

# New Scientist

WEEKLY 18 January 2025

WHY 'IMPOSSIBLE'  
PARTICLES MIGHT  
ACTUALLY BE REAL

HOW TO STICK TO  
YOUR FITNESS GOALS

THE WEARABLE  
TECH THAT AIMS TO  
BOOST YOUR MOOD

SPECIAL REPORT



# EARTH'S NEW CLIMATE

Why extreme weather is here to stay –  
and what that means for us all

How we overshot 1.5 degrees



Why the jet stream has gone haywire

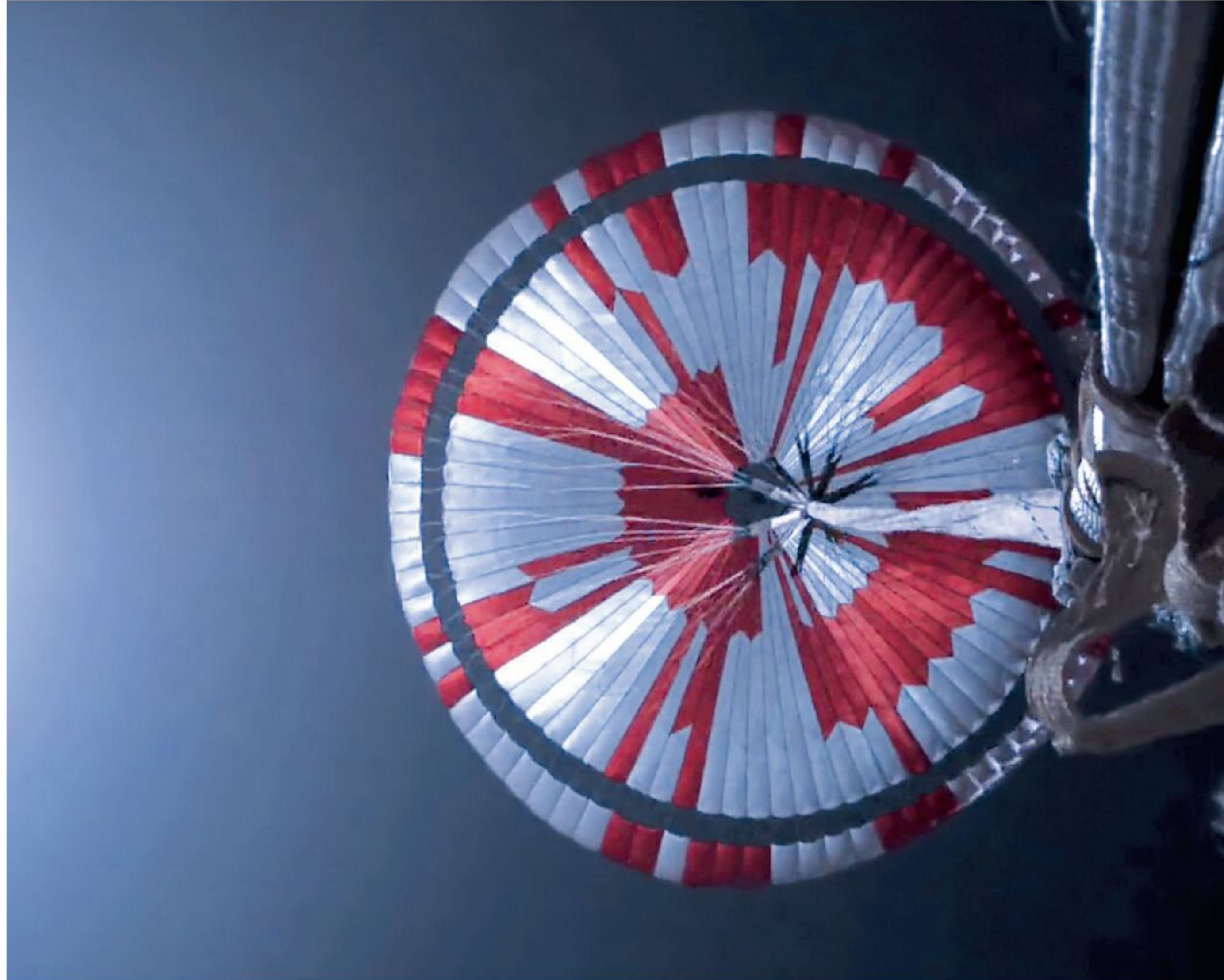
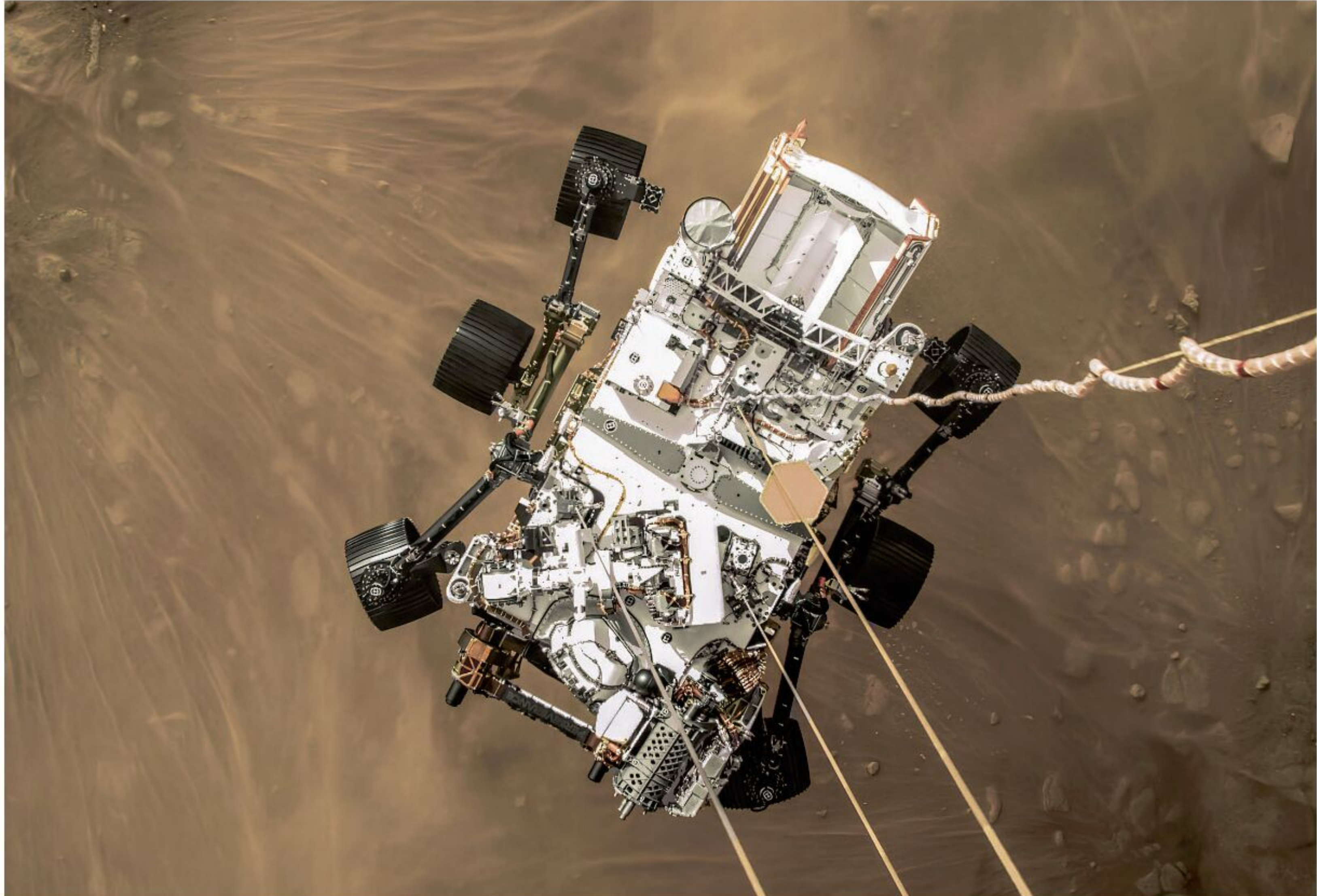


