1
00:00:00,000 --> 00:00:04,040
[wind noise]

2
00:00:04,060 --> 00:00:08,050
[bird hoots]

3
00:00:12,080 --> 00:00:16,080
I'm Michael Studinger, I'm the Project Scientist

4
00:00:16,100 --> 00:00:20,110
for NASA's Operation IceBridge. The IceBridge aircraft has a

5
00:00:20,130 --> 00:00:24,170
unique suite of instruments that we fly over the sea ice.

6
00:00:24,190 --> 00:00:28,210
And we don't have the kind of coverage that

7
00:00:28,230 --> 00:00:32,210
a satellite can provide but we have very detailed measurements

8
00:00:32,230 --> 00:00:36,220
of the thickness of the sea ice that no one else can do.

9
00:00:36,240 --> 00:00:40,250
And we know that the thicker sea ice is diminishing very quickly and

10
00:00:40,270 --> 00:00:44,260
that this is a reason for real concern.

11
00:00:44,280 --> 00:00:48,290
This year we had a very ambitious sea ice part of

12
00:00:48,310 --> 00:00:52,310
Operation IceBridge and we had a very short window to accomplish

13
00:00:52,330 --> 00:00:56,330

many of these flights, so there was a bit of a

14
00:00:56,350 --> 00:01:00,350
pressure for us to get a lot of flights in in a very short

15
00:01:00,370 --> 00:01:04,380
window and so we heavily depend on really

16
00:01:04,400 --> 00:01:08,390
excellent weather for our missions, and so the weather has to cooperate

17
00:01:08,410 --> 00:01:12,420
with what we do and we got eight out of nine sea ice missions

18
00:01:12,440 --> 00:01:16,430
that we had planned. So we have flown over 60 hours

19
00:01:16,450 --> 00:01:20,460
of aircraft iime over the sea ice have collected over 30,000

20
00:01:20,480 --> 00:01:24,490
kilometers of data in the Arctic Ocean with sea ice data.

21
00:01:24,510 --> 00:01:28,550
One of the really important missions that we have flown

22
00:01:28,570 --> 00:01:32,600
was a flight where the Cryosat satellite from the European

23
00:01:32,620 --> 00:01:36,640
Space Agency was actually flying directly over us and

24
00:01:36,660 --> 00:01:40,680
simultaneously collection over the sea ice in the Artic Ocean

25
00:01:40,700 --> 00:01:44,720
And it's not only linking airborne data from aircraft to the satellite data,

26
00:01:44,740 --> 00:01:48,740
we also provide the link to

27
00:01:48,760 --> 00:01:52,770
measurements on the ground.

28
00:01:52,790 --> 00:01:56,800
It's a bit of a tricky issue because it's moving very fast. Sea ice moves about 200 meters per

29
00:01:56,820 --> 00:02:00,830
hour and we had to make sure that with the aircraftr we fly

30
00:02:00,850 --> 00:02:04,840
directly overhead of their survey line.

31
00:02:04,860 --> 00:02:08,860
And so this is a unique data set that we have collected there

32
00:02:08,880 --> 00:02:12,910
where we measure ground truth measurements that people have done

33
00:02:12,930 --> 00:02:16,940
on the sea ice, can compare to our airborne measurements and then