



1  
00:00:06,230 --> 00:00:03,139  
the geostationary lightning map or GLM

2  
00:00:08,120 --> 00:00:06,240  
is an instrument on board goes 16 the

3  
00:00:08,839 --> 00:00:08,130  
newest of NOAA's Earth observing

4  
00:00:11,540 --> 00:00:08,849  
satellites

5  
00:00:13,430 --> 00:00:11,550  
GLM detects the pulses of light produced

6  
00:00:15,740 --> 00:00:13,440  
by lightning and thunderstorms and

7  
00:00:17,900 --> 00:00:15,750  
reports the brightness and geolocation

8  
00:00:19,580 --> 00:00:17,910  
of the lightning to earth where it is

9  
00:00:22,189 --> 00:00:19,590  
used to aid in severe weather

10  
00:00:24,590 --> 00:00:22,199  
forecasting NASA has designed an

11  
00:00:29,320 --> 00:00:24,600  
airborne instrument to validate the GLM

12  
00:00:32,720 --> 00:00:29,330  
observations the fly's eye GLM simulates

13  
00:00:35,150 --> 00:00:32,730

fly's eye or vegs is an array of

14

00:00:37,430 --> 00:00:35,160

radiometers optimized to measure the

15

00:00:40,310 --> 00:00:37,440

obstacle emissions from lightning it

16

00:00:42,860 --> 00:00:40,320

consists of 25 individual radiometers

17

00:00:45,080 --> 00:00:42,870

each tilted at a different viewing angle

18

00:00:48,080 --> 00:00:45,090

so that they combine to create an image

19

00:00:49,299 --> 00:00:48,090

of the style tops at a rate of 100,000

20

00:00:52,040 --> 00:00:49,309

times per second

21

00:00:53,630 --> 00:00:52,050

these radiometers are sensitive to a

22

00:00:56,450 --> 00:00:53,640

narrow spectral emission feature

23

00:00:59,689 --> 00:00:56,460

produced by atomic oxygen in the hot

24

00:01:01,549 --> 00:00:59,699

lightning channel slides I also observes

25

00:01:04,070 --> 00:01:01,559

five additional spectral features

26

00:01:06,260 --> 00:01:04,080

allowing scientists who investigate the

27

00:01:09,170 --> 00:01:06,270

physical properties of the lightning and

28

00:01:12,289 --> 00:01:09,180

HD cameras to reveal details like the

29

00:01:14,840 --> 00:01:12,299

cloud tops to view the thunderstorms

30

00:01:17,840 --> 00:01:14,850

from the top down face is carried on the

31

00:01:20,030 --> 00:01:17,850

NASA er to high altitude laboratories

32

00:01:22,249 --> 00:01:20,040

flies I will help determine the

33

00:01:24,980 --> 00:01:22,259

detection efficiency and sensitivity of