



1
00:00:14,629 --> 00:00:13,430
this is the cosmic background explorer

2
00:00:16,470 --> 00:00:14,639
the kobe

3
00:00:18,470 --> 00:00:16,480
this spacecraft will carry a complement

4
00:00:20,710 --> 00:00:18,480
of three infrared and microwave

5
00:00:22,870 --> 00:00:20,720
measuring instruments all designed and

6
00:00:25,109 --> 00:00:22,880
built by nasa's goddard space flight

7
00:00:27,109 --> 00:00:25,119
center greenbelt maryland

8
00:00:29,269 --> 00:00:27,119
the five thousand pound kobe will be

9
00:00:31,189 --> 00:00:29,279
deployed by a goddard managed delta

10
00:00:32,870 --> 00:00:31,199
expendable rocket following its launch

11
00:00:34,950 --> 00:00:32,880
from vanderberg

12
00:00:36,470 --> 00:00:34,960
scientists hope that data from the kobe

13
00:00:38,709 --> 00:00:36,480

instruments will remove some of the

14

00:00:41,110 --> 00:00:38,719

mystery from such murky matters as the

15

00:00:43,270 --> 00:00:41,120

nature of the big bang

16

00:00:45,350 --> 00:00:43,280

theory has it that this cataclysmic

17

00:00:48,549 --> 00:00:45,360

explosion started the expansion of the

18

00:00:50,790 --> 00:00:48,559

universe about 15 billion years ago

19

00:00:53,350 --> 00:00:50,800

with temperatures in the trillions upon

20

00:00:55,430 --> 00:00:53,360

trillions of degrees

21

00:00:57,189 --> 00:00:55,440

kobe will measure the remnants of the

22

00:00:59,830 --> 00:00:57,199

resulting radiation

23

00:01:01,510 --> 00:00:59,840

kobe project scientist dr john mather at

24

00:01:02,790 --> 00:01:01,520

goddard elaborates

25

00:01:04,310 --> 00:01:02,800

we look at the cosmic background

26

00:01:05,830 --> 00:01:04,320

radiation we're actually looking at the

27

00:01:08,070 --> 00:01:05,840

dominant form of energy in the whole

28

00:01:10,149 --> 00:01:08,080

universe this radiation fills the whole

29

00:01:12,149 --> 00:01:10,159

sky comes from every direction

30

00:01:13,670 --> 00:01:12,159

and so it adds up to be a hundred times

31

00:01:15,510 --> 00:01:13,680

as much energy as comes from all the

32

00:01:17,590 --> 00:01:15,520

stars all the galaxies

33

00:01:19,429 --> 00:01:17,600

all the suns all the planets that people

34

00:01:21,830 --> 00:01:19,439

can see with their own eyes

35

00:01:22,870 --> 00:01:21,840

um a hundred times as much as that

36

00:01:24,630 --> 00:01:22,880

so it's

37

00:01:26,230 --> 00:01:24,640

very important to realize we're looking

38

00:01:27,830 --> 00:01:26,240

at the dominant energy of the whole

39

00:01:30,310 --> 00:01:27,840

universe this is the remnant of the big

40

00:01:32,630 --> 00:01:30,320

bang itself that we're studying with the

41

00:01:35,030 --> 00:01:32,640

kobe satellite

42

00:01:37,510 --> 00:01:35,040

from its orbit more than 500 miles from

43

00:01:39,910 --> 00:01:37,520

earth the kobe also will investigate

44

00:01:43,109 --> 00:01:39,920

such matters as what made the universe

45

00:01:45,830 --> 00:01:43,119

uniform on such a gigantic scale and if

46

00:01:47,830 --> 00:01:45,840

it has a center or an edge

47

00:01:50,149 --> 00:01:47,840

kobe scientist dr michael hauser at

48

00:01:51,990 --> 00:01:50,159

goddard puts the mission in perspective

49

00:01:54,230 --> 00:01:52,000

the kobe mission is

50

00:01:55,910 --> 00:01:54,240

worth every ounce of effort we've put

51

00:01:58,230 --> 00:01:55,920

into it

52

00:02:00,149 --> 00:01:58,240

cosmology as you

53

00:02:01,030 --> 00:02:00,159

can understand is a very difficult

54

00:02:03,030 --> 00:02:01,040

problem

55

00:02:05,510 --> 00:02:03,040

to study objectively

56

00:02:08,630 --> 00:02:05,520

we are given very few

57

00:02:10,070 --> 00:02:08,640

fossils on the beach if you will

58

00:02:11,190 --> 00:02:10,080

those few

59

00:02:13,510 --> 00:02:11,200

that are

60

00:02:14,790 --> 00:02:13,520

present and accessible still to us at

61

00:02:16,949 --> 00:02:14,800

this time

62

00:02:20,790 --> 00:02:16,959

15 billion years or so

63

00:02:24,070 --> 00:02:21,750

are

64

00:02:25,830 --> 00:02:24,080

worth every bit of scrutiny we can give

65

00:02:29,110 --> 00:02:25,840

to them

66

00:02:31,509 --> 00:02:29,120

looking out into space back into time

67

00:02:34,229 --> 00:02:31,519

the kobe spacecraft will undertake the

68

00:02:36,390 --> 00:02:34,239

esoteric task of providing new insights