1
00:00:00,020 --> 00:00:04,090
[aircraft sound]

2
00:00:04,110 --> 00:00:08,140
We are currently on our mission down to Pine Island Glacier in west Antarctica

3
00:00:08,160 --> 00:00:12,190
and we will be flying about a 3 hour survey there over the glacier.

4
00:00:12,210 --> 00:00:16,250
Pine Island Glacier losing ice very quickly

5
00:00:16,270 --> 00:00:20,290
about 6 meters per year and today we will go back and re-fly

6
00:00:20,310 --> 00:00:24,380
the same mission that we have flown two years earlier in 2009.

7
00:00:24,400 --> 00:00:28,440
And we can compare the data that we collect today to our previous data

8
00:00:28,460 --> 00:00:32,480
and also to the data of the ICESat satellite that has collected

9
00:00:32,500 --> 00:00:36,530
surface elevation measurements there over many years. And this will tell us

10
00:00:36,550 --> 00:00:40,620
how much ice is being lost in west Antarctica

11
00:00:40,640 --> 00:00:44,700
and contributes to sea level rise.

12
00:00:44,720 --> 00:00:48,760
Two weeks ago we had another mission over Pine Island Glacier

13
00:00:48,780 --> 00:00:52,780

and when looking out of the window of the aircraft we noticed

14
00:00:52,800 --> 00:00:56,820
a fairly large crack in the ice shelf.

15
00:00:56,840 --> 00:01:00,910
And I talked back to colleagues in the U.S. that downloaded satellite images

16
00:01:00,930 --> 00:01:04,960
and they reported that this crack has formed in sometime between

17
00:01:04,980 --> 00:01:08,980
end of September or early October.

18
00:01:09,000 --> 00:01:13,020
These things happen on a semi-regular basis in both the Arctic and the Antarctic,

19
00:01:13,040 --> 00:01:17,140
but it’s still a fairly large event.

20
00:01:17,160 --> 00:01:21,150
So we wanted to make sure we captured as much of that process as we could.

21
00:01:21,170 --> 00:01:25,170
So today was our first trip to be back in the area and what we do is we modified the existing flight plan

22
00:01:25,190 --> 00:01:29,280
to add another half hour to the flight in order to catch a flight along the

23
00:01:29,300 --> 00:01:33,350
direction of the rift, in order to get mainly a lidar and photographic map of

24
00:01:33,370 --> 00:01:37,410
the shape, depth of the rift, and the width of it -- see how it's developing over time.

25
00:01:37,430 --> 00:01:41,440
At the moment the crack is about 80 meters wide.

26
00:01:41,460 --> 00:01:45,490
If it continues to propagate, it's about an iceberg that ice the area of 800 square kilometers

27
00:01:45,510 --> 00:01:49,520
that eventually will break off from the

28
00:01:49,540 --> 00:01:53,590
Pine Island Glacier.

29
00:01:53,610 --> 00:01:57,720
Now if we're lucky, we may get another chance to come back to this area later, if weather and

30
00:01:57,740 --> 00:02:01,890
timing permits, to do what we just did today to see how the rift has further developed as time goes on.

31
00:02:01,910 --> 00:02:05,930
A lot of times when you're in science you

32
00:02:05,950 --> 00:02:10,060
don't get a chance to catch the big stories as they happen because you're

33
00:02:10,080 --> 00:02:14,130
not there at the right time, but this time we were.