CAN YOU BUILD A

COMPACT,

LIGHT-WEIGHT,

AND

DURABLE SENSOR

TO MEASURE PARTICLES IN THE AIR?

1
00:00:00,850 --> 00:00:04,319
Aerosols are tiny particles suspended in air we can't see them

2
00:00:04,319 --> 00:00:11,218
They're all around us all the time and the reason we care about aerosols is that they can be a health hazard

3
00:00:11,679 --> 00:00:13,799
whether on earth or in space

4
00:00:14,380 --> 00:00:17,129
Humans need fresh air to breathe and remain healthy

5
00:00:17,920 --> 00:00:22,469
The NASA Earth and Space Air prize is a technology competition

6
00:00:22,990 --> 00:00:25,949
with support provided by the Robert Wood Johnson Foundation

7
00:00:27,220 --> 00:00:32,759
Can you build a compact lightweight and durable sensor to measure particles in the air?

8
00:00:33,840 --> 00:00:37,520
Submit your idea for a chance to win a grand prize of

9
00:00:37,660 --> 00:00:39,960
$100,000

10
00:00:39,969 --> 00:00:46,619
We're looking for really great people innovators who will design new kinds of sensors that help us understand t

11
00:00:46,750 --> 00:00:54,149
particulate in air either in a community or in an environment in space. Health and safety are two core values tha

12
00:00:54,489 --> 00:00:58,649
Develop our spacecraft with. We absolutely care about the health of our astronauts

13
00:00:58,960 --> 00:01:03,719

That is our prime driving factor for developing technologies for monitoring human health.

14
00:01:04,000 --> 00:01:06,089
The space station is a really unique environment

15
00:01:06,430 --> 00:01:12,299
It's been in operation for 17 years. There have been over 200 people that have come and gone

16
00:01:12,670 --> 00:01:17,850
They clean the air with filters. So the filters are always taking out particles

17
00:01:17,850 --> 00:01:21,000
But at the same time the humans are always generating particles

18
00:01:21,070 --> 00:01:27,930
There are a lot of science experiments on the space station and all of those materials that are brought up make

19
00:01:28,060 --> 00:01:31,589
We cannot put a full-size aerosol instrument on the space station

20
00:01:32,100 --> 00:01:35,980
Air quality is also a concern for long-term missions.

21
00:01:35,980 --> 00:01:39,400
When we go to Mars, there's going to be a lot of dust

22
00:01:39,400 --> 00:01:44,480
we're gonna be very interested in measuring and controlling the aerosols

23
00:01:44,490 --> 00:01:46,879
in a Martian habitat for example.

24
00:01:47,540 --> 00:01:51,900
The technology developed for space could even be used on earth.

25
00:01:51,900 --> 00:01:54,740
We want to work with leaders all across the country

26
00:01:54,840 --> 00:02:00,740
to help build what we call a culture of health. That's a time in a place in the future where everyone in the United

27
00:02:00,740 --> 00:02:04,000
has lots and lots of opportunity to live a healthy life. Do you have an idea for a new technology?

28
00:02:04,060 --> 00:02:06,680
Do you have an idea for a new technology?

29
00:02:06,680 --> 00:02:10,040
Register by December 13, 2017.