1
00:00:00,000 --> 00:00:09,134
■
ON-SCREEN TEXT:
Scientists have discovered the most predictable and frequent example
of flares from an active galaxy.

2
00:00:09,134 --> 00:00:13,888
ON-SCREEN TEXT:
When they saw the first flare, called ASASSN-14ko ...

3
00:00:13,888 --> 00:00:21,855
ON-SCREEN TEXT:
they thought it was the explosion of one of the galaxy’s billions of stars.

4
00:00:21,855 --> 00:00:27,318
ON-SCREEN TEXT:
But after analyzing years of data from multiple observatories …

5
00:00:27,318 --> 00:00:33,116
ON-SCREEN TEXT:
… and seeing the flares appear over and over again …

6
00:00:33,116 --> 00:00:43,168
ON-SCREEN TEXT:
... they now think that it’s a giant star being slowly devoured
as it orbits the galaxy’s central black hole.

7
00:00:43,168 --> 00:00:50,800
ON-SCREEN TEXT:
The black hole pulls gas from the star each time it passes closest,
every 114 days ...

8
00:00:50,800 --> 00:00:59,142
ON-SCREEN TEXT:
… and the material falls toward the black hole,
eventually striking the disk of gas surrounding it.

9
00:00:59,142 --> 00:01:05,899
ON-SCREEN TEXT:
That’s when the bright flares erupt.

10
00:01:05,899 --> 00:01:13,031
ON-SCREEN TEXT:
The star loses enough gas each orbit to make three Jupiters.

11
00:01:13,031 --> 00:01:19,621
ON-SCREEN TEXT:
Eventually the black hole will consume it entirely.

12
00:01:19,621 --> 00:01:26,669
ON-SCREEN TEXT:
Astronomers eagerly await the next flare …

13
00:01:26,669 --> 00:01:34,844
ON-SCREEN TEXT:
... and will continue to study this unusual process –
a black hole nibbling away at an unlucky star.