



1
00:00:04,950 --> 00:00:02,629
looking back at earth from a million

2
00:00:06,950 --> 00:00:04,960
miles away the deep space climate

3
00:00:09,350 --> 00:00:06,960
observatory will watch the august total

4
00:00:11,669 --> 00:00:09,360
solar eclipse in real time giving

5
00:00:13,990 --> 00:00:11,679
scientists a unique opportunity to study

6
00:00:15,990 --> 00:00:14,000
our solar powered planet

7
00:00:19,029 --> 00:00:16,000
nasa's earth polychromatic imaging

8
00:00:21,910 --> 00:00:19,039
camera called epic will capture images

9
00:00:23,830 --> 00:00:21,920
of the moon's shadow passing over earth

10
00:00:25,910 --> 00:00:23,840
a team of scientists will combine data

11
00:00:27,910 --> 00:00:25,920
from epic with measurements taken on the

12
00:00:30,070 --> 00:00:27,920
ground to learn more about how the sun's

13
00:00:32,229 --> 00:00:30,080

energy is absorbed and reflected in

14

00:00:34,150 --> 00:00:32,239

earth's atmosphere

15

00:00:36,069 --> 00:00:34,160

clouds affect how much of the sun's

16

00:00:37,990 --> 00:00:36,079

energy reaches earth which can be

17

00:00:39,990 --> 00:00:38,000

difficult to calculate without knowing

18

00:00:41,990 --> 00:00:40,000

how each cloud blocks absorbs or

19

00:00:44,150 --> 00:00:42,000

transmits light

20

00:00:45,830 --> 00:00:44,160

like a giant cloud the moon blocks out

21

00:00:46,950 --> 00:00:45,840

the sun's energy during the solar

22

00:00:48,709 --> 00:00:46,960

eclipse

23

00:00:50,869 --> 00:00:48,719

because we already know the exact shape

24

00:00:52,869 --> 00:00:50,879

and makeup of the moon scientists can

25

00:00:55,189 --> 00:00:52,879

use the natural phenomenon to develop

26

00:00:58,229 --> 00:00:55,199

new calculations that could improve

27

00:01:01,110 --> 00:00:58,239

estimates of earth's energy system and

28

00:01:02,709 --> 00:01:01,120

answer questions about earth's climate

29

00:01:05,270 --> 00:01:02,719

nasa has studied the sun and earth

30

00:01:07,190 --> 00:01:05,280

relationship for more than 40 years

31

00:01:09,030 --> 00:01:07,200

this year nasa is launching two