



1
00:00:00,000 --> 00:00:07,000

(Music)

2
00:00:07,000 --> 00:00:17,000

Voyager 1 has left the bubble around the sun and entered interstellar space, the space between stars.

3
00:00:17,000 --> 00:00:22,000

It's amazing that Voyager has operated 36 years.

4
00:00:22,000 --> 00:00:26,000

(sound of launch)

5
00:00:26,000 --> 00:00:30,000

Launched in 1977,

6
00:00:30,000 --> 00:00:36,000

travelled passed the gas giant planets

7
00:00:36,000 --> 00:00:41,000

and now off into interstellar space.

8
00:00:41,000 --> 00:00:49,000

A radio telescope took a radio image of Voyager 1 spacecraft slightly over 11-billion miles from the Earth.

9
00:00:49,000 --> 00:00:57,000

It's a very small radio dot amongst the sea of darkness.

10
00:00:57,000 --> 00:01:01,000

We have an instrument on Voyager, which can measure the density of the ions,

11
00:01:01,000 --> 00:01:03,000

the plasma, which is out there.

12
00:01:03,000 --> 00:01:08,000

In March of 2012, it turns out there was a massive eruption from the sun,

13
00:01:08,000 --> 00:01:15,000

which eventually reached Voyager 1 in April of 2013. When that blast wave reached Voyager,

14

00:01:15,000 --> 00:01:18,000

it caused the plasma around Voyager

15

00:01:18,000 --> 00:01:21,000

to vibrate or oscillate in a certain particular tone.

16

00:01:21,000 --> 00:01:23,000

Literally, they're the sounds of interstellar space.

17

00:01:23,000 --> 00:01:27,000

(Interstellar space sound file)

18

00:01:27,000 --> 00:01:31,000

And by measuring that sound wave, we could measure the density of the plasma

19

00:01:31,000 --> 00:01:36,000

and we're amazed to find out that we were in interstellar space.

20

00:01:36,000 --> 00:01:40,000

This is a historic milestone in the great journeys

21

00:01:40,000 --> 00:01:47,000

of exploration that have been undertaken by humankind.

22

00:01:47,000 --> 00:01:52,000

What is quite remarkable when you think about it, that far off now at ever increasing distances,

23

00:01:52,000 --> 00:01:56,000

there's this little vehicle, two of them, which were built here