1
00:00:08,780 --> 00:00:06,619
2005 yu55 is going to make a very close

2
00:00:12,049 --> 00:00:08,790
approach to the earth on the night of

3
00:00:14,270 --> 00:00:12,059
november eighth 2011 at that time its

4
00:00:16,010 --> 00:00:14,280
distance from earth will be just under

5
00:00:20,179 --> 00:00:16,020
nine tenths of the moon's distance away

6
00:00:21,590 --> 00:00:20,189
from us 2005 yu55 cannot hit earth at

7
00:00:23,029 --> 00:00:21,600
least over the interval that we can

8
00:00:24,800 --> 00:00:23,039
compute the motion reliably which

9
00:00:27,019 --> 00:00:24,810
extends for several hundred years it's

10
00:00:29,120 --> 00:00:27,029
going to be moving very rapidly as it

11
00:00:30,919 --> 00:00:29,130
traverses the sky near the earth on

12
00:00:33,620 --> 00:00:30,929
november seventh eighth ninth and tenth

13
00:00:35,060 --> 00:00:33,630

in effect it will be moving straight at

14
00:00:36,709 --> 00:00:35,070
us from one direction and then they go

15
00:00:38,930 --> 00:00:36,719
whizzing by and straight away from us in

16
00:00:40,670 --> 00:00:38,940
the other direction so it's it's motion

17
00:00:43,130 --> 00:00:40,680
across the sky will be close to 180

18
00:00:45,139 --> 00:00:43,140
degrees over the course of less than two

19
00:00:47,930 --> 00:00:45,149
days it made a close approach to earth

20
00:00:49,520 --> 00:00:47,940
about 18 months ago in April of 2010

21
00:00:51,979 --> 00:00:49,530
colleagues of ours at eros evo

22
00:00:53,720 --> 00:00:51,989
Observatory were able to observe this

23
00:00:55,910 --> 00:00:53,730
asteroid using the radar facility at

24
00:00:59,029 --> 00:00:55,920
Arecibo and they were able to obtain

25
00:01:01,400 --> 00:00:59,039
radar images that showed that this

26
00:01:03,470 --> 00:01:01,410
object is about 400 metres across on

27
00:01:06,410 --> 00:01:03,480
november eighth ninth tenth will be

28
00:01:08,179 --> 00:01:06,420
observing it again this time with both

29
00:01:10,370 --> 00:01:08,189
the air SIBO telescope and with the

30
00:01:12,109 --> 00:01:10,380
Goldstone telescope here in california

31
00:01:14,120 --> 00:01:12,119
this is the closest approach by an

32
00:01:16,039 --> 00:01:14,130
asteroid that large that we've ever

33
00:01:18,109 --> 00:01:16,049
known about in advance the radar

34
00:01:21,380 --> 00:01:18,119
telescopes that we use to observe

35
00:01:23,600 --> 00:01:21,390
asteroids are very large radio dishes if

36
00:01:25,789 --> 00:01:23,610
the Goldstone telescope is 70 meters

37
00:01:27,499 --> 00:01:25,799
which is 240 feet across so it's truly

38
00:01:29,749 --> 00:01:27,509

enormous and Arecibo is even larger

39
00:01:32,179 --> 00:01:29,759
still the Goldstone telescope has a new

40
00:01:34,010 --> 00:01:32,189
radar imaging capability which has just

41
00:01:35,600 --> 00:01:34,020
become available that will enable us to

42
00:01:37,730 --> 00:01:35,610
see much finer detail than has

43
00:01:40,039 --> 00:01:37,740
previously been possible and depending

44
00:01:41,960 --> 00:01:40,049
on how we transmit the signal we can get

45
00:01:44,330 --> 00:01:41,970
different types of data it shows us how

46
00:01:45,859 --> 00:01:44,340
big it is it can show us features on the

47
00:01:48,620 --> 00:01:45,869
asteroid it can tell us information

48
00:01:50,810 --> 00:01:48,630
about the asteroid rotation period we

49
00:01:52,039 --> 00:01:50,820
should be able to tell much better with