1
00:00:09,030 --> 00:00:05,030
[music]

2
00:00:09,030 --> 00:00:13,030
airborne and ground-based campaign to characterize the seasonal snowpack all

3
00:00:13,030 --> 00:00:17,030
over the western U.S., in Colorado and Idaho

4
00:00:17,030 --> 00:00:21,030
and California and other places. These figures show ICESat-2 data over

5
00:00:21,030 --> 00:00:25,030
the same locations where SnowEx was studying the snowpack

6
00:00:25,030 --> 00:00:29,030
in detail. Now each one of those dots in the figure represents a

7
00:00:29,030 --> 00:00:33,030
photon that ICESat-2 measured. And for each one of those photons, we have

8
00:00:33,030 --> 00:00:37,000
the latitude, the longitude and the height. Now the bright

9
00:00:37,000 --> 00:00:41,000
line you see across the middle of the figure is composed of thousands and thousands

10
00:00:41,000 --> 00:00:45,030
and thousands of photons, and each of those are individual elevation measurements.

11
00:00:45,030 --> 00:00:49,030
By comparing measurements of the elevation of the bare ground

12
00:00:49,030 --> 00:00:53,000
surface during summer or fall with the snow-covered

13
00:00:53,000 --> 00:00:57,000

surface, we can take a difference in those elevations and figure out what the snow

14
00:00:57,000 --> 00:01:01,030
depth is. Scientists will be able to compare the elevations

15
00:01:01,030 --> 00:01:05,030
measured by ICESat-2 from these photon clouds with the intensive

16
00:01:05,030 --> 00:01:09,030
ground-based, airborne and other field campaigns from SnowEx to determine

17
00:01:09,030 --> 00:01:13,030
the extent to which ICESat-2 can add to our understanding of snow depth

18
00:01:13,030 --> 00:01:17,030
worldwide.
Vuyovich: Snow is a really part of our planet.

19
00:01:17,030 --> 00:01:21,030
It provides water, hydropower, it’s a water source

20
00:01:21,030 --> 00:01:25,030
for agriculture and water supply. It also is an important

21
00:01:25,030 --> 00:01:29,030
part of our energy feedback and helps cool the planet.

22
00:01:29,030 --> 00:01:33,030
So understanding how much snow is on the ground, where it’s distributed and

23
00:01:33,030 --> 00:01:37,030
what those characteristics are is really important.