LOS ANGELES
TIMES
LOS ANGELES, CA
DAILY 902,164
MAR 10 2005

Physicist Wins Spirituality Prize

Nobel recipient's belief that religion and science were converging raised hackles in the 1960s.

By LARRY B. STAMMER
Times Staff Writer

Charles Townes, the UC Berkeley professor who shared the 1964 Nobel Prize in physics for his work in quantum electronics and then startled the scientific world by suggesting that religion and science were converging, was awarded the $1.5-million Templeton Prize on Wednesday for progress in spiritual knowledge.

The prize, the proceeds of which Townes said he planned to largely donate to academic and religious institutions, recognized his groundbreaking and controversial leadership in the mid-1960s in bridging science and religion.

The co-inventor of the laser, Townes, 89, said no greater question faced humankind than discovering the purpose and meaning of life — and why there was something rather than nothing in the cosmos.

"If you look at what religion is all about, it's trying to understand the purpose and meaning of our universe," he said in a telephone interview from New York this week. "Science tries to understand function and structures. If there is any meaning, structure will have a lot to do with any meaning. In the long run they must come together."

Townes said that it was "extremely unlikely" that the laws of physics that led to life on Earth were accidental.

Some scientists, he conceded, had suggested that if there were an almost infinite number of universes, each with different laws, one of them was bound by chance to hit upon the right combination to support life.

"I think one has to consider that seriously," Townes told The Times. But he said such an assumption could not currently be tested. Even if there were a multitude of universes, he said, we do not know why the laws of physics would vary from one universe to another.

Townes said science was increasingly discovering how special our universe was, raising questions as to whether it was planned. To raise such a question is the work of scientists and theologians alike, said Townes, who grew up in a Baptist household that embraced "an open-minded approach" to biblical interpretation. He is a member of the First Congregational Church in Berkeley and prays twice daily.

In 1964, while a professor at Columbia University, Townes delivered a talk at Riverside Church in New York that became the basis for an article, "The Convergence of Science and Religion," which put him at odds with some scientists.

In the article, Townes said science and religion should find common ground, noting "their differences are largely superficial, and ... the two become almost indistinguishable if we look at the real nature of each." When MIT published the article, a prominent alumnus threatened to break ties with the institution.

In a 1996 interview with The Times, Townes said that new findings in astronomy had opened people's minds to religion. Before the 1960s, the Big Bang was just an idea that was hotly debated. Today, there is so much evidence supporting the theory that most cosmologists take it for granted.

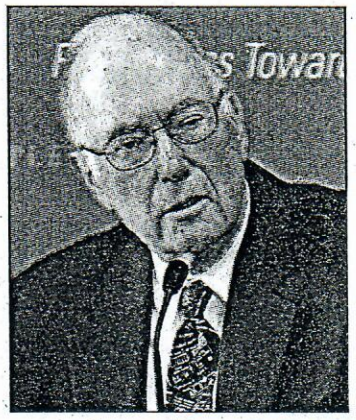
"The fact that the universe had a beginning is a very striking thing," Townes said. "How do you explain that unique event" without God?

Townes this week spoke of his interest in the search for extraterrestrial intelligence. The sheer number of stars and planets, he said, would likely increase the probability of intelligent life elsewhere. But for life to get started on even one planet is "highly improbable. It might not have started more than two or three times," he said. "It would be fascinating to find somebody out there."

Born in Greenville, S.C., in 1915, Townes received a bachelor's degree in physics, summa cum laude, from Furman University in Greenville when he was 19. Two years later he received a master's in physics from Duke University, and in 1939 a doctorate in physics from Caltech with a thesis on isotope separation and nuclear spins.

During World War II he helped develop radar systems that functioned in the humid conditions of the South Pacific.

His research led to the development of the maser in 1954, which amplifies electromagnetic waves, and later co-invented the laser. His work, for which he shared the 1964 Nobel in physics, led to a wide variety of inventions and discoveries in medicine, telecommunications, electronics, computers and other areas.



GREGORY BULL *Associated Press*

CHARLES TOWNES: *The co-inventor of the laser won the $1.5- million Templeton Prize.*

He was named provost and professor of physics at MIT in 1961, director of the Enrico Fermi International School of Physics in 1963, and, in 1967, professor of physics at UC Berkeley, a post he held until 1986.

The Templeton Prize for Progress Toward Research or Discoveries about Spiritual Realities was established in 1972 by Sir John Templeton, a global investor and philanthropist. Past winners include Mother Teresa; evangelist Billy Graham; Holmes Rolston III, a philosopher, clergyman and scientist whose explorations of biology and faith have helped foster religious interest in the environment; and John C. Polkinghorne, a British mathematical physicist and Anglican priest.

The Duke of Edinburgh is to present the prize to Townes in a private ceremony at Buckingham Palace in April.