Physicist to Present New Exact Solution of Einstein's Gravitational Field Equation

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New antigravity solution will enable space travel near speed of light by the end of this century, he predicts.

On Tuesday, Feb. 14, noted physicist Dr. Franklin Felber will present his new exact solution of Einstein's 90-year-old gravitational field equation to the Space Technology and Applications International Forum (STAIF) in Albuquerque. The solution is the first that accounts for masses moving near the speed of light.

Felber's antigravity discovery solves the two greatest engineering challenges to space travel near the speed of light: identifying an energy source capable of producing the acceleration; and limiting stresses on humans and equipment during rapid acceleration.

"Dr. Felber's research will revolutionize space flight mechanics by offering an entirely new way to send spacecraft into flight," said Dr. Eric Davis, Institute for Advanced Studies at Austin and STAIF peer reviewer of Felber's work. "His rigorously tested and truly unique thinking has taken us a huge step forward in making near-speed-of-light space travel safe, possible, and much less costly."

The field equation of Einstein's General Theory of Relativity has never before been solved to calculate the gravitational field of a mass moving close to the speed of light. Felber's research shows that any mass moving faster than 57.7 percent of the speed of light will gravitationally repel other masses lying within a narrow 'antigravity beam' in front of it. The closer a mass gets to the speed of light, the stronger its 'antigravity beam'

becomes.

Felber's calculations show how to use the repulsion of a body speeding through space to provide the enormous energy needed to accelerate massive payloads quickly with negligible stress. The new solution of Einstein's field equation shows that the payload would 'fall weightlessly' in an antigravity beam even as it was accelerated close to the speed of light.

Accelerating a 1-ton payload to 90 percent of the speed of light requires an energy of at least 30 billion tons of TNT. In the 'antigravity beam' of a speeding star, a payload would draw its energy from the antigravity force of the much more massive star. In effect, the payload would be hitching a ride on a star.

"Based on this research, I expect a mission to accelerate a massive payload to a 'good fraction of light speed' will be launched before the end of this century," said Dr. Felber. "These antigravity solutions of Einstein's theory can change our view of our ability to travel to the far reaches of our universe."

More immediately, Felber's new solution can be used to test Einstein's theory of gravity at low cost in a storage-ring laboratory facility by detecting antigravity in the unexplored regime of near-speed-of-light velocities.

During his 30-year career, Dr. Felber has led physics research and development programs for the Army, Navy, Air Force, and Marine Corps, the Defense Advanced Research Projects Agency, the Defense Threat Reduction Agency, the Department of Energy and Department of Transportation, the National Institute of Justice, National Institutes of Health, and national laboratories. Dr. Felber is Vice President and Co-founder of Starmark.

Source: Starmark