AEROSPACE
AMERICA

JET FUEL FROM SMOKESTACKS

One company's journey to a sustainable aviation fuel to meet the growing demand from airlines **PAGE 14**

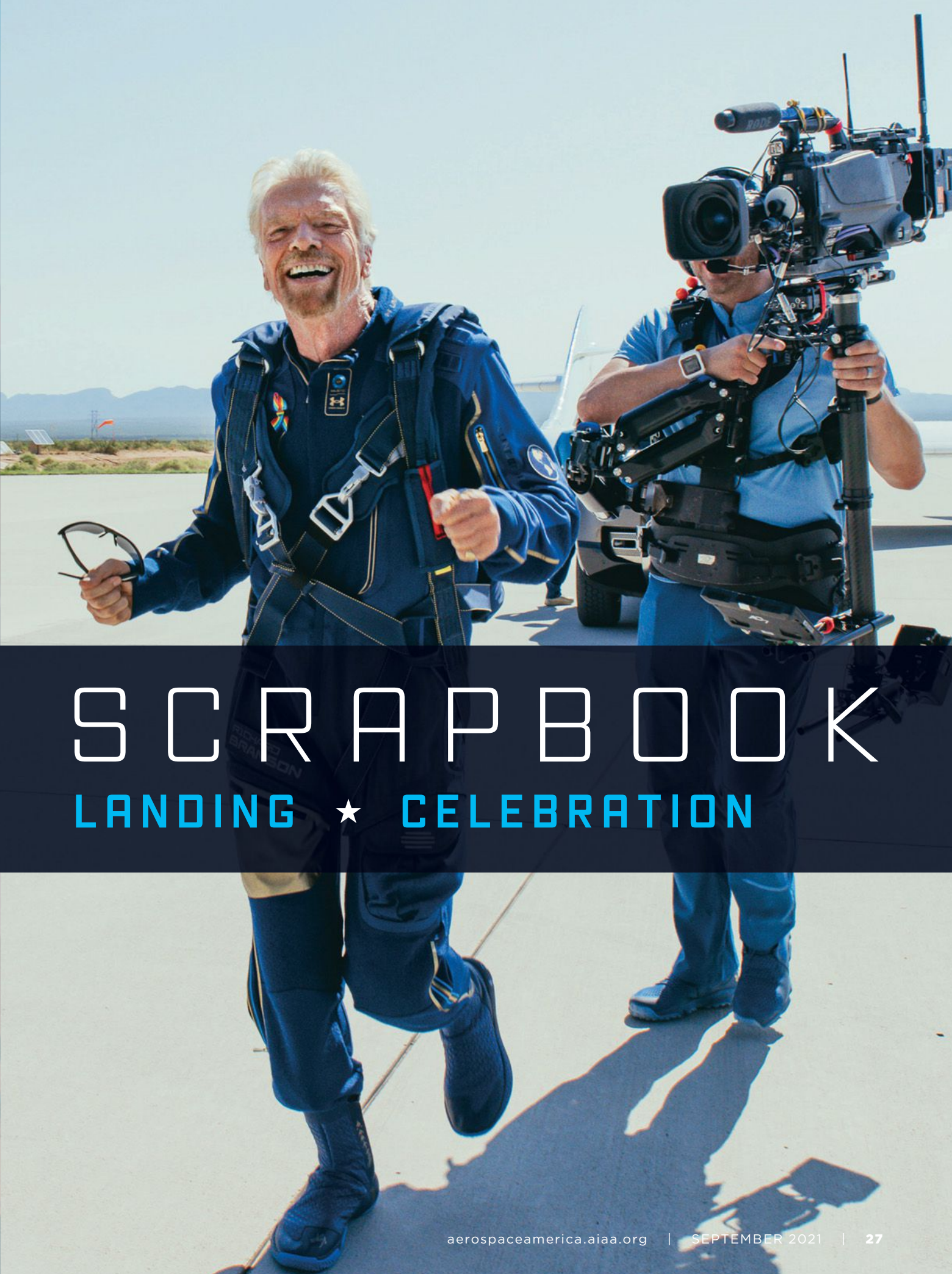**AIAA**
SHAPING THE FUTURE OF AEROSPACE

SUBORBITAL

LAUNCH ★ FREE FALL

SCRAPBOOK

LANDING ★ CELEBRATION

Wally Funk is seen through one of the six windows of the Reusable Space Ship First Step passenger capsule as she and the three other passengers prepare for the launch.

