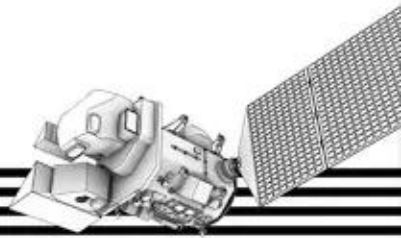
# LANDSAT 8

NASA • USGS



1
00:00:00,350 --> 00:00:01,080
8

2
00:00:01,100 --> 00:00:01,970
7

3
00:00:01,990 --> 00:00:02,840
6

4
00:00:02,860 --> 00:00:03,750
5

5
00:00:03,770 --> 00:00:04,710
4

6
00:00:04,730 --> 00:00:05,540
3

7
00:00:05,560 --> 00:00:06,640
2

8
00:00:06,660 --> 00:00:07,680
1

9
00:00:07,700 --> 00:00:08,430
0

10
00:00:08,450 --> 00:00:09,970
and ignition

11
00:00:09,990 --> 00:00:12,720
and lift-off!

12
00:00:12,740 --> 00:00:15,060
In February of 2013,

13
00:00:15,080 --> 00:00:18,390

NASA launched the 8th satellite in the Landsat program,

14
00:00:18,410 --> 00:00:21,430
continuing an unbroken string of Earth observations

15
00:00:21,450 --> 00:00:25,000
stretching back to 1972.

16
00:00:25,020 --> 00:00:27,190
Since launch, mission operations

17
00:00:27,210 --> 00:00:30,470
have been handled by the U.S. Geological Survey.

18
00:00:35,200 --> 00:00:37,010
After five years in orbit,

19
00:00:37,030 --> 00:00:40,550
Landsat 8 has more than met its mission to collect global data,

20
00:00:40,570 --> 00:00:46,020
giving scientists the ability to assess changes in Earth’s landscape.

21
00:00:46,040 --> 00:00:48,630
Each Landsat satellite has been an improvement

22
00:00:48,650 --> 00:00:50,860
on the previous generation.

23
00:00:50,880 --> 00:00:54,230
Landsat 8’s new design allowed more sensitive measurements,

24
00:00:54,250 --> 00:00:56,090
detected more wavelengths,

25
00:00:56,110 --> 00:00:59,230
and collected more data than ever before.

26
00:00:59,250 --> 00:01:03,070
More observations give scientists more opportunities

27
00:01:03,090 --> 00:01:05,310
to monitor forests around the globe

28
00:01:05,330 --> 00:01:09,480
and track blooms of algae to assess water quality.

29
00:01:09,500 --> 00:01:10,880
For the first time,

30
00:01:10,900 --> 00:01:13,540
Landsat 8 can measure a specific frequency

31
00:01:13,560 --> 00:01:15,190
to detect cirrus clouds

32
00:01:15,210 --> 00:01:17,750
thin, wispy clouds, high in the atmosphere

33
00:01:17,770 --> 00:01:20,550
that can interfere with scientific measurements

34
00:01:20,570 --> 00:01:24,860
enabling scientists to improve the accuracy of their data.

35
00:01:24,880 --> 00:01:27,460
More sensitive detectors can distinguish

36
00:01:27,480 --> 00:01:30,090
subtle changes in vegetation health.

37
00:01:30,110 --> 00:01:32,080
Landsat 8 data is being used

38
00:01:32,100 --> 00:01:34,280

to measure agricultural productivity

39
00:01:34,300 --> 00:01:38,180
and the condition of forests at home and around the globe.

40
00:01:38,200 --> 00:01:41,340
Improved sensitivty in thermal infrared wavelengths

41
00:01:41,360 --> 00:01:43,510
allowed the detection of an ice island

42
00:01:43,530 --> 00:01:45,610
calving off the Larsen C ice shelf

43
00:01:45,630 --> 00:01:50,840
in Antarctica during the otherwise sunless polar winter.

44
00:01:50,860 --> 00:01:52,490
By collecting more data,

45
00:01:52,510 --> 00:01:54,380
and higher-quality data,

46
00:01:54,400 --> 00:01:56,090
Landsat 8 enables scientists

47
00:01:56,110 --> 00:01:58,030
to track the velocity of glaciers

48
00:01:58,050 --> 00:02:00,930
as they speed up and slow down through the year,

49
00:02:00,950 --> 00:02:07,500
providing insights into what is driving changes in the cryosphere.

50
00:02:07,520 --> 00:02:10,470
Engineered with a design life of five years,

51
00:02:10,490 --> 00:02:13,010
Landsat 8 is still going strong,

52
00:02:13,030 --> 00:02:16,510
maintaining the tradition of long operational lifetimes.

53
00:02:16,530 --> 00:02:19,180
And engineers are already building the next satellite

54
00:02:19,200 --> 00:02:20,650
in the Landsat program,