

# Santa: A Claus-et physicist

December 28 2010, By David Zucchino, Los Angeles Times

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All Santa skeptics, please take a look at the North Carolina State University website.

Several professors in the school's Department of Mechanical and Aerospace Engineering recently asked their students to explore the aerodynamic and thermodynamic challenges of delivering gifts to millions of children worldwide in a single night from an airborne sleigh.

The results, posted at [web.ncsu.edu/abstract/tag/science-of-santa](http://web.ncsu.edu/abstract/tag/science-of-santa), posit that [Santa Claus](#) is a brilliant engineer and physicist.

One of the professors, Dr. Larry Silverberg, said the students concluded

that Santa has expanded Einstein's theory of relativity to take advantage of "relativity clouds" that stretch time and bend the universe. "Relativity clouds are controllable domains - rips in time - that allow him months to deliver presents while only a few minutes pass on Earth," he said.

The site reports that his sleigh must be an advanced aerodynamic design made of honeycombed titanium alloy, capable of altered shape in flight and yet stable enough for landings on steep roofs. Laser sensors would help select the fastest route, and a porous, nano-structured skin outfitted with a low-pressure system reduces drag up to 90 percent, Silverberg said.

Silverberg confessed that he really didn't understand all of it, even though he's an expert in unified field theory.

"The man is a genius," Silverberg said of Santa, whom he described as "jolly, but learned."

What about figuring out who is naughty and nice? Theory: A mile-wide antenna of super-thin mesh relying on electromagnetic induction principles picks up brain waves of children around the world. Filter algorithms organize desires and behaviors, and microprocessors feed the data to an onboard sleigh guidance system.

Also, Santa must be checking kids' Facebook and Twitter accounts.

And does Santa carry all those presents in a single sleigh? Not possible, according to Silverberg.

More plausible: He creates them on-site, i.e., on each rooftop, using a reversible thermodynamic processor - a sort of nano-toymaker known as the "magic sack." The carbon from chimney soot would be a common building block.

But the students theorized that he still delivers presents the old-fashioned way, climbing down chimneys, dressed in a fire-resistant halocarbon polymer suit.

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Citation: Santa: A Claus-et physicist (2010, December 28) retrieved 10 April 2024 from <https://phys.org/news/2010-12-santa-claus-et-physicist.html>

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