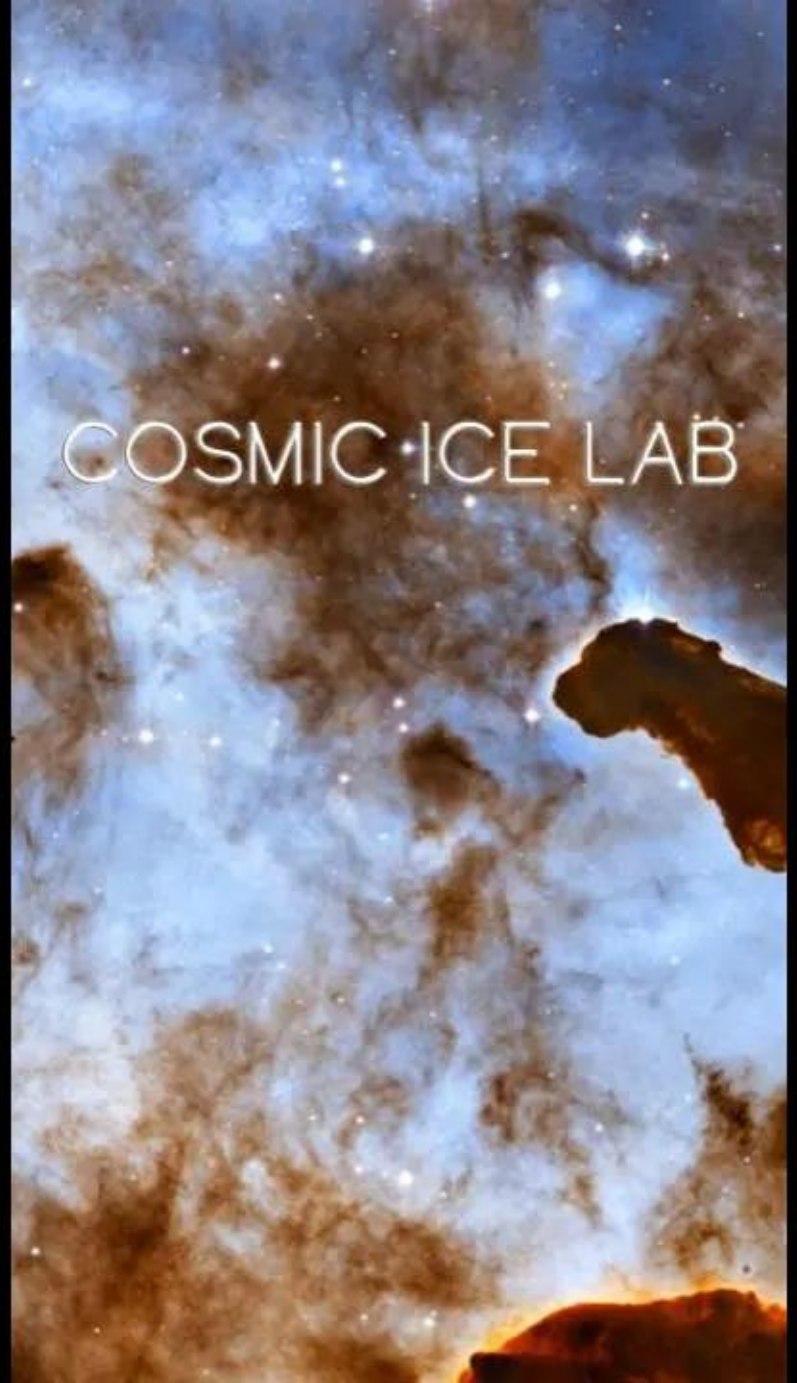
COSMIC ICE LAB

1
00:00:02,669 --> 00:00:03,069
So this

2
00:00:03,069 --> 00:00:06,072
lab is called the Cosmic Ice Laboratory.

3
00:00:06,473 --> 00:00:11,878
And in this lab, we essentially try
to simulate the formation of ices

4
00:00:11,878 --> 00:00:15,482
that are found in deep space
in these giant

5
00:00:15,482 --> 00:00:18,284
interstellar molecular clouds.

6
00:00:18,752 --> 00:00:21,921
So when you think of an ice,
you think of water, ice cube.

7
00:00:22,222 --> 00:00:25,125
But in space,
the temperatures are super low.

8
00:00:25,392 --> 00:00:27,694
So everything is an ice.

9
00:00:28,128 --> 00:00:31,598
So one of the practical applications
of this work is, hypothetically speaking,

10
00:00:31,598 --> 00:00:36,703
if water were to arrive from an ocean
to the surface of a planetary body

11
00:00:36,703 --> 00:00:40,306
such as Europa,
we could then determine how long

12
00:00:40,440 --> 00:00:45,211
any potential biologically relevant
molecules could survive on the surface.

13
00:00:45,745 --> 00:00:49,115
It's not a really big lab,
but all you really need

14
00:00:49,115 --> 00:00:53,253
is a vacuum chamber
that can swat out molecules and atoms,

15
00:00:53,253 --> 00:00:55,321
and you need something that can cool