00:00:48,800
At that point the upper stage lights, and
takes us on to orbit, the service module panels

8
00:00:48,800 --> 00:00:55,540
separate, and the launch abort system with
its shroud, which has been covering the capsule,

9
00:00:55,540 --> 00:01:05,040
comes off. In low Earth orbit, which is about
250 miles above the Earth, we make one orbit,

10
00:01:05,040 --> 00:01:12,530
and this orbit lets us check out our systems.
After one orbit, we ignite the upper stage

11
00:01:12,530 --> 00:01:20,580
and we lift the orbit to about 3,600 miles.
Now 3,600 miles is approximately 10 times

12
00:01:20,580 --> 00:01:26,870
higher than any man-rated spaceship has been
since 1972 when we came back from the moon.

13
00:01:26,870 --> 00:01:31,760
And the reason we are doing this is to test
our heat shield on reentry. The heat shield

14
00:01:31,760 --> 00:01:36,910
will be exposed to heating much like you would
get from the moon, and we will be able to

15
00:01:36,910 --> 00:01:42,390
demonstrate that our heat shield is sufficient
for recovering people from missions beyond

16
00:01:42,390 --> 00:01:51,240
Earth. And as we begin to enter, the capsule
then separates from the service module section.

17
00:01:51,240 --> 00:01:56,480
The service module section stays attached
to the upper stage, and here you see the control

18
00:01:56,480 --> 00:02:03,990
jets that are firing. The control jets the
altitude for entry. As we enter, we experience

19
00:02:03,990 --> 00:02:12,360
maximum heating lower in the atmosphere. This
is the primary test of Exploration Flight

20
00:02:12,360 --> 00:02:17,870
Test 1, is that heat shield. As we get low
in the atmosphere, the forward bay cover come

21
00:02:17,870 --> 00:02:28,700
off, which covers the parachutes, and two
small chutes come out to slow us down. After

22
00:02:28,700 --> 00:02:35,090
we slow down those separate, three small pilot
chutes come out to open the main parachutes,

23
00:02:35,090 --> 00:02:40,900
which initially open at about three percent
opening. Then they go to ten percent open.

24
00:02:40,900 --> 00:02:46,950
Then they go to full open. We use those on
staging the keep the forces on the chutes

25
00:02:46,950 --> 00:02:53,510
lower. It makes for a softer ride and it keeps
our chutes safe. We enter the water at a slight

26
00:02:53,510 --> 00:02:59,990
angle, to help the crew with the impact of
the water. The parachutes fall in the water,

27
00:02:59,990 --> 00:03:04,989
we hope to recover those. We are cooperating
with the Navy, and using one of their well

28
00:03:04,989 --> 00:03:13,150
deck ships to recover our capsule. This Orion
after this spaceflight will be refurbished

29
00:03:13,150 --> 00:03:15,803
and used again on an ascent abort test in
the future. [Content_Types].xml #!MB Lz]__

30
00:03:15,803 --> 00:03:16,803
U~YkG _rels/.rels theme/theme/themeManager.xml
sQ\}# theme/theme/theme1.xml G$$DA :$BR si-@R

31
00:03:16,803 --> 00:03:17,803
r,[L bX*x KfN1 ,tV@ .EML M .c =<R8 (F\

32
00:03:17,803 --> 00:03:18,803
p)af theme/theme/_rels/themeManager.xml.rels
6?$Q K(M&$R(.1 [Content_Types].xmlPK _rels/.relsPK

33
00:03:18,803 --> 00:03:19,803
theme/theme/themeManager.xmlPK theme/theme/theme1.xmlPK
theme/theme/_rels/themeManager.xml.relsPK

34
00:03:19,803 --> 00:03:20,803
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<a:clrMap xmlns:a="http://schemas.openxmlformats.org/drawingml/2006/main"

35
00:03:20,803 --> 00:03:21,803
bg1="lt1" tx1="dk1" bg2="lt2" tx2="dk2" accent1="accent1"
accent2="accent2" accent3="accent3" accent4="accent4"

36
00:03:21,803 --> 00:03:22,803
accent5="accent5" accent6="accent6" hlink="hlink"
folHlink="folHlink"/> NASA ODIN Normal.dotm

37
00:03:22,803 --> 00:03:23,803
NASA ODIN Microsoft Macintosh Word PICT*:
o\{o\{^ o\{g9g9kZZ kZo\{^ o\{g9Z JRkZ^ JRJRV F1NsR

38
00:03:23,803 --> 00:03:24,803
kZNs^ JRNskZNsc F1F1s F1kZZ JRNsV JRF1R o\{g9w
o\{g9 +g9g9o\{g9g9Z kZg9c o\{Nsg9g9c NskZg9s

39
00:03:24,803 --> 00:03:25,803
kZg9g9o\{w o\{g9w NskZ g9g9o\{kZkZs g9g9^ kZg9kZkZw
>g9R g9NskZkZc o\{kZV g9g9NsV JRNsw kZkZR NsJRR

40
00:03:25,803 --> 00:03:26,803
JRJRZ o\{o\

41
00:03:26,803 --> 00:03:27,803

F1F1g9R JRo\{R kZF1R JRNsR JRF1NsJRR F1F1R
JRF1V F1JRc kZkZ g9R g9g9^ g9kZZ kZg9c kZg9g9^

