

Amateurs aim to rocket themselves into space

Danish men plan first test launch this week using crash dummy



By Irene Klotz

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Kristian von Bengtson and Peter Madsen of Denmark don't have a death wish, or even a mid-life crisis. Yet they're the first to admit that their efforts to put themselves in space on home-built rockets certainly begs the question.

"This project might be daring or extreme but we're never going to be foolish. We're not going to say something like, 'This might work, let's try it,' but obviously we set our own standards," said von Bengtson, 36, an architect who specializes in human spacecraft design.

"We're not going to kill ourselves," he told Discovery News.

Von Bengtson has worked with U.S. government space contractors before, an experience he enjoyed but one that left him unfulfilled. "At NASA, you work on interesting projects, but they're not used for 20 or 30 years, or they may get canceled," he said.

Working on his own launch system was mostly a dream until early 2008 when he met Madsen, a fellow space enthusiast and rocket expert who shared the dream. They formed a nonprofit organization called Copenhagen Suborbitals and, with corporate donations and volunteer labor, started designing and building their own human space launch [vehicle](#).

A major milestone is set for as early as this week when the men launch for the first time their suborbital rocket, a solid-propellant, liquid oxidizer affair called HEAT-1X Tycho Brahe (named after a 16th century Danish discoverer of a supernova).

Von Bengtson says he won't be disappointed if the rocket fails. "There's a good chance of that," he said. "Basically we're just going to go out there and push the button and build a new rocket — no matter what happens."

Additional test flights will follow over the next three to 10 years, von Bengtson says, before he and Madsen, 39, take turns strapping themselves inside the one-person capsule and blasting off for a suborbital ride to space.

A crash dummy will be the occupant for the rocket's debut flight, which will take place from a platform in the Baltic Sea. (In testament to the duo's technical expertise, they also built the mini-submarine that will [haul](#) the platform out into the ocean.)

The main advantage of launching at sea, says von Bengtson, is the lack of government regulations. "It's very difficult for us who are building rockets to find places to launch them. If you go into international waters, you only have to cooperate with those few authorities that are left," he said. Those regulatory loopholes don't apply to companies and groups operating from the United States, added John Gedmark, executive director of the Washington, D.C.-based Commercial Spaceflight Federation, an advocacy group.

"The agreement between nations is that nations are fully responsible, fully liable for any and all damages for a rocket launching under their flag, no matter where they're launched from anywhere in the world," Gedmark told Discovery News.

"Obviously, the requirement that you have to meet in terms of safety and collateral damage to the uninvolved public is a lot easier to meet if you're out in the middle of nowhere," he said. The project apparently has the blessing of the Danish government, which is lending Copenhagen Suborbitals a National Guard ship and crew to try to retrieve their rocket and capsule after the flight, according to von Bengtson.

The exact launch date will depend on the weather, which is notoriously fickle this time of year. Von Bengtson and Madsen plan to remotely launch the rocket from aboard a ship about two miles away. While the ultimate outcome of the project will be to fly themselves and eventually others in space, von Bengtson said he's happy just to be working on a rapid-development human space flight program.

"Being able to do this every day is what I want," he said. "It's more of a process rather than an actual goal."

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