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Stanford scientist compares impact of World Trade Center attack to a nuclear bomb explosion

BY CRAIG KAPITAN

Stanford Professor Steven Block, an expert on national security and terrorism, spoke with the press Tuesday to answer technical questions surrounding the World Trade Center disaster.

According to his "back-of-an-envelope calculation," a fully laden Boeing 767 or 757 jet aircraft would have the impact of approximately 500 tons of TNT when running into the side of a building. That is equal to roughly 1/25th of the energy in the atomic bomb dropped on Hiroshima.

"It's a staggering amount of energy," Block said. "The simple calculation shows that any aircraft fully fueled is essentially a giant flying bomb."

Although the World Trade Center was designed to withstand "amazing kinds of forces" and even an aircraft collision, architects may not have taken into consideration the enormous amount of heat a plane loaded with enough fuel to fly across the country would generate. The intense heat could have melted the buildings' cores, allowing for the collapses, he suggested.

"You don't design buildings to withstand nuclear attacks," he said of the collapse. "Next to an atomic weapon, this is the most [energy] that you can pack in one punch."

Block, a professor in the Department of Biological Sciences and the Department of Applied Physics, is also a senior fellow at Stanford's Institute for International Studies. He also consults for JASON, a group of primarily academic scientists that consults for the U.S. government and its agencies on technical matters relating to national security.

The combination of a "kamikaze aircraft on the one hand and a hijacked aircraft on the other" is a totally new terrorist method, he said.

"When you combine the two, you really are

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talking about a new terror weapon," he explained. "We've seen that it can be an equipment of great devastation."

The possibility of a terrorist mounting an attack of this scale does not come as a total shock, he said. It is very hard to thwart a terrorist who is "bold, determined and willing to give up his life."

Politicians and citizens will now have to decide how much of their civil liberties they want to forgo -- if any -- in order to ward off future attacks, Block speculated.

"Most indications are these type of terrorist events are ramping up," he said. "What we're witnessing here is a truly extraordinary event that we hope doesn't become an ordinary event in coming years."

