

NASA  
NASA Ames Research Center  
Moffett Field, Calif.

## NASA Ames 2016 Summer Series

Tuesday, July 19

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Office of the Chief Scientist



1  
00:00:01,166 --> 00:00:04,166  
[musical tones]  
[electronic sounds of data]

2  
00:00:16,900 --> 00:00:22,866  
- Welcome to the 2016  
NASA Ames Summer Series.

3  
00:00:22,866 --> 00:00:24,500  
- If there's something  
you want to do,

4  
00:00:24,500 --> 00:00:26,066  
ask for it.

5  
00:00:26,066 --> 00:00:29,266  
You know,  
don't let anybody tell you

6  
00:00:29,266 --> 00:00:31,366  
that you can't do anything,

7  
00:00:31,366 --> 00:00:34,466  
but particularly,  
don't let yourself

8  
00:00:34,466 --> 00:00:36,466  
limit yourself.

9  
00:00:36,466 --> 00:00:38,733  
Particularly women.

10  
00:00:38,733 --> 00:00:42,166  
Whatever you want to do,  
go do it.

11  
00:00:42,166 --> 00:00:43,733  
- What is life?

12

00:00:43,733 --> 00:00:45,300

What does that mean?

13

00:00:45,300 --> 00:00:46,933

What are the implications  
for that

14

00:00:46,933 --> 00:00:50,766

for actually looking  
for organisms on other planets

15

00:00:50,766 --> 00:00:53,433

when you have no idea  
what they're gonna be like?

16

00:00:53,433 --> 00:00:55,233

- I have an atom  
I've prepared this way.

17

00:00:55,233 --> 00:00:56,300

I let go of it.

18

00:00:56,300 --> 00:00:58,366

Its velocity is defined

19

00:00:58,366 --> 00:01:00,266

to within  
100 microns per second,

20

00:01:00,266 --> 00:01:01,966

slower than an ant will crawl,

21

00:01:01,966 --> 00:01:03,766

which is kind of amazing  
when you consider

22

00:01:03,766 --> 00:01:05,766

that the atoms in this room  
are whipping around

23

00:01:05,766 --> 00:01:07,700  
at a kilometer per second.

24

00:01:07,700 --> 00:01:10,800  
- Why is it that despite  
the universal belief

25

00:01:10,800 --> 00:01:14,100  
that all human beings  
are created equal,

26

00:01:14,100 --> 00:01:17,933  
there continues to be disparity  
among genders?

27

00:01:17,933 --> 00:01:21,766  
- To this day,  
I cherish the word "citizen,"

28

00:01:21,766 --> 00:01:24,066  
because our own government

29

00:01:24,066 --> 00:01:27,600  
wasn't willing  
to use the word "citizen"

30

00:01:27,600 --> 00:01:29,600  
in describing those of us

31

00:01:29,600 --> 00:01:33,200  
who were American citizens  
born here,

32

00:01:33,200 --> 00:01:35,933  
but of Japanese ancestry.

33

00:01:35,933 --> 00:01:39,533  
- What new processes

might we create in space?

34

00:01:39,533 --> 00:01:42,400

How can the space environment  
allow us

35

00:01:42,400 --> 00:01:46,266

to unlock new processes  
that don't exist on Earth?

36

00:01:46,266 --> 00:01:49,633

How do we make things in space  
that can't be made on Earth

37

00:01:49,633 --> 00:01:52,000

and then bring them  
back to Earth?

38

00:01:52,000 --> 00:01:55,200

- If one little robot  
the size of a baby grand

39

00:01:55,200 --> 00:01:57,266

can generate this much interest  
by going

40

00:01:57,266 --> 00:02:01,000

to a frozen, remote planet  
3 billion miles away,

41

00:02:01,000 --> 00:02:05,033

can you imagine  
the inspiration it will be

42

00:02:05,033 --> 00:02:08,733

to send our fellow men  
and women to Mars?

43

00:02:08,733 --> 00:02:11,666

- Take advantage.

Ask for the world.