



1  
00:00:00,000 --> 00:00:01,780  
(Music)

2  
00:00:01,780 --> 00:00:04,230  
Narrator: Natalie Batalha, the Project Scientist

3  
00:00:04,230 --> 00:00:07,310  
for NASA's Kepler Mission was recently named to

4  
00:00:07,310 --> 00:00:10,010  
Time Magazine's 100 Most Influential

5  
00:00:10,010 --> 00:00:12,560  
People of 2017.

6  
00:00:12,560 --> 00:00:15,780  
The Time 100 annual list was created to honor

7  
00:00:15,780 --> 00:00:18,500  
individuals whose work has changed the world,

8  
00:00:18,500 --> 00:00:22,340  
or in this case, our place in the universe.

9  
00:00:22,340 --> 00:00:24,450  
Thanks to the pioneering work of Natalie and

10  
00:00:24,450 --> 00:00:27,000  
the Kepler team, we now know that our galaxy

11  
00:00:27,000 --> 00:00:31,210  
contains planets around virtually every star.

12  
00:00:31,210 --> 00:00:34,410  
Using a space-based telescope, the Kepler Mission

13  
00:00:34,410 --> 00:00:37,300

measured tiny drops in light intensity that could

14

00:00:37,300 --> 00:00:40,100

indicate a "transit" or eclipse of a star

15

00:00:40,100 --> 00:00:43,360

as a planet orbits across its face.

16

00:00:43,360 --> 00:00:45,530

One of Natalie's many achievements was the

17

00:00:45,530 --> 00:00:49,370

discovery of Kepler-10b, the first rocky planet

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00:00:49,370 --> 00:00:52,500

identified outside of our solar system.

19

00:00:52,500 --> 00:00:55,200

Since then, Natalie and the Kepler team have

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00:00:55,200 --> 00:00:58,100

confirmed hundreds of other Earth-size planets

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00:00:58,100 --> 00:00:59,870

as well as thousands of planets

22

00:00:59,870 --> 00:01:02,660

of all types and sizes.

23

00:01:02,660 --> 00:01:05,600

She started out as a business major who realized

24

00:01:05,600 --> 00:01:08,310

that science was her true calling.

25

00:01:08,310 --> 00:01:10,940

Natalie pursued her graduate studies in California

26  
00:01:10,940 --> 00:01:14,270  
and South America, where she was deeply inspired

27  
00:01:14,270 --> 00:01:16,090  
by the new perspective of the stars

28  
00:01:16,090 --> 00:01:19,120  
in the southern night skies.

29  
00:01:19,120 --> 00:01:22,710  
As her career progressed, she became more fixated

30  
00:01:22,710 --> 00:01:25,050  
on the question of whether planet Earth is alone

31  
00:01:25,050 --> 00:01:26,650  
in the universe...

32  
00:01:26,650 --> 00:01:28,850  
or if there might be other rocky worlds

33  
00:01:28,850 --> 00:01:31,590  
out there similar to ours.

34  
00:01:31,590 --> 00:01:35,610  
In 1999, she contacted researchers at NASA Ames

35  
00:01:35,610 --> 00:01:38,050  
to discuss some challenges she anticipated

36  
00:01:38,050 --> 00:01:41,210  
with the proposed mission called Kepler.

37  
00:01:41,210 --> 00:01:42,700  
Natalie Batalha: When I first heard about this

38  
00:01:42,700 --> 00:01:44,770

idea for detecting Earth-size planets

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00:01:44,770 --> 00:01:46,820

I admit I was skeptical.

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00:01:46,820 --> 00:01:50,020

At the time, I was working on star spots.

41

00:01:50,020 --> 00:01:52,510

And I wondered if it would really be possible to

42

00:01:52,510 --> 00:01:55,140

disentangle the signal from the planet transiting

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00:01:55,140 --> 00:01:57,460

in front of the star from the signal

44

00:01:57,460 --> 00:02:00,910

of the star spot rotating in and out of view.

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00:02:00,910 --> 00:02:03,380

Almost immediately the Principal Investigator,

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00:02:03,380 --> 00:02:05,780

Bill Borucki, responded to my email.

47

00:02:05,780 --> 00:02:08,290

So, Bill invited me to come to Ames

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00:02:08,290 --> 00:02:10,300

to work on this very issue.

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00:02:10,300 --> 00:02:11,760

Narrator: She quickly became a leader within

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00:02:11,760 --> 00:02:14,410

the team as the mission progressed.

51  
00:02:14,410 --> 00:02:17,010  
Natalie and the Kepler team helped to make one

52  
00:02:17,010 --> 00:02:19,490  
ground-breaking discovery after another,

53  
00:02:19,490 --> 00:02:23,090  
effectively rewriting every textbook on astronomy.

54  
00:02:23,090 --> 00:02:25,240  
Natalie Batalha: I'd like to start by reminding

55  
00:02:25,240 --> 00:02:26,980  
you of what Kepler is...

56  
00:02:26,980 --> 00:02:29,200  
Narrator: Her abilities as a powerful communicator

57  
00:02:29,200 --> 00:02:30,750  
were key to helping share

58  
00:02:30,750 --> 00:02:33,400  
the mission's incredible discoveries.

59  
00:02:33,400 --> 00:02:34,960  
Natalie Batalha:: One of the main goals of the

60  
00:02:34,960 --> 00:02:38,190  
Kepler mission is to determine how common

61  
00:02:38,190 --> 00:02:39,650  
planets are in the galaxy.

62  
00:02:39,650 --> 00:02:41,440  
That is, planets of different sizes

63  
00:02:41,440 --> 00:02:43,320

and orbital periods.

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00:02:43,320 --> 00:02:45,320

The future is filled with promise for great

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00:02:45,320 --> 00:02:48,380

research and Kepler's exo-planet survey is going

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00:02:48,380 --> 00:02:51,460

to be very important for designing NASA's

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00:02:51,460 --> 00:02:54,030

next missions, the missions to find

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00:02:54,030 --> 00:02:56,190

evidence of life beyond Earth.

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00:02:56,190 --> 00:02:58,610

Narrator: Natalie is working with many teams and

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00:02:58,610 --> 00:03:00,200

advisory panels to chart

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00:03:00,200 --> 00:03:03,600

the future of astrophysics research.

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00:03:03,600 --> 00:03:06,570

Earth is not alone in the universe and with each

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00:03:06,570 --> 00:03:10,240

new discovery come many new questions.

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00:03:10,240 --> 00:03:12,570

Natalie is working harder than ever