



THE SUN

1
00:00:09,110 --> 00:00:07,349
my name is angelus vulidas and i'm the

2
00:00:11,669 --> 00:00:09,120
project scientist for the shaky

3
00:00:13,830 --> 00:00:11,679
instrument suite on stereo a coronal

4
00:00:15,430 --> 00:00:13,840
mass ejection is an explosion of the

5
00:00:17,670 --> 00:00:15,440
sun's atmosphere that propagates in

6
00:00:19,830 --> 00:00:17,680
space in the form of a cloud

7
00:00:22,790 --> 00:00:19,840
they can really disrupt satellite

8
00:00:25,509 --> 00:00:22,800
communications they can affect gps

9
00:00:28,230 --> 00:00:25,519
signals or cell phones and even cause

10
00:00:30,950 --> 00:00:28,240
electricity disruptions

11
00:00:33,590 --> 00:00:30,960
so the stereo satellites

12
00:00:35,190 --> 00:00:33,600
is a mission specifically to study the

13
00:00:37,030 --> 00:00:35,200

quantum mass injections using two

14

00:00:39,030 --> 00:00:37,040

identical spacecraft so we can

15

00:00:41,670 --> 00:00:39,040

reconstruct the three-dimensional

16

00:00:44,229 --> 00:00:41,680

structure of these clouds the use of a

17

00:00:46,950 --> 00:00:44,239

single spacecraft is similar to seeing

18

00:00:49,190 --> 00:00:46,960

the wall with one eye you suddenly

19

00:00:50,869 --> 00:00:49,200

lack perception of depth and we never

20

00:00:53,670 --> 00:00:50,879

know if the object for example is coming

21

00:00:55,750 --> 00:00:53,680

towards us going away from us by

22

00:00:58,389 --> 00:00:55,760

injecting the second viewpoint then

23

00:00:59,910 --> 00:00:58,399

suddenly you run out of solutions and

24

00:01:01,750 --> 00:00:59,920

you you have a very limited number of

25

00:01:05,270 --> 00:01:01,760

models to choose from

26
00:01:08,310 --> 00:01:05,280
so this uh the shape of cme seems to to

27
00:01:10,710 --> 00:01:08,320
be similar to a french croissant only

28
00:01:12,469 --> 00:01:10,720
instead of be comprised of

29
00:01:13,510 --> 00:01:12,479
pastries comprised of magnetic field

30
00:01:15,350 --> 00:01:13,520
lines

31
00:01:17,030 --> 00:01:15,360
we basically have moved

32
00:01:19,429 --> 00:01:17,040
halfway towards

33
00:01:20,710 --> 00:01:19,439
the solving solving the problem at least

34
00:01:23,749 --> 00:01:20,720
in a practical

35
00:01:25,830 --> 00:01:23,759
manner by modeling and getting a ground

36
00:01:28,710 --> 00:01:25,840
truth on the shape and the energy on the

37
00:01:30,550 --> 00:01:28,720
cme can make better predictions of when