



1  
00:00:09,490 --> 00:00:04,850  
foreign

2  
00:00:12,350 --> 00:00:09,500  
[Music]

3  
00:00:18,950 --> 00:00:12,360  
deep within the constellation of Pegasus

4  
00:00:27,070 --> 00:00:21,890  
called Steven's quintet this collection

5  
00:00:36,069 --> 00:00:30,109  
and how they can interact in dense

6  
00:00:41,869 --> 00:00:38,569  
ground-based observations show the

7  
00:00:48,950 --> 00:00:44,270  
and the Hubble Space Telescope captures

8  
00:00:56,810 --> 00:00:51,650  
using infrared light the Spitzer Space

9  
00:01:04,369 --> 00:00:59,869  
and the web Space Telescope unveils new

10  
00:01:10,010 --> 00:01:07,550  
the Chandra x-ray Observatory reveals a

11  
00:01:12,730 --> 00:01:10,020  
high energy component both in and

12  
00:01:15,310 --> 00:01:12,740  
between the galaxies

13  
00:01:19,190 --> 00:01:15,320

foreign

14

00:01:22,330 --> 00:01:19,200

s this spiral galaxy is much closer than

15

00:01:28,490 --> 00:01:25,429

the visible light view shows numerous

16

00:01:33,050 --> 00:01:28,500

pink star-forming regions and blue young

17

00:01:38,210 --> 00:01:35,510

the infrared view highlights the cool

18

00:01:46,609 --> 00:01:38,220

gas and dust amid a diffuse collection

19

00:01:49,030 --> 00:01:48,890

more distant galaxies are grouped

20

00:01:56,050 --> 00:01:49,040

together

21

00:01:58,969 --> 00:01:56,060

[Music]

22

00:02:04,370 --> 00:01:58,979

these elliptical galaxies are dominated

23

00:02:16,430 --> 00:02:07,130

and have rounded shapes in both infrared

24

00:02:22,130 --> 00:02:19,610

this barred spiral galaxy has few

25

00:02:26,330 --> 00:02:22,140

star-forming regions and some irregular

26  
00:02:33,250 --> 00:02:29,690  
its core contains an active supermassive

27  
00:02:38,760 --> 00:02:36,110  
energetic material around the black hole

28  
00:02:40,250 --> 00:02:38,770  
blazes brightly in x-rays

29  
00:02:43,369 --> 00:02:40,260  
[Music]

30  
00:02:47,869 --> 00:02:43,379  
more distant material shines in infrared

31  
00:02:55,809 --> 00:02:50,809  
a tidal tail provides evidence of an

32  
00:03:01,729 --> 00:02:58,790  
this small spiral is part of the group

33  
00:03:09,490 --> 00:03:01,739  
and passed near the larger Bard spiral

34  
00:03:15,530 --> 00:03:12,830  
this galaxy is undergoing a high-speed

35  
00:03:19,850 --> 00:03:15,540  
Collision as it crashes into the group

36  
00:03:25,850 --> 00:03:23,210  
its shape features distorted spiral arms

37  
00:03:29,330 --> 00:03:25,860  
and stretched out tails with

38  
00:03:35,089 --> 00:03:31,430

foreign

39

00:03:37,729 --> 00:03:35,099

this x-ray shocked Ridge marks where the

40

00:03:43,369 --> 00:03:37,739

Galaxy is colliding with the dense gas

41

00:03:49,009 --> 00:03:46,610

a bridge of material that extends in

42

00:03:55,430 --> 00:03:49,019

front of the barred spiral galaxy can be

43

00:03:55,440 --> 00:04:04,490

as bright clouds in infrared light

44

00:04:04,500 --> 00:04:16,870

and dark clouds in visible light

45

00:04:22,670 --> 00:04:19,550

an encounter with the distant elliptical

46

00:04:32,270 --> 00:04:22,680

may have stretched out the spiral before

47

00:04:36,670 --> 00:04:35,150

Stefan's quintet shows several types of

48

00:04:39,290 --> 00:04:36,680

galaxies

49

00:04:41,230 --> 00:04:39,300

including some with stretched and

50

00:04:44,210 --> 00:04:41,240

distorted shapes

51  
00:04:48,790 --> 00:04:44,220  
that highlight interactions within the

52  
00:04:54,170 --> 00:04:51,610  
NASA's great observatories provide

53  
00:04:56,689 --> 00:04:54,180  
multi-wavelength observations that

54  
00:04:58,440 --> 00:04:56,699  
enable diverse insights into this