No cliché: Rotary meeting is 'rocket science'

bluShift Aerospace Inc. communications director presents virtual talk to Waterville club



Contributed photo Seth Lockman, communications director for Brunswick-based bluShift Aerospace Inc.

BY GREG LEVINSKY MORNING SENTINEL

WATERVILLE — Members of the Rotary Club of Waterville learned some of what goes into a Mainebased rocket launch Monday when Seth Lockman of bluShift Aerospace Inc. spoke as part of the organization's speaker series.

Lockman, communications director for the Brunswick-based company, explained its January rocket launch at the former Loring Air Force Base in Limestone.

The Stardust 1.0 became the first commercial rocket launched with biofuel.

"Watching a rocket launch is really a full-body experience,"

Lockman told local Rotarians.

He said biofuel costs less than traditional rocket fuel and is better for the environment because it is nontoxic and carbon neutral.

The Stardust, which is 20 feet long and 550 pounds, flew less than a mile before returning to Earth.

"Because it is relatively cheap to fly and doesn't need the high-tech infrastructure of larger rockets, it will help make space research accessible to more people," Jane O'Brien of BBC News wrote when covering the launch.

"Students, researchers and businesses will be able to conduct experiments and test products with greater control and frequency."

The bluShift Aerospace rocket was not the first to use biofuel. The V-2 rocket, launched during World War II, used it, too. The rocket launched by bluShift Aerospace was the first using biofuel to be launched commercially.

Lockman said the fuel lasts a long time. In its solid form, the fuel has lasted about a year.

BluShift Aerospace Inc. is a small rocket company with about 10 employees, according to Lockman. The operating costs for the company since its founding in 2014 have recently exceeded \$1 million.

Lockman said the goal is to expand and create 40 jobs over the next five years.

He estimated there are 190 companies across the globe doing similar work.

Lockamn said Stardust 1.0's first launch — more than 4,000 feet — is only the start.

"We want to go higher," he said.

The company expects its next rocket launch will be an amateur flight licensed by the Federal Aviation Agency, but future launches will go through another permitting process. BluShift Aerospace officials hope the state of Maine will help with site identification, environmental impact studies and more.

"There's a real opportunity to cut through the red tape by bringing in the government in this case," Lockman said.

Plans for the company's next flight call for launching the Starless Rogue, which is about twice as long as Stardust 1.0, with a two-stage rocket. Stardust Rogue is expected to go into space, experiencing up to eight minutes of no gravity.

If all goes as planned, the three-stage Red Dwarf rocket would be up next.

The timeline is subject to change.

"If SpaceX is the freight train to space and Rocket Lab is the bus to space, we're the Uber to space,"

Lockman said. "At this point, I'm happy to say the competition is friendly, from what I can tell."

Jeff Melanson, president-elect of the Rotary Club of Waterville, said the organization's weekly speaker series has been on Zoom since the COVID-19 pandemic was announced about a year ago.

He said hosting the series on Zoom encourages speakers who otherwise might not be able to get to Waterville.

"Our plan for the future is to reach out to more speakers that will draw interest to our meetings," Melanson said.

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