Pilots Dave Mackay and Michael "Sooch" Masucci fly Virgin Space Ship Unity as Mackay tells the passengers they are "clear to unstrap" and enjoy a few minutes of free fall, also known as zero-g.

Blue Origin passengers, from left, Oliver Daemen, Wally Funk and Mark Bezos toss an orange pingpong ball during their three minutes of weightlessness.

Virgin Galactic's Sirisha Bandla, vice president for government affairs and research operations, does weightless somersaults after VSS Unity reaches the apogee of its flight.
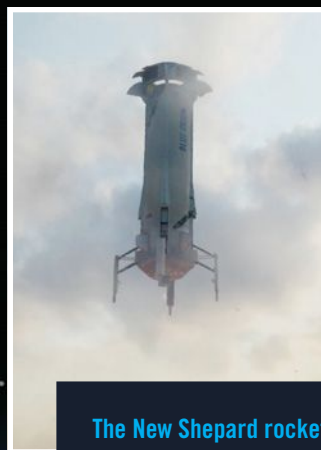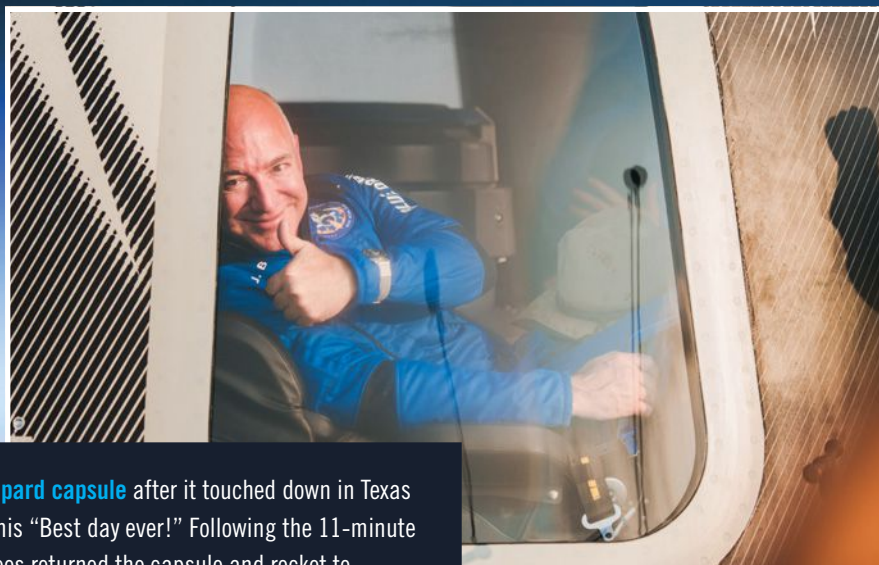
LANDING

Three parachutes slow Blue's New Shepard RSS First Step capsule for a landing in the West Texas desert, a few kilometers from the launch pad.

The New Shepard rocket lands on its pad after delivering the capsule to space.

Jeff Bezos in his New Shepard capsule after it touched down in Texas on what he declared was his "Best day ever!" Following the 11-minute flight, Blue Origin employees returned the capsule and rocket to the company's Texas facility for refurbishment ahead of a second passenger flight scheduled for late September or early October.

VSS Unity glides toward a landing at Virgin's runway at Spaceport America in New Mexico.

Blue Origin's company astronaut pin showing the feather logo that "represents freedom, exploration, mobility and progress," Blue's website reads.

Former Canadian astronaut Chris Hadfield, a member of the Virgin Galactic Space Advisory Board, shown after attaching the company astronaut pin to Richard Branson's flight suit. The gold pin shows a spaceplane between two sycamore seeds, which like Virgin's spaceplanes "detach from the mothership of their tree and float and tumble," Hadfield said.