

## INVESTIGATING ORIGINS

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### “The Rapid Formation of Stars”

It has been discussed numerous times in this column that the cryptic phrase in Genesis 1:2 about the Earth having been “without form, and void” in its original state may refer to the fact that celestial bodies begin their “lives” as colossal clouds of gas and dust that coalesce into what we now know as stars and planets. For many decades, this was known as the Nebular Hypothesis (from the Latin *nebula*, meaning “cloud”), and remained in the realm of theory. However, thanks to advanced telescopes such as the Hubble, what once was a theory has now become an observable fact. It is no longer a matter of question that celestial bodies do indeed form from huge, chaotic, formless clouds of dust and gas.

One aspect of the Nebular Hypothesis, however, ran contrary to a Genesis-based origin of the Earth and other celestial bodies: the fact that stellar and planetary formation from formless clouds of matter was supposed to take millions of years. Recent photographs of the Orion nebula in the Milky Way galaxy, sent back by the Hubble’s new, high-resolution Advanced Camera for Surveys, have suggested that the formation of stellar bodies from clouds of matter may take a lot less time than was originally supposed. The journal *Science News* reported that “astronomers for decades have been drawn to the Milky Way’s Orion nebula. This young, star-forming region provides a remarkably clear window on star making. Intense radiation and fierce winds from a quartet of young, massive stars at Orion’s center have blasted away much of the dusty material.

“What’s more, at just 1,500 light-years from Earth, Orion is the closest stellar maternity ward where massive stars have cleared the view” (Cowen 2006: 154).

According to the journal, Hubble’s new camera has been able to photograph the entirety of the Orion nebula, whereas an older camera in the mid-1990’s took pictures only of Orion’s core. Moreover, the new camera has taken much sharper images of Orion, employing wavelengths ranging from near-infrared to ultraviolet (Ibid.). The journal reported:

“The new portrait, a mosaic of 520 razor-sharp Hubble images supplemented by ground-based observations, includes some 3,000 stars packed into a region 13 light-years across. The picture covers 10 times the area of Orion originally imaged by Hubble. About half the stars have never been seen before in visible light, from which astronomers can directly measure illumination from a star’s surface.

“The stars span an unusually wide range of sizes, from a few times Jupiter’s mass to 40 times as heavy as the sun. Seeing stars of all sizes so close together provides an extraordinary opportunity to study star formation in all its variety, says Massimo Robberto of the Space Telescope Science Institute in Baltimore. He and his colleagues unveiled the mosaic in January [2006] at a meeting of the American Astronomical Society in Washington, D.C.” (Ibid.).

One of the new insights provided by these brilliant new photographs is that the formation of celestial bodies from a chaotic, formless state takes a lot less time than was originally hypothesized. According to *Science News*,

“The accumulating data indicate that stars in the nebula formed all at once, in a baby boom only about a million years ago [according to conventional dating methods], says team member Lynne Hillenbrand of the California Institute of Technology in Pasadena. Astronomers had previously

proposed that star birth in Orion was a more sluggish process, spread out over several million years. That scenario was based on less-accurate estimates of stellar brightness in the nebula, Hillenbrand explains” (Ibid.).

This last point is especially interesting: the findings that are more in tune with a Biblical scenario of Earth’s origins are the ones based on more-correct scientific data, while the theory that appeared to contradict Genesis was based on assumptions that have now been proven to be incorrect.

Reference:

Cowen, R. 2006. “Peeling Back Orion’s Layers.” *Science News* 169, no. 10: 154-6.

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