

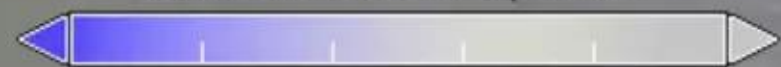
Dome F

Dome A

Vostok S

# AVHRR Minimum Temperature

AVHRR Minimum Temperature



-103.15 -96.15 -89.15 -82.15 -75.15 -68.15

Celsius

1  
00:00:00,010 --> 00:00:04,020

It's an incredible place to be.

2  
00:00:04,040 --> 00:00:08,050

It's desolate and yet it's compelling in a lot of ways.

3  
00:00:08,070 --> 00:00:12,080

There's a sense that humans have never been in these areas much before.

4  
00:00:12,100 --> 00:00:16,130

There's a strong sense that really humans

5  
00:00:16,150 --> 00:00:20,160

don't have any place there.

6  
00:00:20,180 --> 00:00:24,180

It's not a comfortable continent. But at the same time it's stark and beautiful

7  
00:00:24,200 --> 00:00:28,200

and amazing. Way up at the top of the ice sheet

8  
00:00:28,220 --> 00:00:32,230

about 13,000 to 14,000 feet, it's actually a very flat plain,

9  
00:00:32,250 --> 00:00:36,270

but it's slightly higher than all the area around it.

10  
00:00:36,290 --> 00:00:40,330

That's the area we started looking at. There's a

11  
00:00:40,350 --> 00:00:44,400

lot of atmospheric science and climate science

12  
00:00:44,420 --> 00:00:48,450

that's behind what produces the coldest temperatures in Antarctica.

13  
00:00:48,470 --> 00:00:52,480

The home of all of that is this area along the ridge, the highest part

14

00:00:52,500 --> 00:00:56,520

of the ridge in East Antarctica, where

15

00:00:56,540 --> 00:01:00,550

if conditions are right, temperatures plummet to

16

00:01:00,570 --> 00:01:04,570

extremely low levels, past the previous record low temperatures

17

00:01:04,590 --> 00:01:08,620

recorded by the Russians at

18

00:01:08,640 --> 00:01:12,640

a base called Vostok. What we found was that the coldest

19

00:01:12,660 --> 00:01:16,700

temperatures are actually just off of the crest.

20

00:01:16,720 --> 00:01:20,750

The crest is an area where the air, as soon as it gets to a low temperature, starts to drain away

21

00:01:20,770 --> 00:01:24,800

What you need is a place where that air is actually caught and held

22

00:01:24,820 --> 00:01:28,850

for a while, so that it can cool down still more

23

00:01:28,870 --> 00:01:32,880

by radiating away into space, and those are

24

00:01:32,900 --> 00:01:36,930

the places where we're finding these very very low temperatures.

25

00:01:36,950 --> 00:01:40,950

You might say, let's go there, and maybe in summer that's

26  
00:01:40,970 --> 00:01:44,980  
a reasonable thing to try and do.... It's really cold.

27  
00:01:45,000 --> 00:01:49,000  
And so things like your ordinary thermometers, a mercury thermometer won't work

28  
00:01:49,020 --> 00:01:53,050  
and alcohol thermometer will have a lot of trouble.

29  
00:01:53,070 --> 00:01:57,080  
Were talking temperatures that are 50°C colder than anything that has ever been seen