1
00:00:01,000 --> 00:00:06,910
\h Music

2
00:00:06,910 --> 00:00:10,290
\h George Diller/NASA Public Affairs Officer: NASA technology is at the heart of a system being developed

3
00:00:10,290 --> 00:00:16,580
\h save lives in some of the most dangerous parts of the world. Leak detectors are used at space shuttle la

4
00:00:16,580 --> 00:00:23,000
\h pads to warn workers of invisible dangers. A mobile unit developed at NASA's Kennedy Space Center in

5
00:00:23,000 --> 00:00:30,590
\h Florida could soon warn those living near a volcano of unseen threats. However, designers didn't intend

6
00:00:30,590 --> 00:00:37,050
\h make a volcano monitor when they set out to miniaturize the gas detection system used for the shuttle.

7
00:00:37,050 --> 00:00:39,980
\h Tim Griffin/Kennedy Chemical Analysis Branch Chief: A couple of us from Kennedy went out to a

8
00:00:39,980 --> 00:00:45,600
\h conference, and we presented our data and some information that we were doing for stuff for the pad

9
00:00:45,600 --> 00:00:51,600
\h work. And while we were there, a professor from the University of Costa Rica presented some, an

10
00:00:51,600 --> 00:00:57,880
\h instrument that he was trying to work on in order to monitor for gases. And we said, 'Wow, there's a lot o

11
00:00:57,880 --> 00:00:59,490
\h similarities there.'

12
00:00:59,490 --> 00:01:03,540
\h George Diller/NASA Public Affairs Officer: Working with Costa Rica's scientific program, Griffin and his t

13
00:01:03,540 --> 00:01:07,930

\h modified their leak detector to specialize in volcano research.

14
00:01:07,930 --> 00:01:11,420
\h Tim Griffin/ Kennedy Chemical Analysis Branch Chief: Embedded computer and everything we've chose

15
00:01:11,420 --> 00:01:17,970
\h much smaller. And this is also a more autonomous system. On the launch pad, because it's launch critic

16
00:01:17,970 --> 00:01:28,630
\h you make decisions that are life or death, we have humans intervene in it. And this one is just archiving

17
00:01:28,630 --> 00:01:31,730
\h George Diller/NASA Public Affairs Officer: It was small enough to be carried in a variety of vehicles to

18
00:01:31,730 --> 00:01:35,880
\h effectively sample the air around the Costa Rican mountains.

19
00:01:35,880 --> 00:01:39,890
\h Tim Griffin/ Kennedy Chemical Analysis Branch Chief: We've put it onto three different aircraft, we've

20
00:01:39,890 --> 00:01:42,430
\h carried it by hand into the craters of volcanoes.

21
00:01:42,430 --> 00:01:46,470
\h George Diller/NASA Public Affairs Officer: The detector incorporates a number of innovations from Griff

22
00:01:46,470 --> 00:01:49,090
\h Tim Griffin/ Kennedy Chemical Analysis Branch Chief: So you can see, there's a pump here, there's a p

23
00:01:49,090 --> 00:01:53,960
\h here and there's another pump in the back. So you can see when we talked about needing to make the

24
00:01:53,960 --> 00:01:59,190
\h pumps a little bit smaller and less power consumption why that's one of the big keys.

25
00:01:59,190 --> 00:02:02,880
\h George Diller/NASA Public Affairs Officer: Griffin's team aims to create more innovations, allowing man

26
00:02:02,880 --> 00:02:07,920
\h the mobile detectors to be strategically based around the world. That way, they can be carried by plane

27
00:02:07,920 --> 00:02:16,360
\h active cone for study, leading to potential warnings. With multiple surveys done over time and covering

28
00:02:16,360 --> 00:02:23,120
\h many volcanoes, Griffin said there's a better chance of specialists being able to make accurate predictio

29
00:02:23,120 --> 00:02:26,720
\h Tim Griffin/ Kennedy Chemical Analysis Branch Chief: The information is still a little, from a volcanologis

30
00:02:26,720 --> 00:02:34,090
\h standpoint, is still real tough to interpret because there's not enough data worldwide and history base to

31
00:02:34,090 --> 00:02:37,670
\h know for sure exactly what's going on.

32
00:02:37,670 --> 00:02:41,740
\h George Diller/NASA Public Affairs Officer: For as much work and progress Griffin's group has made, he

33
00:02:41,740 --> 00:02:44,900
\h considers the field very young, with lots of potential.

34
00:02:44,900 --> 00:02:47,580
\h Tim Griffin/ Kennedy Chemical Analysis Branch Chief: Well, hopefully, the long-term idea of this is that w

35
00:02:47,580 --> 00:02:54,160
\h would be able to help characterize the volcanoes better. And then as, if a volcano becomes more active

36
00:02:54,160 --> 00:03:00,120
\h we'll be able to get a better idea of what's going on, how active it is, do we think it's going to be violent

37
00:03:00,120 --> 00:03:04,310
\h eruption or maybe gases coming out.

38
00:03:04,310 --> 00:03:07,570

\h George Diller/NASA Public Affairs Officer: Griffin's team still is working with the test unit and they expec

39
00:03:07,570 --> 00:03:11,080
\h several more improvements before their ultimate goal is met.

40
00:03:11,080 --> 00:03:15,150
\h Tim Griffin/ Kennedy Chemical Analysis Branch Chief: Well the ultimate goal is a ways away because w