



GERALD SCHROEDER, Ph.D.

NUCLEAR PHYSICIST, 'EXPERT' ON GOD

Dr. Gerald Schroeder lives in Jerusalem with his wife, the author, Barbara Sofer. They have five children and a changing number of grandchildren. His formal education includes a BSc, MSc, and Ph.D., all from the Massachusetts Institute of Technology. His theological training includes twenty years of study under the late Rabbi Herman Pollack, Rabbi Noah Weinberg, and Rabbi Chaim Brovender.

He spent seven years on the staff of the M.I.T. Physics Department before moving to Israel and joining first the Weizmann Institute of Science, and then the Volcani Research Institute and the Hebrew University Isotope Separation Mass Spectrometer facility. His current teaching venues include Aish HaTorah College of Jewish Studies in Jerusalem. He lectures worldwide on the amazing confluence of ancient Biblical commentary and the discoveries of modern science. In addition, he is active in research in environmental radioactivity. Dr. Schroeder has over 60 publications in leading peer-reviewed scientific journals and has witnessed the detonation of a long series of nuclear weapons (atomic bombs) during research in nuclear physics

Dr. Schroeder is author of *Genesis and the Big Bang* (Bantam Doubleday); *The Science of God* (Free Press of Simon & Schuster, and Broadway Books of Bantam Doubleday); *The Hidden Face of God* (Free Press); and *God According to God* (HarperOne). In the first full year of its publication, *The Science of God* was on the Barnes & Noble list of non-fiction best sellers and was Amazon's best-selling book in the field of physics/cosmology. His books appear in ten languages.

Dr. Schroeder's YouTube video, "Proof of God in 5 Minutes," has had over four million views.

His lecture venues have ranged from synagogues worldwide to the Mormon Tabernacle, NSA, and the Smithsonian, and from Chabad in South Africa to mega-churches in Brazil and outposts in Korea.

The greatest compliment he ever overheard: Two teenagers, following a lecture, "Finally it all makes sense."

NASA Discovers The Fingerprint Of God

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As a scientist with a fourteen-year academic history at the Massachusetts Institute of Technology, I am often asked how I can believe in God. My reply is quite simple: How can I not believe in God? The very institution that has researched our cosmic origins, NASA, has discovered God, or if not directly God, then at least the fingerprint of God in the metaphysical force that created our magnificent physical universe from nothing physical. And NASA describes this revelation in a diagram (see footnote).¹

What we learn in this extraordinary visual piece of NASA-generated knowledge is that our universe had a beginning, a fact that Albert Einstein's equations indicated but against which he argued for a decade, initially insisting that our universe must be static and eternal. It took a journey of 9,000 kilometers from Germany to California, to visit with Edwin Hubble and Milton Humason and observe the evidence firsthand, to convince him otherwise.

One would think that the discovery that our universe had a beginning would be proof enough of a "Beginner," a creating God, but it was not. In 1973, Edward Tryon, professor of astronomy at City University of New York, asked, "Is the universe a vacuum fluctuation?" in an article in *Nature*. Tryon described how a combination of relativity and a quantum fluctuation could yield the spontaneous creation of a universe from nothing. No God needed. But Tryon expanded on his extraordinary insight: If relativity and a quantum fluctuation are the source of our existence, then "matter and energy would not be fundamental. They would be manifestations of underlying laws. Ultimate reality would be the laws themselves – the mind of Einstein's God."²

In other words, the laws of nature themselves would be the creating force. But what are the traits of the laws of nature? They are not physical, they're just abstractions that act on the physical – somehow. And somehow these laws created the physical universe from nothing physical. If they created the universe, that means they must have pre-dated the universe. That in turn means they are outside our concept of time.

A non-physical force that pre-dated our universe and is therefore outside of time created our physical universe from nothing physical. Sound familiar? That is the traditional theological description of the creating God, made manifest by acts in and on nature.

But is that creating God still active in creating the universe? That NASA diagram gives us a clue. Visually it tells us a magnificent truth: that the initial burst of energy, the super-powerful light-beams that marked the Big Bang creation of our universe, eventually evolved to produce beings alive and conscious and so clever that they could build the WMAP space probe to explore the wonders of existence. Those laws that governed that evolution continue to unfold and manifest in us. The light beams of creation learned to feel wonder, the majesty of love. They became you and me, surely the fingerprint of God in creation.

Footnotes:

1. NASA WMAP time-line diagram: the cosmic history of our universe, NASA.
2. E. Tryon, *Nature* 246, 1973; p396; //E. Tryon, *Discover Magazine*, winter 2011, p. 51.

