1
00:00:00,000 --> 00:00:16,000
(music)

2
00:00:16,000 --> 00:00:21,000
Comets are the most primitive bodies in the solar system, by studying that material we learn

3
00:00:21,000 --> 00:00:26,000
about the chemistry of the early solar nebula. They hold the key to understanding

4
00:00:26,000 --> 00:00:30,000
what the condition for life in the solar system. And could that possibly be an

5
00:00:30,000 --> 00:00:37,000
important part of what makes life happen on Earth. We are looking for

6
00:00:37,000 --> 00:00:41,000
organics on this comet. Life is composed of the most complicated

7
00:00:41,000 --> 00:00:46,000
molecules and that's what we're looking for on the surface of the comet.

8
00:00:46,000 --> 00:00:51,000
We found that the comets surface wasn't rich in ice as we thought it would be.

9
00:00:51,000 --> 00:00:56,000
It is rich of organic materials. It turns out that our particular comet has a lot of sulfur.

10
00:00:56,000 --> 00:01:01,000
We have discovered a lot of alcohols. So we say that in addition to smelling like

11
00:01:01,000 --> 00:01:06,000
rotten eggs, we smell like a drunk and we have methane and the content of animal droppings.

12
00:01:06,000 --> 00:01:13,000
The composition of that dust and ice are the primordial ingredients for life.

13
00:01:13,000 --> 00:01:17,000

We believe that comets transported organic material across

14
00:01:17,000 --> 00:01:24,000
our solar system to our planet by impacts, putting life on the surface of the Earth.

15
00:01:24,000 --> 00:01:27,000
The right ingredients were brought to the Earth and Earth was the right laboratory,

16
00:01:27,000 --> 00:01:33,000
in which those ingredients could thrive and become life as we know it.

17
00:01:33,000 --> 00:01:35,000
Such a small body has