



1
00:00:00,010 --> 00:00:05,050

[music]

2
00:00:05,070 --> 00:00:10,530

My name is Florence Tan, I'm the SAM Electrical Lead Engineer, I work at Goddard Space Flight Center.

3
00:00:10,550 --> 00:00:16,680

SAM stands for Sample Analysis at Mars. It is an organic chemistry lab on the Curiosity rover,

4
00:00:16,700 --> 00:00:21,150

it is the most well-equipped chemistry lab that we've sent to Mars to date.

5
00:00:21,170 --> 00:00:30,260

Curiosity landed on Mars on August 5, 2012. It was born on Mars that day, and so we consider that day as its b

6
00:00:30,280 --> 00:00:36,130

We're here at the test bed lab where SAM was built. It is an identical unit to the unit on Mars,

7
00:00:36,150 --> 00:00:41,500

and we use this unit to test our experiments before it is transmitted to Mars.

8
00:00:41,520 --> 00:00:47,980

SAM will be running some great science experiments on Mars, we will be analyzing some soil samples.

9
00:00:48,000 --> 00:00:53,430

To make the soil samples go down, we have to program it to vibrate at various frequencies.

10
00:00:53,450 --> 00:00:58,430

When we're introducing a sample into SAM, it will go through a resonance and it will sound like this.

11
00:00:58,450 --> 00:01:08,010

[electronic tone]

12
00:01:08,030 --> 00:01:13,730

To commemorate SAM's birthday and Curiosity's birthday on Mars, we decided to play a little song.

13
00:01:13,750 --> 00:01:19,930

If there's anyone listening on Mars on this special occasion, you will hear this.

14

00:01:19,950 --> 00:01:42,430

[Happy Birthday to You]

15

00:01:42,450 --> 00:01:50,060

It's really neat, and it's exciting! This is a first for NASA and for the world, and music brings us all together so th

16

00:01:50,080 --> 00:01:54,280

It's been a great year on Mars and I cannot wait to get to Mount Sharp next year.