



1
00:00:00,100 --> 00:00:04,160

One of the things that's really interesting about snowflakes that not many people know is that

2
00:00:04,180 --> 00:00:08,270

every single one of them has six sides. And that's the way

3
00:00:08,290 --> 00:00:12,390

that the bonds, when they freeze, they actually

4
00:00:12,410 --> 00:00:16,510

force the water to have a fixed side. Liquid

5
00:00:16,530 --> 00:00:20,700

water can move all around, you know, you can pour it and stuff like that, but snow always has

6
00:00:20,720 --> 00:00:24,860

six sides. As the snowflake grows, parts

7
00:00:24,880 --> 00:00:28,900

form off the side depending on the temperature and the water that's

8
00:00:28,920 --> 00:00:32,940

available within the atmospheric column. You start to get

9
00:00:32,960 --> 00:00:37,000

different parts that come out of that snowflake. And you can get these

10
00:00:37,020 --> 00:00:41,070

beautifully complex dendrites with just little

11
00:00:41,090 --> 00:00:45,140

spikes off of them, and they are all from that hard binding

12
00:00:45,160 --> 00:00:49,350

between the oxygen and the hydrogen within

13
00:00:49,370 --> 00:00:53,450

the water itself as it freezes. It's important to be able to

14

00:00:53,470 --> 00:00:57,580

improve these numerical weather predictions and their forecasts. Right

15

00:00:57,600 --> 00:01:01,590

now they're slowly moving toward making the

16

00:01:01,610 --> 00:01:05,660

snowflakes within these models more realistic. And GPM can do

17

00:01:05,680 --> 00:01:09,700

that because we are able to measure layer-by-layer within the storm

18

00:01:09,720 --> 00:01:13,790

and provide drop size distributions, not only of the rain

19

00:01:13,810 --> 00:01:17,860

particles, but also the snowflakes within that storm.

20

00:01:17,880 --> 00:01:22,000

And that allows us to put that information into