



1
00:00:00,020 --> 00:00:04,030
Silence

2
00:00:12,080 --> 00:00:16,120
[Gene Feldman] SeaWiFS was launched back in August of 1997.

3
00:00:16,140 --> 00:00:20,130
and began operating and sending data down in September of

4
00:00:20,150 --> 00:00:24,150
1997 and lasted until December 11th of 2010.

5
00:00:24,170 --> 00:00:28,170
So, that's more than a 13 year data set.

6
00:00:28,190 --> 00:00:32,200
The original idea behind SeaWiFS, which stands for Sea Viewing Wide Field

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00:00:32,220 --> 00:00:36,260
Sensor, was to monitor the color of the ocean. The color

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00:00:36,280 --> 00:00:40,310
of the ocean is related to the amount of microscopic plants that live in the ocean

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00:00:40,330 --> 00:00:44,350
that have a pigment called chlorophyll, which is

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00:00:44,370 --> 00:00:48,390
green. And the more chlorophyll, more phytoplankton, in the water the

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00:00:48,410 --> 00:00:52,410
greener the water, the less the bluer the water. So, we've demonstrated

12
00:00:52,430 --> 00:00:56,460
that we can actually measure the color of the ocean from space. But what we haven't had

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00:00:56,480 --> 00:01:00,500

is a long term record of how ocean color

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00:01:00,520 --> 00:01:04,530

and hence, the amount of plants and productivity in the ocean, changes over

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00:01:04,550 --> 00:01:08,540

time. And that was the main goal for the SeaWiFS mission.

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00:01:08,560 --> 00:01:12,560

Space is a very, very harsh environment. Every

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00:01:12,580 --> 00:01:16,600

90 minutes, you go from frigid, frigid cold to very, very

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00:01:16,620 --> 00:01:20,640

hot. And, you know, imagine doing that every day

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00:01:20,660 --> 00:01:24,670

14 times a day for 13 and a half years, operating

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00:01:24,690 --> 00:01:28,730

continuously. The mission was only supposed to last for

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00:01:28,750 --> 00:01:32,760

5 years. We lasted actually for over 13.

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00:01:32,780 --> 00:01:36,800

But over time things begin to wear out. In

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00:01:36,820 --> 00:01:40,860

December what happened was we lost communication with the spacecraft.

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00:01:40,880 --> 00:01:44,880

Which is kind of important because what it said was the spacecraft could no longer

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00:01:44,900 --> 00:01:48,920

contact Earth and send data down. But more importantly

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00:01:48,940 --> 00:01:52,960

we could not contact the spacecraft to try to fix a problem.

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00:01:52,980 --> 00:01:56,990

And so finally, in February, it was decided that

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00:01:57,010 --> 00:02:01,020

it was hopeless, we were not going to be able to reach the

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00:02:01,040 --> 00:02:05,040

spacecraft and the people that operated it, GeoEye,

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00:02:05,060 --> 00:02:09,070

declared it lost. Before SeaWiFS,

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00:02:09,090 --> 00:02:13,090

ocean color as a measurement was seen as an experimental

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00:02:13,110 --> 00:02:17,110

mission, an experimental data set. We never really

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00:02:17,130 --> 00:02:21,120

were sure that it was going to give us the kind of information we needed.

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00:02:21,140 --> 00:02:25,170

But as a result of SeaWiFS, ocean color as a

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00:02:25,190 --> 00:02:29,220

parameter is now one of the key variables that need to get measured by all

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00:02:29,240 --> 00:02:33,260

future missions. So, there will be ocean color measurements from this

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00:02:33,280 --> 00:02:37,290

point forward. They may not be exactly like

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00:02:37,310 --> 00:02:41,320

SeaWiFS, they may present other challenges, but as a

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00:02:41,340 --> 00:02:45,340

parameter, ocean color will continue into the future

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00:02:45,360 --> 00:02:49,350

and that is solely because of the success of the SeaWiFS mission.