



# Who Turned Out The Lights?

Jan. 7, 2015



It looks like someone has stolen the stars right out of the sky in this new photograph of space! But don't worry, we don't need Sherlock Holmes to solve this mystery— this cosmic crime has already been solved.

The black gap in this glittering starfield isn't really a gap at all. It is a dark cloud of gas and dust blocking the light of any background stars.

Clouds like this are called Dark Nebulae. They appear to be empty, starless patches of sky, but in reality these clouds are some of the busiest star-making machines in the entire Universe!

It's out of the gas and dust in these Dark Nebulae that stars are made. And many of these apparently dark blobs are brimming with hidden new-born stars — including this one.

In the earliest part of its life a star is called a 'protostar'. At this point, a star is simply a ball of cold gas and dust that is collapsing under the force of gravity. At this point it doesn't even have nuclear fire in its heart, which power older stars.

As it continues to collapse, the protostar squashes in to a tighter, hotter ball. Protostars go from a freezing  $-250\text{ }^{\circ}\text{C}$  to anywhere up to  $40,000\text{ }^{\circ}\text{C}$  (on their surface) when they become fully fledged stars.

As the cloud in this picture creates more and more stars, it will be eaten away to reveal the missing background stars and the ones that are newly born.



## COOL FACT

The start of a star's life can be triggered by many events, such as galaxies colliding or the shockwave of a nearby supernova.

This Space Scoop is based on a Press Release from [ESO](#).  
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This website was produced by funding from the European Community's Horizon 2020 Programme under grant agreement n° 638653