
NASA

1
00:00:00,030 --> 00:00:04,120
Each year, severe weather in the U.S.

2
00:00:04,120 --> 00:00:08,370
causes $5 billion in damage and losses

3
00:00:12,560 --> 00:00:16,700
up to 10,000 lives lost globally.

4
00:00:20,880 --> 00:00:25,090
NASA's Earth Science Technology Office funded a CubeSat project

5
00:00:25,090 --> 00:00:29,190
that could validate a new technology approach to improve weather forecasting.

6
00:00:33,659 --> 00:00:35,816
Our ESTO funded project is called MiRaTA.

7
00:00:40,409 --> 00:00:45,940
It stands for the Microwave Radiometer Technology
Acceleration mission.

8
00:00:45,941 --> 00:00:51,103
It has two really interesting Earth sensors
on it.

9
00:00:51,103 --> 00:00:57,523
One of them is going to be taking maps of
temperature and water vapor and cloud ice on Earth.

10
00:00:57,523 --> 00:00:58,701
It’s called a microwave radiometer.

11
00:01:03,634 --> 00:01:08,306
...and one of them is a GPS radio occultation
receiver.

12
00:01:11,022 --> 00:01:12,919

It uses signals from GPS satellites.

13
00:01:12,919 --> 00:01:16,933
The signal bends as it goes through the atmosphere,
and we can measure that with the receiver.

14
00:01:37,741 --> 00:01:41,995
...so that we can constantly monitor the Earth's
weather systems.

15
00:01:46,328 --> 00:01:50,482
... will go into our forecasting systems,
and help us predict the tracks better;

16
00:01:50,492 --> 00:01:54,994
help us to assess how much damage is expected,
and plan emergency resources better.

17
00:01:54,995 --> 00:02:01,525
You know, just generally contribute to advanced
warning and responsiveness to weather systems.

18
00:02:04,170 --> 00:02:06,577
Earth observations are really important.

19
00:02:06,586 --> 00:02:11,570
Obviously we are here on earth, and its really
important that we take good care of earth,