1
00:00:12,310 --> 00:00:09,669
one of the real key questions

2
00:00:13,350 --> 00:00:12,320
in our field of volcanology is to try to

3
00:00:15,910 --> 00:00:13,360
understand

4
00:00:17,670 --> 00:00:15,920
when is a volcano getting ready to erupt

5
00:00:18,710 --> 00:00:17,680
and when is something that we observe

6
00:00:21,510 --> 00:00:18,720
happening there just

7
00:00:23,830 --> 00:00:21,520
a natural process that doesn't isn't

8
00:00:26,310 --> 00:00:23,840
going to lead to eruption

9
00:00:28,310 --> 00:00:26,320
deformation is often one of the first

10
00:00:29,429 --> 00:00:28,320
signs that a volcano is becoming

11
00:00:32,229 --> 00:00:29,439
restless

12
00:00:33,830 --> 00:00:32,239
and then we also look for increased

13
00:00:35,510 --> 00:00:33,840

seismic activity

14
00:00:37,030 --> 00:00:35,520
but the earlier that we can detect that

15
00:00:39,670 --> 00:00:37,040
deformation the more

16
00:00:40,869 --> 00:00:39,680
we can refine what kind of a forecast we

17
00:00:45,190 --> 00:00:40,879
have and whether or not we need

18
00:00:47,350 --> 00:00:45,200
to be concerned about eruptions

19
00:00:48,869 --> 00:00:47,360
nysar has a couple of capabilities that

20
00:00:50,229 --> 00:00:48,879
are going to be really transformative

21
00:00:51,270 --> 00:00:50,239
for volcanology the first is the

22
00:00:53,029 --> 00:00:51,280
consistency

23
00:00:54,709 --> 00:00:53,039
the fact that we're going to get these

24
00:00:57,029 --> 00:00:54,719
incredible data

25
00:00:58,069 --> 00:00:57,039
very consistently every couple of weeks

26
00:01:00,310 --> 00:00:58,079
the other aspect

27
00:01:02,709 --> 00:01:00,320
of nysar that's very important is its

28
00:01:03,510 --> 00:01:02,719
wavelength it's got a longer wavelength

29
00:01:05,350 --> 00:01:03,520
than most

30
00:01:06,950 --> 00:01:05,360
satellite missions that have taken

31
00:01:08,469 --> 00:01:06,960
radars up into space

32
00:01:09,590 --> 00:01:08,479
and that longer wavelength means that

33
00:01:11,429 --> 00:01:09,600
we're going to be able to penetrate

34
00:01:12,710 --> 00:01:11,439
vegetation and be able to see the ground

35
00:01:14,390 --> 00:01:12,720
through trees

36
00:01:15,830 --> 00:01:14,400
we're going to get consistency and we're

37
00:01:16,710 --> 00:01:15,840
going to get the ability to see through

38
00:01:18,870 --> 00:01:16,720

a lot of this

39
00:01:20,550 --> 00:01:18,880
obscuring vegetation and that's really

40
00:01:22,550 --> 00:01:20,560
going to open the door for studies of

41
00:01:24,789 --> 00:01:22,560
volcanoes

42
00:01:26,630 --> 00:01:24,799
because it's expensive and dangerous to

43
00:01:28,070 --> 00:01:26,640
put ground sensors around many of the

44
00:01:30,069 --> 00:01:28,080
world's volcanoes

45
00:01:32,310 --> 00:01:30,079
many volcanoes around the world have no

46
00:01:34,069 --> 00:01:32,320
sensors on them or too few sensors to

47
00:01:35,830 --> 00:01:34,079
really understand what's happening

48
00:01:37,590 --> 00:01:35,840
having something that's completely

49
00:01:39,590 --> 00:01:37,600
remote and satellite based

50
00:01:41,030 --> 00:01:39,600
allows us to get an image of what's

51
00:01:43,429 --> 00:01:41,040
going on without

52
00:01:45,030 --> 00:01:43,439
needing to have something in the remote

53
00:01:46,950 --> 00:01:45,040
ground surface

54
00:01:48,950 --> 00:01:46,960
the thing about volcanoes is they could

55
00:01:50,710 --> 00:01:48,960
have a regional or even a global impact

56
00:01:52,870 --> 00:01:50,720
depending on the size of the eruption

57
00:01:54,630 --> 00:01:52,880
so it's really key to be able to

58
00:01:56,789 --> 00:01:54,640
understand how volcanoes work so we can