
EXIT

1
00:00:12,400 --> 00:00:04,040
[Music]

2
00:00:12,400 --> 00:00:16,440
NASA's Operation IceBridge

3
00:00:16,440 --> 00:00:20,550
Mission the largest airborne survey of adverse polar ice every flown

4
00:00:20,550 --> 00:00:24,650
kicks off it's second year with the arrival of two NASA aircraft next week in Greenland.

5
00:00:24,650 --> 00:00:28,680
The team will spend 200 hours gathering data using a suite

6
00:00:28,680 --> 00:00:32,720
of instruments that peer below some of the regions critical glaciers

7
00:00:36,930 --> 00:00:32,750
IceBridge is aptly named because it will bridge the data gap between

8
00:00:36,930 --> 00:00:41,080
the loss of NASA's Ice Cloud and Land elevation satellite, or ICESat

9
00:00:41,080 --> 00:00:45,120
and the launch of ICESat 2 planned for 2015.

10
00:00:45,120 --> 00:00:49,290
[John Sonntag] I think its probably safe to say if it weren't for Operation IceBridge

11
00:00:49,290 --> 00:00:53,480
or the similar efforts that the global science community would lose a lot of its knowledge

12
00:00:53,480 --> 00:00:57,530
of what's going on with Greenland and Antarctica as a whole.

13
00:00:57,530 --> 00:01:01,540

[Narrator] 200 hours in the air, require a lot of work on the ground

14
00:01:01,540 --> 00:01:05,660
engineers have been outfitting NASA's DC8 and PB3 aircraft with an array of

15
00:01:05,660 --> 00:01:09,830
science instruments. IceBridge planes

16
00:01:09,830 --> 00:01:14,010
resurvey previous ICESat tracks to get a sense of how arctic ice is changing.

17
00:01:14,010 --> 00:01:18,050
[John Sonntag] I think the last thing that NASA would like to see is

18
00:01:18,050 --> 00:01:22,230
to take a snap shot of the ice at the end of ICESat 1

19
00:01:22,230 --> 00:01:26,250
operational period. Get another snap shot at the beginning of ICESat

20
00:01:26,250 --> 00:01:30,320
2 and have no idea what happen in between. That is essentially what IceBridge is about

21
00:01:30,320 --> 00:01:34,510
is filling in that gap knowledge. [Bryan Blair] If you want to look at

22
00:01:34,510 --> 00:01:38,680
areas that are very dynamic like a glacial region

23
00:01:38,680 --> 00:01:42,770
its like a lot of ice moving through and there is a lot of vertical changes, we can map that entire

24
00:01:42,770 --> 00:01:46,830
area and capture the full spacial variably of

25
00:01:46,830 --> 00:01:50,850
that change. Which is a really good indication of what's the mechanics of

26
00:01:50,850 --> 00:01:54,870
how that change is happening. [John Sonntag] Greenland because of it's

27
00:01:54,870 --> 00:01:58,960
presence and Antarctica all the ice mass act as a buffer and climate

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00:01:58,960 --> 00:02:03,130
and so if they were to start to melt, which many people

29
00:02:03,130 --> 00:02:07,310
believe that they are. Then the eventual affect will be a

30
00:02:07,310 --> 00:02:11,340
warmer climate over all. [Narrator] Annual spring missions over the

31
00:02:11,340 --> 00:02:15,530
arctic and fall missions over Antarctica will allow scientists to track changes

32
00:02:15,530 --> 00:02:19,550
in polar ice thickness and extent, so we have a better picture of ice dynamics.

33
00:02:19,550 --> 00:02:23,620
and future sea level rise.