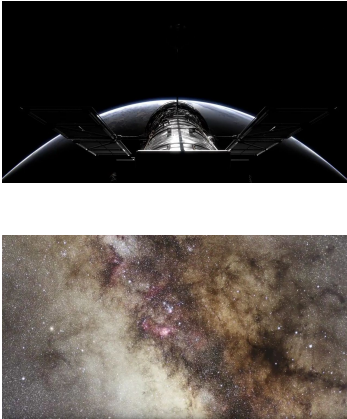





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Keywords: Anniversary, Lagoon Nebula

Hubblecast Episode 109: Trip through the Lagoon Nebula	Visual notes
<p>00:00 [Narrator] 1. It is Hubble's 28th birthday, and like in previous years the telescope is celebrating the anniversary of its launch with a breathtaking new image of the cosmos.</p> <p>This year's image takes us on a trip through the spectacular Lagoon Nebula — which is not as peaceful and idyllic as its name would suggest.</p>	
<p>00:26 2. Intro</p>	

00:38

[Narrator]

3. 28 years ago on the 24th of April 1990, Hubble was launched into space aboard the Space Shuttle *Discovery*. The ambitious mission was — and still is — only possible because of a successful collaboration between NASA and the European Space Agency, ESA.

Thanks to this collaboration, Hubble was able to revolutionise our knowledge of the Universe by making stunning discoveries. To celebrate its story of success, each year Hubble uses a tiny part of its observation time to take an anniversary image, showing us the beauty of the cosmos.

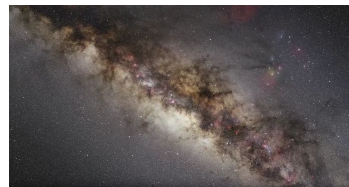


01:26

[Narrator]

4. This year's image features the colourful Lagoon Nebula, a colossal interstellar cloud about 5000 light-years away in the constellation of Sagittarius.

Due to the nebula's large relative size on the night sky, Hubble is only able to capture a fraction of it — but this close-up view shows stunning details.



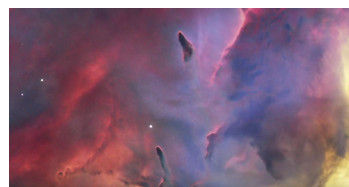
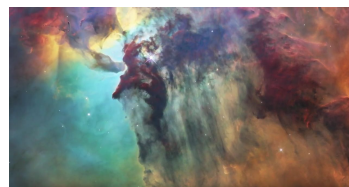
01:57

[Narrator]

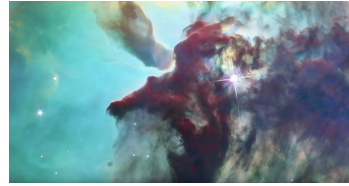
5. Like many stellar nurseries, the Lagoon Nebula boasts many large, hot stars. Their ultraviolet radiation ionises the surrounding gas, causing it to shine brightly and sculpting it into ghostly and other-worldly shapes.

The nebula features interstellar “twisters” — eerie rope-like structures made of dust and gas.

In other places, patches of extremely dense dust block the light of background stars. These clumps of gas are gradually collapsing under their own gravity. One day



they will form new stars at their cores.

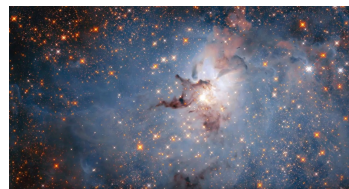
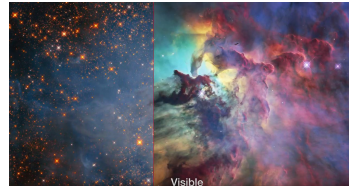


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[Narrator]

6. Hubble's versatile instruments and its infrared capabilities also allowed it to peer through the dust clouds. This revealed the astonishing internal complexity of the nebula, as well as the young stars within it.

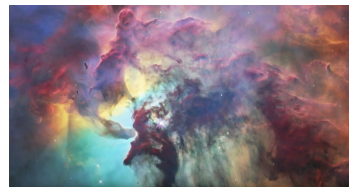
One day, when these stars die, they will release their material back into the nebula to be recycled into a new generation of stars.



03:23

[Narrator]

7. This cycle of stellar birth and death will continue on, sculpting out more beautiful shapes, streams, and areas of light and dark throughout the wonderful Lagoon Nebula.



Ends xx:xx