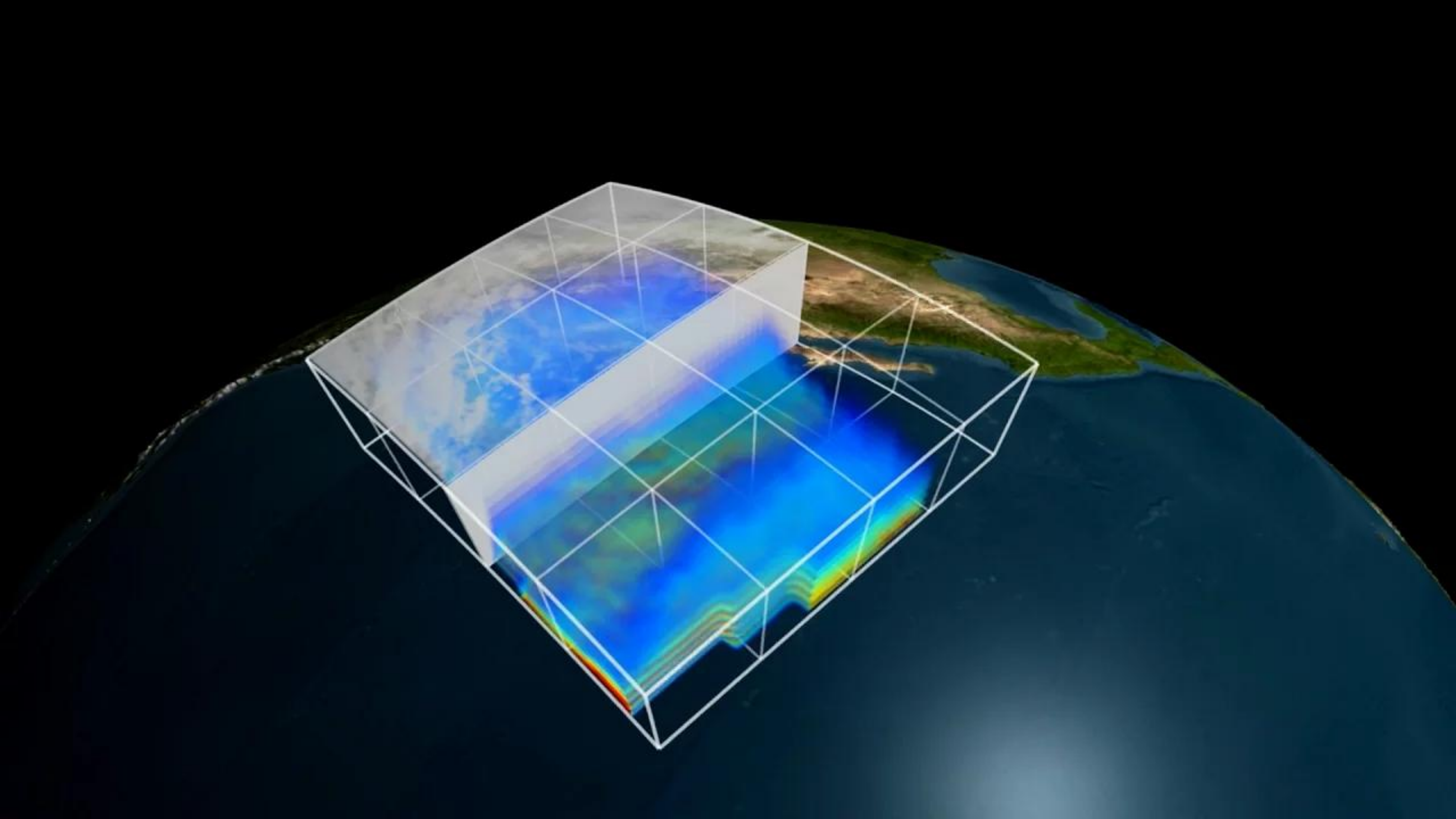

1
00:00:01,200 --> 00:00:05,071
[■]

2
00:00:06,906 --> 00:00:11,378
Better weather
forecasts save lives

3
00:00:12,445 --> 00:00:15,882
and property.

4
00:00:16,916 --> 00:00:19,352
AIRS, launched
aboard Aqua in 2002,

5
00:00:19,385 --> 00:00:23,023
gave weather forecasters
a new kind of data.

6
00:00:23,155 --> 00:00:25,925
Before AIRS, satellite
instruments looked at the

7
00:00:25,958 --> 00:00:27,961
atmosphere in about 15
different wavelengths of light.

8
00:00:29,628 --> 00:00:34,234
AIRS multiplied that to
almost 2400 wavelengths

9
00:00:34,334 --> 00:00:36,102
and uses the multiple
wavelengths to create

10
00:00:36,135 --> 00:00:39,672
3D maps of air temperature,
humidity and clouds.

11
00:00:39,805 --> 00:00:44,310

This high-definition
view improves forecasts.

12
00:00:45,811 --> 00:00:49,049
AIRS sees more than
just weather.

13
00:00:49,815 --> 00:00:53,319
It sees emissions
from volcanoes,

14
00:00:54,453 --> 00:00:59,225
gases from fires,

15
00:01:02,328 --> 00:01:05,999
indicators of drought.

16
00:01:06,332 --> 00:01:08,734
AIRS was the first instrument
to make global maps

17
00:01:08,767 --> 00:01:10,570
of carbon dioxide high
in the atmosphere,

18
00:01:10,603 --> 00:01:13,473
helping scientists see
how climate change

19
00:01:13,506 --> 00:01:14,607
is playing out globally.

20
00:01:15,808 --> 00:01:18,812
AIRS has been a game-changer
for research in many fields,

21
00:01:18,912 --> 00:01:22,916
from observing the
Antarctic ozone hole

22
00:01:23,315 --> 00:01:26,719
to understanding storms

23
00:01:27,686 --> 00:01:31,424
to measuring greenhouse gases.

24
00:01:36,529 --> 00:01:40,567
Other missions have adopted its
3D mapping approach.