1
00:00:26,790 --> 00:00:25,349
with each new probe to a neighboring

2
00:00:29,269 --> 00:00:26,800
planet

3
00:00:31,910 --> 00:00:29,279
with each new science mission to study

4
00:00:35,590 --> 00:00:33,590
the moon

5
00:00:37,590 --> 00:00:35,600
another heavenly body

6
00:00:40,549 --> 00:00:37,600
we add to our growing knowledge and

7
00:00:42,790 --> 00:00:40,559
understanding of our solar system

8
00:00:45,110 --> 00:00:42,800
yet as we've come to know much of how

9
00:00:46,470 --> 00:00:45,120
things are in our small corner of the

10
00:00:49,029 --> 00:00:46,480
cosmos

11
00:00:50,950 --> 00:00:49,039
we're still in search of one fundamental

12
00:00:52,950 --> 00:00:50,960
answer

13
00:00:54,310 --> 00:00:52,960

what are the boundaries of our solar

14
00:00:56,790 --> 00:00:54,320
system

15
00:00:59,750 --> 00:00:56,800
what of the areas that surround and

16
00:01:02,229 --> 00:00:59,760
separate us from what lies beyond

17
00:01:03,430 --> 00:01:02,239
we would like to look beyond

18
00:01:04,950 --> 00:01:03,440
what other missions have have

19
00:01:08,789 --> 00:01:04,960
accomplished and have done such as

20
00:01:13,830 --> 00:01:12,070
from the sun flows the solar wind it

21
00:01:15,350 --> 00:01:13,840
inflates the bubbles surrounding our

22
00:01:18,149 --> 00:01:15,360
solar system

23
00:01:20,230 --> 00:01:18,159
this heliosphere protects earth and

24
00:01:22,950 --> 00:01:20,240
every living thing on our planet from

25
00:01:24,070 --> 00:01:22,960
dangerous galactic cosmic rays

26
00:01:26,789 --> 00:01:24,080
but how

27
00:01:28,390 --> 00:01:26,799
how does the heliosphere interact with a

28
00:01:32,390 --> 00:01:28,400
harsh environment of the milky way

29
00:01:38,390 --> 00:01:35,429
a new mission ibex the interstellar

30
00:01:41,350 --> 00:01:38,400
boundary explorer is about to search for

31
00:01:43,830 --> 00:01:41,360
answers

32
00:01:46,469 --> 00:01:43,840
the outer boundary that we have now is

33
00:01:50,069 --> 00:01:46,479
we kind of defined it through again

34
00:01:54,389 --> 00:01:52,149
we have somewhat of a clear picture but

35
00:01:57,030 --> 00:01:54,399
this will go again this will be a better

36
00:02:00,389 --> 00:01:57,040
definition of where it is

37
00:02:02,230 --> 00:02:00,399
ibex will go into orbit 200 000 miles

38
00:02:03,429 --> 00:02:02,240

above the earth most of the way to the

39
00:02:05,990 --> 00:02:03,439
moon

40
00:02:07,749 --> 00:02:06,000
it'll use a pair of atom sensors that'll

41
00:02:10,550 --> 00:02:07,759
act as cameras

42
00:02:12,630 --> 00:02:10,560
they'll produce first of its kind images

43
00:02:15,430 --> 00:02:12,640
depicting the interactions between the

44
00:02:17,830 --> 00:02:15,440
million mile per hour solar wind and the

45
00:02:20,470 --> 00:02:17,840
interstellar medium the low density

46
00:02:23,270 --> 00:02:20,480
material between the stars

47
00:02:25,190 --> 00:02:23,280
every six months ibex will complete an

48
00:02:26,470 --> 00:02:25,200
all-sky map of the interstellar

49
00:02:29,030 --> 00:02:26,480
boundaries

50
00:02:31,509 --> 00:02:29,040
telling us more about how they work and

51
00:02:34,550 --> 00:02:31,519
how they protect us all

52
00:02:36,309 --> 00:02:34,560
as we go out to explore out into to mars

53
00:02:38,869 --> 00:02:36,319
and going back to the moon we want to

54
00:02:39,670 --> 00:02:38,879
know what those effects are as we go

55
00:02:43,430 --> 00:02:39,680
through

56
00:02:46,550 --> 00:02:43,440
these various areas within space

57
00:02:49,110 --> 00:02:46,560
to keep up on the latest news about ibex

58
00:02:51,589 --> 00:02:49,120
learn more about the heliosphere

59
00:02:52,790 --> 00:02:51,599
or to watch informative videos about the

60
00:02:56,869 --> 00:02:52,800
mission