



Hubble Catches Possible Runaway Black Hole

1
00:00:04,670 --> 00:00:02,690
there's an invisible giant monster on

2
00:00:07,249 --> 00:00:04,680
the loose it's barreling through

3
00:00:09,650 --> 00:00:07,259
Intergalactic space fast enough to

4
00:00:12,770 --> 00:00:09,660
travel from Earth to the Moon in 14

5
00:00:15,829 --> 00:00:12,780
minutes but don't worry luckily this

6
00:00:18,529 --> 00:00:15,839
Beast is very very far away

7
00:00:21,529 --> 00:00:18,539
this potential supermassive black hole

8
00:00:24,830 --> 00:00:21,539
weighing as much as 20 million Suns has

9
00:00:26,870 --> 00:00:24,840
left behind and never before seen 200

10
00:00:28,130 --> 00:00:26,880
000 light year-long trail of newborn

11
00:00:30,890 --> 00:00:28,140
Stars

12
00:00:33,470 --> 00:00:30,900
the streamer is twice the diameter of

13
00:00:35,510 --> 00:00:33,480

our Milky Way galaxy it's likely the

14

00:00:37,790 --> 00:00:35,520

result of a rare bizarre game of

15

00:00:39,350 --> 00:00:37,800

Galactic Billiards among three massive

16

00:00:41,810 --> 00:00:39,360

black holes

17

00:00:44,389 --> 00:00:41,820

astronomers suspect that first two

18

00:00:46,850 --> 00:00:44,399

galaxies merge perhaps 50 million years

19

00:00:48,709 --> 00:00:46,860

ago that brought together two

20

00:00:50,930 --> 00:00:48,719

supermassive black holes at their

21

00:00:53,450 --> 00:00:50,940

centers they Whirled around each other

22

00:00:56,209 --> 00:00:53,460

until another galaxy came along with its

23

00:00:58,130 --> 00:00:56,219

own supermassive black hole the three of

24

00:01:00,410 --> 00:00:58,140

them chaotically orbited around each

25

00:01:02,750 --> 00:01:00,420

other this unstable configuration

26
00:01:04,609 --> 00:01:02,760
couldn't last and eventually one of them

27
00:01:05,870 --> 00:01:04,619
was violently flung out of the host

28
00:01:08,030 --> 00:01:05,880
Galaxy

29
00:01:10,429 --> 00:01:08,040
rather than gobbling up Stars ahead of

30
00:01:12,890 --> 00:01:10,439
it this Speedy black hole is plowing

31
00:01:16,010 --> 00:01:12,900
into gas in front of it to trigger new

32
00:01:18,350 --> 00:01:16,020
star formation along a narrow corridor

33
00:01:20,810 --> 00:01:18,360
the next step is to do follow-up

34
00:01:23,210 --> 00:01:20,820
observations with NASA's James Webb

35
00:01:24,649 --> 00:01:23,220
Space Telescope and the Chandra x-ray

36
00:01:28,010 --> 00:01:24,659
Observatory

37
00:01:30,109 --> 00:01:28,020
also NASA's upcoming Nancy Grace Roman

38
00:01:32,210 --> 00:01:30,119

Space Telescope will have a wide angle

39

00:01:35,569 --> 00:01:32,220

view of the universe with Hubble's high

40

00:01:37,670 --> 00:01:35,579

resolution as a survey telescope the

41

00:01:39,590 --> 00:01:37,680

Roman observations might find more of

42

00:01:42,230 --> 00:01:39,600

these rare and improbable events

43

00:01:45,050 --> 00:01:42,240

elsewhere in the universe

44

00:01:46,969 --> 00:01:45,060

Hubble once again showing us that the