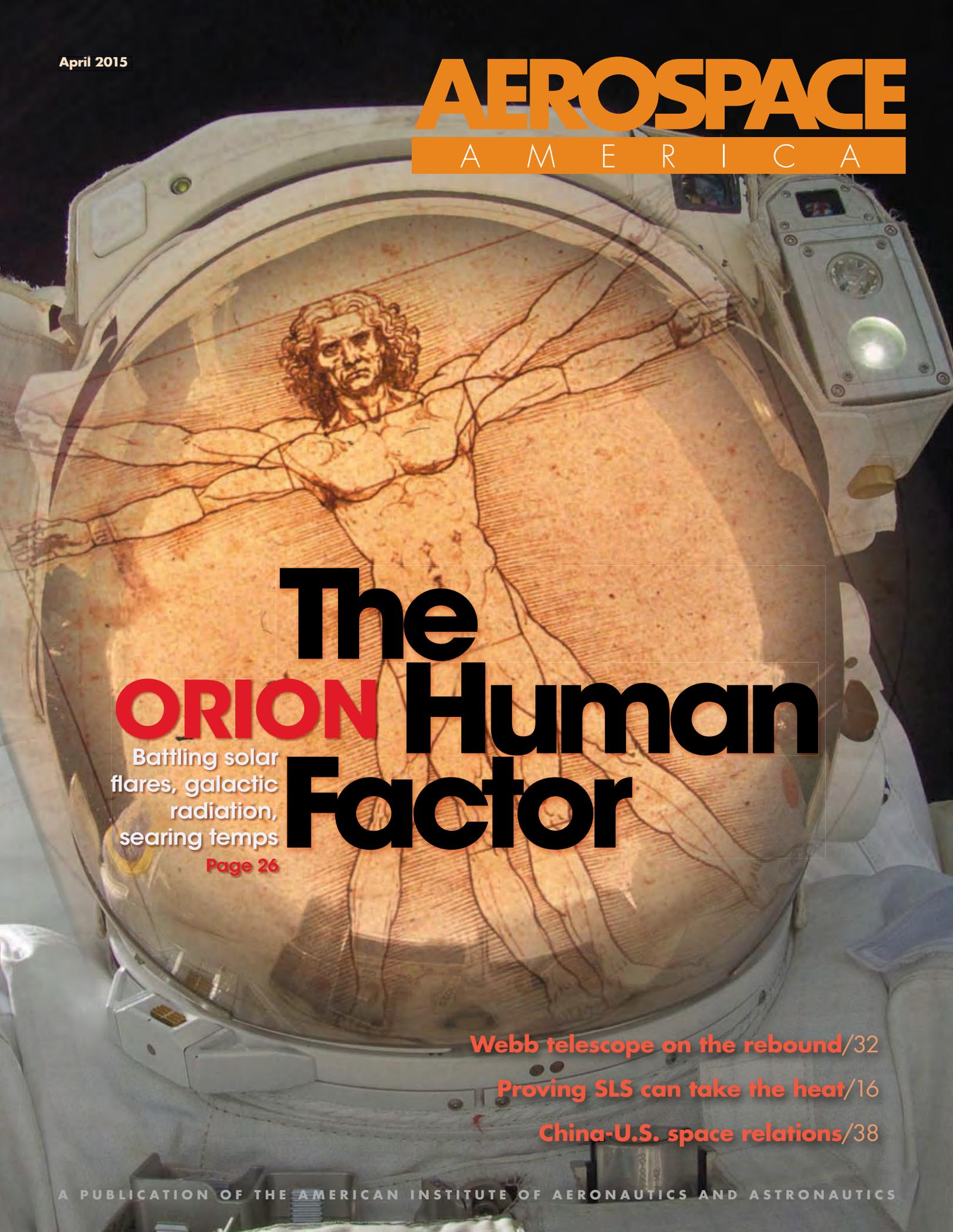


April 2015

AEROSPACE

A M E R I C A



ORION The Human Factor

Battling solar flares, galactic radiation, searing temps

Page 26

Webb telescope on the rebound/32

Proving SLS can take the heat/16

China-U.S. space relations/38



University of California

The new SETI tool will be mounted to the Nickel telescope at the Lick Observatory on Mount Hamilton just east of San Jose, California.

Detecting communications from faraway folks has been a passion for astronomer Frank Drake for decades. Back in 1960, he carried out the first modern search for extraterrestrial intelligence by listening for radio signals using a telescope at Green Bank, West Virginia.

Drake is among the SETI experts who wonder if advanced civilizations might be communicating via lasers rather than radio waves. The first searches for evidence of optical communications came up as empty as the searches for radio signals, but those efforts were focused on visible light. Drake is a member of an international team that's about to start looking for pulses of near-infrared light.

From an extraterrestrial's perspective, there might be good reason to communicate across interstellar distances using infrared lasers. "The Milky Way is filled with gas and dust that absorbs optical light,

and if aliens were to communicate across great distances — hundreds to thousands of light years — they would use lasers that are less obscured, like infrared lasers," said Shelley Wright, principal investigator for the SETI project at the University of California at Berkeley's Department of Astronomy.

The team plans to mount the Near-infrared Optical SETI (NIRO-SETI) instrument that makes use of two near-infrared detectors — discrete amplification Avalanche Photodiodes — on the lower end of the 1-meter diameter Nickel telescope at Lick Observatory on Mount Hamilton east of San Jose, California, and run the system through a series of engineering checks.

The project is a collaboration of the University of California at San Diego; U.C. Berkeley; the University of Toronto; the SETI Institute in Mountain View, California; and the Univer-

sity of California's Lick Observatory.

SETI experts have long been anxious to search for infrared signals.

"We had to wait another 20 years, until we had detectors that would make infrared SETI feasible. Our team has been testing these new infrared detectors for the last several years, and we are now ready to point them at the sky," Wright said. "This is essential to the future of SETI programs...to be able to use brand new detectors and take advantage of communication technology development."

"It could be a breakthrough," Drake suggests, but he offers a caveat to the forthcoming SETI activity. "It does depend on the extraterrestrials helping you out by targeting you. The stellar beams are so narrow that they have to be aimed precisely," he said.

Leonard David
newsspace@aol.com