

INVESTIGATING ORIGINS

By Stephen Caesar
Associates for Biblical Research

“Planets without Suns”

As has been discussed several times in earlier installations of this column, the mysterious statement in Gen. 1:2 that the Earth began its existence in a chaotic state described as being “without form, and void” may refer to what astronomers have directly witnessed via advanced telescopes: new planets being formed from the gas and dust that spew out from their parent stars. There is, however, a major objection to the reliability of the Genesis account of planetary origins: the fact that it places the creation of the Earth (Gen. 1:6) before the creation of the sun (Gen. 1:16). Up till recently, no planet has ever been observed coalescing from a formless, chaotic state without a parent star providing the necessary gas and dust.

Recent high-resolution photographs taken by the Hubble Telescope’s new Advanced Camera for Surveys have served to clear up this objection. Hubble’s new images have shown that celestial bodies can indeed coalesce without a parent star providing the requisite dust and gas. The best place to witness these awesome births of planets is the Milky Way galaxy’s Orion Nebula, which is only 1,500 light-years from Earth. Massimo Robberto of the Space Telescope Science Institute in Baltimore was the astronomer who, along with his colleagues, made public the new, “razor-sharp” images from Orion in January 2006 at a meeting of the American Astronomical Society in Washington DC (Cowen 2006: 154).

The Hubble photographs made public by Robberto actually show the formation of three different kinds of celestial bodies from a formless and void state: stars, planets, and brown dwarfs. Under the sub-heading “Planets in the Making,” the journal *Science News* reported:

“Brown dwarfs form as stars do, from the collapse of clouds of gas and dust, but unlike stars, they’re not massive enough to sustain nuclear fusion at their cores.

“A few of these low-mass pairs might be so small—less than 13 times the mass of Jupiter—that they wouldn’t even qualify as brown dwarfs. Instead, they would be considered giant planets UNATTACHED TO A PARENT STAR. Astronomers have spied such free floaters in other parts of the galaxy.”

“Free-floating planets in the high-resolution Orion portrait could shed light on their origins, Robberto says. In the standard planet-formation theory, planets arise exclusively when gas and dust coalesce within disks encircling young stars. In this scenario, free-floating planets once orbited a star but got kicked out of its system, perhaps by the tug of another star.

“But a new hypothesis holds that some free floaters NEVER HAD A PARENT STAR. Instead, they arose directly from a star-making cloud of dust and gas” (Ibid. 155 [emphases added]).

If this hypothesis holds true, then the objection to the Genesis account of the formation of the Earth from a chaotic cloud of matter before the existence of the sun vanishes, because it demonstrates the plausibility of a planet having begun its existence “without form, and void” without the benefit of a parent star.

Reference:

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

Stephen Caesar holds his master’s degree in anthropology/archaeology from Harvard. He is a staff member at Associates for Biblical Research.

