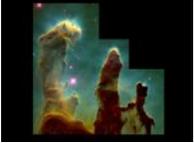
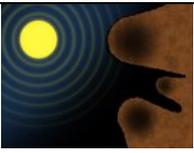
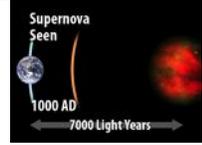


<p>Hidden Universe #6: Pillars of Destruction</p>	
<p>They're known as the Pillars of Creation, but according to recent Spitzer observations these ghostly apparitions have already met their own destruction!</p>	
<p>This is the Hidden Universe of the Spitzer Space Telescope, exploring the mysteries of infrared astronomy with your host, Dr. Robert Hurt.</p>	
<p>This nursery for baby stars is known as M16 or the Eagle Nebula. But whether or not you've heard the name, you've likely seen it before. In 1995 the Hubble Space Telescope gave us the "Pillars of Creation," which has become a truly iconic image for astronomy.</p>	
<p>Now the Spitzer Space Telescope has exposed this Eagle's infrared plumage. The pillars, opaque in visible light, become ghostly, transparent columns of glowing dust. The dark spots seen in their tips shed light, or more appropriately shadow, on their formation.</p>	
<p>In regions like this, dust particles are easily destroyed by ultraviolet light from hot, young stars. The densest dust clumps, opaque even in the infrared, will erode more slowly and shield the areas behind them. Columns emerge, impressive but hardly more substantial than shadows.</p>	
<p>Spitzer has let astronomers view the Eagle Nebula in many different shades and combinations of infrared light. But one of these observations has hinted at a grim fate for the Pillars. Nicholas Flagey, a graduate student at the Institute d'Astrophysique Spatiale in Orsay, France, explains.</p>	
<p>"When we use the seven infrared color images that Spitzer obtained for the Eagle Nebula, we see that six of them look almost exactly the same. But one of them, the 24 micron image, is completely different from the other ones."</p>	
<p>The oddball warm dust at 24 microns is here seen as red, while the cooler dust at shorter wavelengths is blue-green.</p>	
<p>"We see that there is dust that is much more hot inside the nebula and to explain this we guess there is a shock wave that heats the dust and the gas that didn't heat the pillars of creation. And to make this shockwave, what we think is that there was a massive star that goes on into a supernova."</p>	
<p>Flagey and his team estimate the light from this Eagle-born supernova explosion would have reached Earth one to two thousand years ago. We should see its slow-moving shockwave smash into the fragile pillars within the next thousand years.</p>	

“So at the end the pillars are going to be destroyed by the shockwave. They are going to crumble because some parts of them are not dense enough to resist the shockwave. So at the end the pillars of creation are going to be the pillars of destruction.”



In fact this show is a cosmic delayed broadcast of events that happened long ago. The Eagle Nebula is 7000 light years away, indicating how long its light takes to reach us. The Pillars of Creation had crumbled to dust, so to speak, well before the great pyramids were built!



But creation and destruction can be two sides of the same coin. An infrared view reveals baby stars nestled within the doomed pillars, stars that will be exposed when the shockwave brushes the dust away.



The same shockwave will continue to expand through the Eagle, colliding with and compressing other dust clouds. Astronomers think this process can trigger a new generation of star formation.



More pillars will arise, just as we've seen throughout our studies of the Milky Way, as a natural stage in the ongoing life cycle of stars.

