



1

00:00:00,000 --> 00:00:05,438

(music throughout) On October 20th, 2020, NASA's OSIRIS-REx spacecraft

2

00:00:05,438 --> 00:00:07,807

collected a sample from asteroid Bennu.

3

00:00:07,807 --> 00:00:11,745

Navigation. Nav is go for TAG.

4

00:00:11,745 --> 00:00:18,485

Program Manager. Program Manager is go for TAG

5

00:00:18,485 --> 00:00:26,159

All stations, this is OREx systems on OREx cord, all subsystems are go for TAG.

6

00:00:26,159 --> 00:00:31,598

Position uncertainty is 0.5 meters

7

00:00:31,598 --> 00:00:35,835

(clapping) predicted TAG lateral offset is 1.7 meters

8

00:00:35,835 --> 00:00:39,239

Hazard probability is zero percent

9

00:00:39,239 --> 00:00:43,877

OSIRIS-REx's sampling mechanism penetrated Bennu's regolith

10

00:00:43,877 --> 00:00:50,483

and fired its nitrogen gas bottle to stir up sample material for collection in the TAGSAM head.

11

00:00:50,483 --> 00:00:58,658

At 6:08pm EDT, the team on Earth received confirmation of a successful touchdown.

12

00:00:58,658 --> 00:01:02,095

OREx has descended below the five meter mark

13

00:01:02,095 --> 00:01:03,930

the hazard map is go for TAG

14

00:01:03,930 --> 00:01:17,844

and we have touchdown! (cheering)

15

00:01:17,844 --> 00:01:21,981

After spending approximately 6 seconds at the surface,

16

00:01:21,981 --> 00:01:28,054

OSIRIS-REx fired its thrusters and backed away from sample site Nightingale.

17

00:01:28,054 --> 00:01:34,094

Images taken a few days later by the SamCam camera showed rocks and dust

18

00:01:34,094 --> 00:01:36,529

escaping the sampler head.

19

00:01:36,529 --> 00:01:40,500

The team believed it collected a sufficient sample and decided to seal

20

00:01:40,500 --> 00:01:44,471

the TAGSAM to preserve the remaining material.

21

00:01:44,471 --> 00:01:49,042

The spacecraft made one more flyover of Bennu and saw

22

00:01:49,042 --> 00:01:51,578

just how big a mark it left on the asteroid's surface.

23

00:01:51,578 --> 00:01:56,416

The TAG event sent boulders flying across Nightingale's surface.

24

00:01:56,416 --> 00:02:03,256

OSIRIS-REx completed its last flyover of Bennu at around 6 am EDT on April 7th 2021

25

00:02:03,256 --> 00:02:10,330

and slowly began drifting away from the asteroid.

26
00:02:10,330 --> 00:02:15,568
On May 10th, 2021, OSIRIS-REx fired its thrusters

27
00:02:15,568 --> 00:02:29,115
and began its two-year cruise back home to Earth.

28
00:02:29,115 --> 00:02:32,852
As OSIRIS-REx approaches Earth, it will jettison

29
00:02:32,852 --> 00:02:37,490
the Sample Return Capsule that contains pieces from asteroid Bennu.

30
00:02:37,490 --> 00:02:42,061
The SRC will then travel through Earth's atmosphere

31
00:02:42,061 --> 00:02:54,073
and land under parachutes at the Utah Test and Training Range on September 24, 2023.

32
00:02:54,073 --> 00:03:00,113
Once recovered, the capsule will be transported to the curation facility at NASA's Johnson Space Center,