Will ‘God particle’ spur science-religion debate?

by Chris Lisee in the August 8, 2012 issue

The Higgs boson is perhaps better known by its sexier nickname: the “God particle.” But many scientists, including the physicist for whom it is named, dislike the term.

In 1993 when American physicist Leon Lederman was writing a book on the Higgs boson, he dubbed it “the goddamn particle.” An editor suggested “the God particle” instead.

One thing is clear: the July 4 announcement of the discovery that marked a new chapter in scientific knowledge also reignited debate over the universe’s origins—and the validity of religious faith as scientific knowledge expands.

The Higgs boson explains why particles have mass—and in turn why we exist. Without the boson, the universe would have no physical matter, only energy.

The cosmological implications are hotly debated. Can God fit into a scientific story of creation?

The answer is no for Lawrence M. Krauss, an Arizona State University theoretical physicist. He argued in *Newsweek* that the Higgs boson discovery “posits a new story of our creation” independent of religious belief.

“Humans, with their remarkable tools and their remarkable brains, may have just taken a giant step toward replacing metaphysical speculation with empirically verifiable knowledge,” he wrote.

With enough data, physics would make God obsolete, he said. “If we can describe the laws of nature back to the beginning of time without any supernatural shenanigans, it becomes clear that you don’t need God.”

Religious believers see things differently. Vatican astronomer Guy Consolmagno argued in a *Washington Post* column that scientifically deduced universal laws

expose “the personality” of God. “The mysteries revealed by modern science are a constant reminder that reality is bigger than our day-to-day lives,” he wrote.

Alternative medicine guru Deepak Chopra said in a YouTube video that the boson hints at a divine interconnectedness of all things. “It only strengthens the notion that the universe comes out of a nothingness which is everything,” he said.

This much is true: Higgs bosons—which permeate the universe—help us understand how something comes from nothing.

The awe we feel with this heady topic causes even nonreligious people to use religious language, said Philip Clayton, dean of Claremont School of Theology and a researcher of science and religion.

“Humans are really fascinated with what we know scientifically and what lies right at the boundaries of what we can know,” he said. Albert Einstein’s quip that God “doesn’t play dice with the world” is a metaphor to help explain our quest for order in a world that seems chaotic, Clayton said.

Such metaphorical language helps to explain the world at the particle level where physical laws such as gravity break down and physicists rely on abstractions to describe how particles interact.

Clayton said discussing whether the discovery “disproves religion or supports creation” misses the point. “The fans and the foes of religion . . . are overreaching on both sides. The quest for the Higgs boson, and its ultimate discovery, neither proves nor disproves God,” he wrote in a *Huffington Post* column.

But Arizona State’s Krauss says science isn’t trying to disprove God. Rather, data only have to offer an explanation for the universe that would make a divine creator redundant. When English physicist Peter Higgs proposed the Higgs boson in 1964, it helped codify an incomplete model of the universe. This model was shown accurate through experimentation culminating in the recent discovery.

Krauss said further experimentation will lead toward a “unified theory” of the universe that accounts for everything from quarks to galaxies. “That’s the difference between science and religion,” he said. “We don’t require the universe to be what we want—we force our beliefs to conform to the evidence of reality.” —RNS