



1  
00:00:07,909 --> 00:00:04,070  
arctic sea ice maximum 2009

2  
00:00:09,910 --> 00:00:07,919  
the 2009 arctic sea ice maximum extent

3  
00:00:11,830 --> 00:00:09,920  
has just been reached this is a

4  
00:00:13,990 --> 00:00:11,840  
measurement of the amount of sea ice

5  
00:00:16,550 --> 00:00:14,000  
covering the arctic at the end of each

6  
00:00:18,790 --> 00:00:16,560  
winter for the past several decades the

7  
00:00:21,349 --> 00:00:18,800  
maximum arctic ice extent has been

8  
00:00:23,509 --> 00:00:21,359  
declining scientists monitor this vital

9  
00:00:25,750 --> 00:00:23,519  
element of our planet from space with a

10  
00:00:28,070 --> 00:00:25,760  
variety of different spacecraft that

11  
00:00:30,470 --> 00:00:28,080  
make global measurements in remote and

12  
00:00:33,110 --> 00:00:30,480  
treacherous locations not easily

13  
00:06:13,350 --> 00:00:33,120

accessible from the ground for more log

14

00:06:18,790 --> 00:06:16,469

hi i'm bob ben chadler i'm a scientist

15

00:06:20,950 --> 00:06:18,800

at nasa's goddard space flight center i

16

00:06:23,029 --> 00:06:20,960

study ice i'm a glaciologist and i've

17

00:06:31,749 --> 00:06:23,039

been doing it here for almost 30 years

18

00:06:35,990 --> 00:06:33,510

west antarctica

19

00:06:38,710 --> 00:06:36,000

pine island glacier drains into an ice

20

00:06:40,870 --> 00:06:38,720

shelf and the satellite data tell us

21

00:06:43,430 --> 00:06:40,880

that's the spot that's the spot where

22

00:06:45,909 --> 00:06:43,440

the ice is thinning very rapidly it's

23

00:06:48,469 --> 00:06:45,919

doubled at speed in less than 10 years

24

00:06:51,749 --> 00:06:48,479

right now it's moving a foot an hour

25

00:06:53,670 --> 00:06:51,759

this ice is racing into the ocean

26  
00:06:55,430 --> 00:06:53,680  
faster and faster and we need to know

27  
00:06:58,550 --> 00:06:55,440  
why

28  
00:07:02,710 --> 00:07:01,029  
two months ago i was able to stand on

29  
00:07:04,629 --> 00:07:02,720  
the ice shelf

30  
00:07:06,390 --> 00:07:04,639  
there was debate in our community you

31  
00:07:08,710 --> 00:07:06,400  
can't even land on the ice shelf it's

32  
00:07:10,469 --> 00:07:08,720  
too heavily crevassed but again with

33  
00:07:12,870 --> 00:07:10,479  
satellite imagery we were able to

34  
00:07:15,110 --> 00:07:12,880  
identify a spot that we thought we could

35  
00:07:17,110 --> 00:07:15,120  
land and we did

36  
00:07:19,430 --> 00:07:17,120  
we're in the sweet spot on the ice shop

37  
00:07:21,189 --> 00:07:19,440  
about the only place you can land

38  
00:07:23,430 --> 00:07:21,199

that was the good news the bad news was

39

00:07:24,629 --> 00:07:23,440

the surface was so hard that the

40

00:07:28,469 --> 00:07:24,639

airplane

41

00:07:30,950 --> 00:07:28,479

again and again and again with with

42

00:07:35,990 --> 00:07:30,960

heavy cargo lows so we couldn't put our

43

00:07:39,350 --> 00:07:37,749

because we couldn't land on the ice

44

00:07:41,029 --> 00:07:39,360

shelf what we were going to do we still

45

00:07:43,189 --> 00:07:41,039

had some instruments we set these

46

00:07:46,070 --> 00:07:43,199

instruments up as close to the ice shelf

47

00:07:48,070 --> 00:07:46,080

as we could an automatic weather station

48

00:07:50,469 --> 00:07:48,080

fairly complex it took us about three

49

00:07:52,150 --> 00:07:50,479

days to set it all up but it's there

50

00:07:54,469 --> 00:07:52,160

it's working it's going to operate we

51  
00:07:56,710 --> 00:07:54,479  
hope all the way through the the dark

52  
00:07:59,029 --> 00:07:56,720  
cold antarctic winter helping us to

53  
00:08:01,029 --> 00:07:59,039  
prepare for the next time we're going to

54  
00:08:04,150 --> 00:08:01,039  
go to the ice shelf

55  
00:08:06,469 --> 00:08:04,160  
we also set up some two gps receivers

56  
00:08:09,430 --> 00:08:06,479  
that tell us how fast the ice is going

57  
00:08:12,629 --> 00:08:09,440  
and if there are any changes that also

58  
00:08:15,350 --> 00:08:12,639  
bones its data back by satellite phone

59  
00:08:17,430 --> 00:08:15,360  
so we can receive these data right now

60  
00:08:20,390 --> 00:08:17,440  
in as we prepare for the next field

61  
00:08:24,869 --> 00:08:22,150  
we'll go back we'll go back with