

29



1

00:00:01,360 --> 00:00:05,780

The Hubble Space Telescope celebrates its 29th birthday in April 2019.

2

00:00:07,020 --> 00:00:12,160

To mark the occasion, it premiered this image of the Southern Crab Nebula.

3

00:00:12,940 --> 00:00:18,180

The space telescope continues to reveal the mysteries of the cosmos.

4

00:00:19,080 --> 00:00:24,200

Here are some achievements from Hubble's latest year in orbit.

5

00:00:25,860 --> 00:00:29,760

SOLAR SYSTEM

6

00:00:31,260 --> 00:00:37,640

Hubble showed the seasonal dynamics in the atmospheres of Uranus and Neptune,

7

00:00:38,840 --> 00:00:44,980

viewed storms on Saturn and Mars during their closest approach to Earth,

8

00:00:46,700 --> 00:00:51,920

and spotted 'Oumuamua, the first known interstellar object to visit our solar system.

9

00:00:52,820 --> 00:00:58,300

Hubble caught the mysterious visitor having an unexpected change in speed.

10

00:00:59,760 --> 00:01:04,120

EXOPLANETS

11

00:01:05,920 --> 00:01:10,220

Hubble made discoveries about planets around other stars,

12

00:01:12,480 --> 00:01:16,720

from studying a gas giant with an atmosphere hot enough to melt silver,

13

00:01:18,540 --> 00:01:23,800

to detecting helium for the first time in  
an exoplanet's atmosphere,

14

00:01:24,400 --> 00:01:29,860

and helping find the first evidence for a  
possible moon outside our solar system.

15

00:01:30,920 --> 00:01:36,120

Hubble also found that young red dwarf stars have more intense flares than older red dwarfs.

16

00:01:37,020 --> 00:01:42,040

These superflares could endanger any planets forming around the red dwarfs.

17

00:01:43,840 --> 00:01:50,460

EXTRAGALACTIC

18

00:01:52,000 --> 00:01:57,040

Hubble premiered this ultra-HD view of the Triangulum Galaxy

19

00:01:57,760 --> 00:02:03,560

and found that star formation is 10 times more intense here than in the Andromeda Galaxy.

20

00:02:04,700 --> 00:02:10,400

Hubble finished the largest ultraviolet survey of nearby galaxies.

21

00:02:11,980 --> 00:02:16,340

More than 50 galaxies were surveyed to better understand star formation.

22

00:02:17,320 --> 00:02:23,460

Hubble used light from orphaned stars to trace the distribution of dark matter

23

00:02:24,200 --> 00:02:31,980

and studied merging black holes at the centers of colliding galaxies.