42
00:03:27,803 --> 00:03:28,803
kZkZg9kZc kZkZg9c g9g9s g9g9c @kZ^ g9kZg9V
@g9c g9o\{kZw o\{o\{kZ\{ kZg9g9kZg9\{ o\{kZs o\{g9^

43
00:03:28,803 --> 00:03:29,803
kZkZo\{kZkZo\{Z kZkZg9\{ g9o\{o\{kZw o\{g9g9s 1g9c
JRg9kZR Nso\{^ g9o\{R NsNsZ NsJR\{ kZNs^ NsNs^

44
00:03:29,803 --> 00:03:30,803
o\{kZ^ o\{g9s g9o\{o\{kZw o\{o\{g9o\{ o\{o\{s o\{g9c
g9kZ 6g9o\{s kZkZc kZkZ\{ o\{kZs o\{g9o\{g9o\{s

45
00:03:30,803 --> 00:03:31,803
o\{o\{ kZkZ o\{o\{w Ag9R Nso\{JRZ JRNsV o\{NsR JRF1R
Nsg9kZNs^ g9Nsc F1g9V NsNsZ 4g9^ g9o\{Nsc F1kZkZJRo\{

46
00:03:31,803 --> 00:03:32,803
o\{g9kZkZs kZg9w kZg9o\{g9s o\{g9g9s o\{kZZ g9o\{g9
o\{kZkZg9g9s JRJRV NsJRF1^ g9F1^ JRNsJRNsg9g9R

47
00:03:32,803 --> 00:03:33,803
F1F1o\{V kZo\{g9 >F1c JRJR^ g9JRNsNsc F1NsNsV
g9Nsc NsJRJRR Nsg9JRNsR NsJRc F1JRs F1JRs

48
00:03:33,803 --> 00:03:34,803
kZo\{kZo\{w o\{-c o\{o\

49
00:03:34,803 --> 00:03:35,803
JRNskZR >g9V kZo\{V kZNs^ o\{kZo\{kZw kZ5w o\{kZkZw
kZkZg9o\{s kZg9w g9g9Z g9o\{c g9kZs o\{o\{s kZo\{g9

50
00:03:35,803 --> 00:03:36,803
kZkZ^ g9g9c g9g9o\{w o\{g9w ?JRF1R kZNsV F1g9V
F1F1V NsF1JRR g9NsV kZo\{w kZo\{ g9kZg9g9kZg9R

51
00:03:36,803 --> 00:03:37,803
kZg9kZg9c kZg9o\{kZg9^ kZg9w g9g9w g9kZg9^

kZg9Z kZg9V o\{Nsc o\{g9R o\{g9^ o\{o\{kZg9s kZo\{c

52
00:03:37,803 --> 00:03:38,803
o\{kZg9V NsNsc g9NsV o\{NsZ Nso\{R kZkZo\{g9s
o\{o\{s o\{kZkZw o\{o\{s kZo\{kZs o\{kZg9 o\{kZo\{o\{s

53
00:03:38,803 --> 00:03:39,803
o\{kZkZw o\{o\{s kZkZo\{g9o\{o\{s kZo\{ $o\{g9\{ o\{o\{w
g9g9s kZo\{kZ kZg9c o\{g9B JRo\{Nsc JRJR^ Ns"\{

54
00:03:39,803 --> 00:03:40,803
kZJRR JRNsg9Nsc NsF1w NsJRZ Nsg9s >o\{c g9g9\

55
00:03:40,803 --> 00:03:41,803
NsNsV JRNsZ NsF1w NsJR Nso\{NsJRNsNsZ o\{g9\

56
00:03:41,803 --> 00:03:42,803
g9kZ o\{o\{kZV kZg9^ o\{kZkZo\

57
00:03:42,803 --> 00:03:43,803
o\{o\{kZs g9kZo\

58
00:03:43,803 --> 00:03:44,803
kZkZ\{ kZo\{w o\{g9c g9o\{w g9g9s o\{kZkZs g9o\{g9w
o\{kZo\{s g9kZs g9o\{kZg9kZkZg9\{ g9o\{g9 kZkZs

59
00:03:44,803 --> 00:03:45,803
o\{g9 kZo\{ o\{kZ\{ F1g9JRZ Nsg9JRR JRg9c F1NsV
NsJRg9R JRo\{B Nsg9NsR NsNs^ g9kZZ o\{Nsc ?g9c

60
00:03:45,803 --> 00:03:46,803
kZo\{s kZg9V kZg9Z o\{g9s o\{kZ^ o\{g9g9o\{g9g9w
o\{kZc *kZs g9NsB JRNsNsF1Z g9g9Z JRJRs g9JRg9Z

61
00:03:46,803 --> 00:03:47,803
JRF1s F1NsNsJRJR^ kZo\{ o\{kZs o\{kZ\{ F1o\{kZw
kZkZs kZkZs g9kZZ o\{kZkZo\{kZo\{w g9kZg9s o\{o\{g9kZg9s

62
00:03:47,803 --> 00:03:48,803

kZo\{o\{g9w kZo\{o\{s o\{o\{w g9o\

63
00:03:48,803 --> 00:03:49,803
F1g9 o\{g9R o\{g9o\{kZc o\{kZo\{c g9kZc NsF1^ kZF1Z
g9F1^ Ns(g9V F1F1\{ NsNsJRZ NsJRB g9F1s F1JR^