California's unprecedented wildfires

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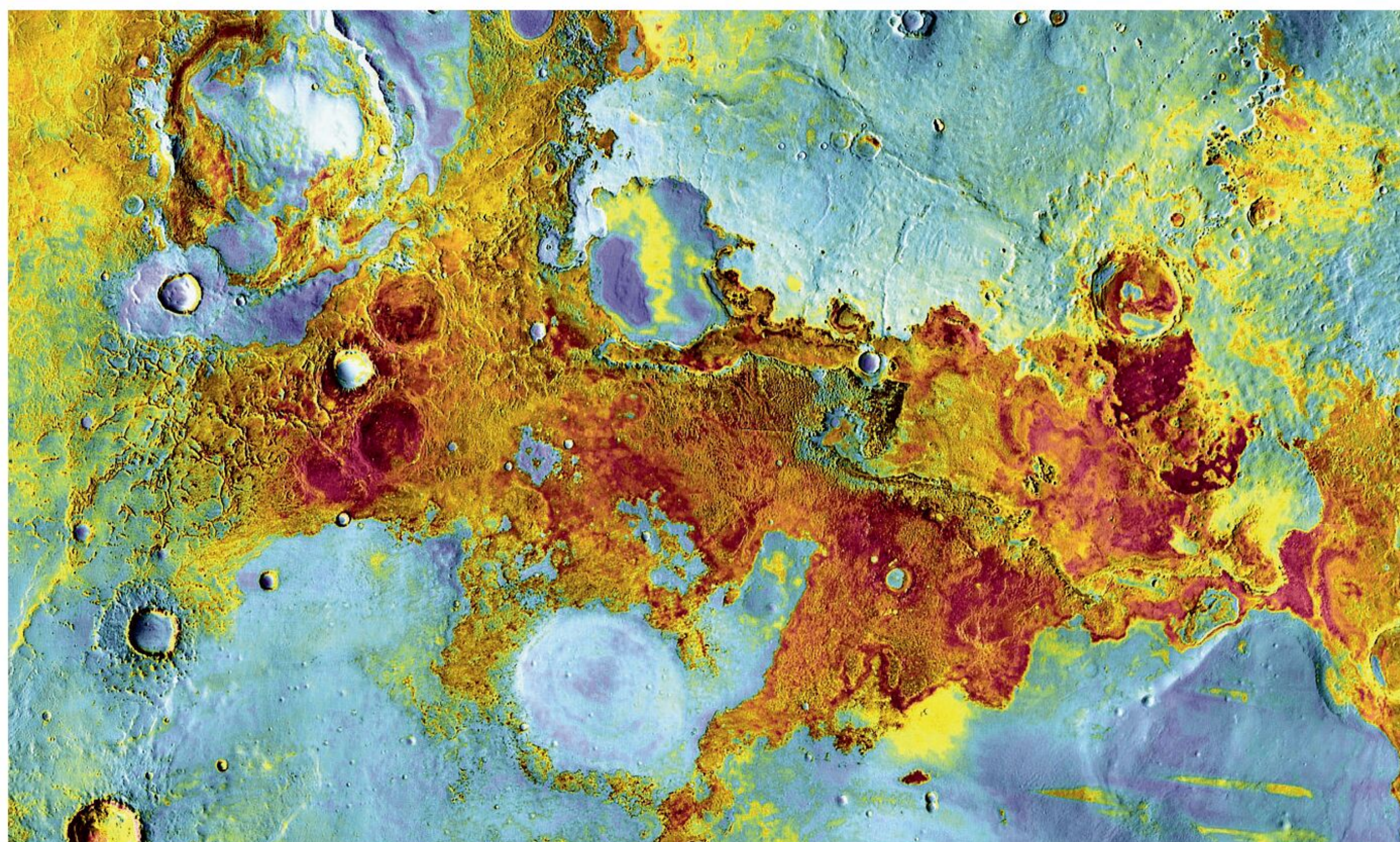
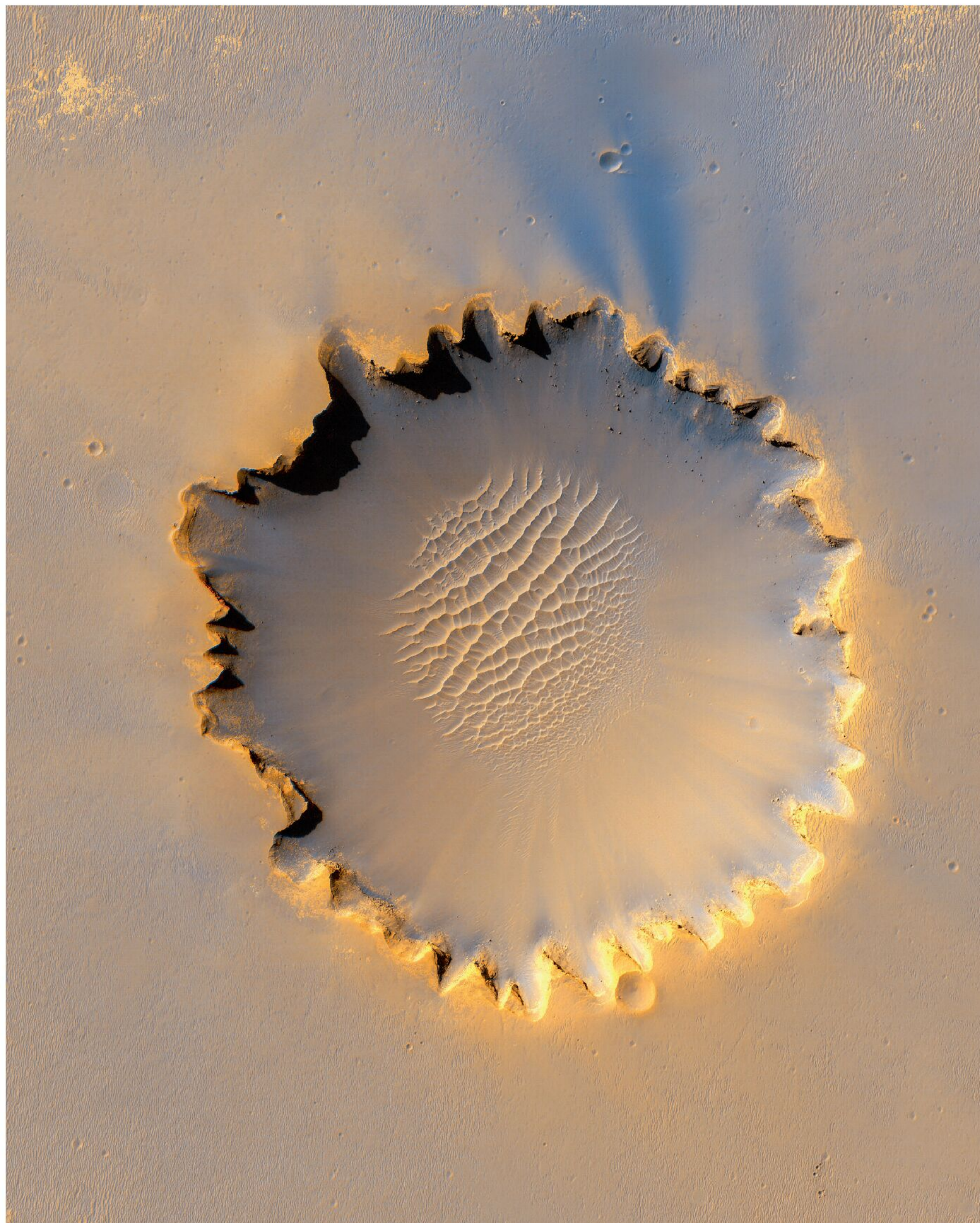






## Setting foot on the Red Planet

Human exploration of Mars is coming, says NASA's former chief scientist [newscientist.com/video](https://www.newscientist.com/video)



## Seeing red



NASA/JPL-Caltech  
TASCHEN

FROM H. G. Wells's alien invaders in *The War of the Worlds* to *The Martian*'s abandoned astronaut, we have long been inspired by the idea that life could reside on Mars – human or otherwise. Flybys, orbiters and landers, including NASA's Perseverance rover and its aerial sidekick, Ingenuity, have made Mars one of the best understood planets in our solar system. Now, more than ever, we are closer to answering the question: could life exist there?

A new book, *Mars: Photographs from the NASA archive*, celebrates the missions that have enriched our understanding of Mars and looks to a future where humans explore the Red Planet.

Clockwise from top, far left: the Dingo gap in Gale crater, which NASA's Curiosity rover crossed; an impact crater at Meridiani Planum, shot by the Mars Reconnaissance Orbiter's High Resolution Imaging Science Experiment camera; Mars's surface temperature, from cold blue to warm red, captured by the Mars Odyssey spacecraft's Thermal Emission Imaging System; Perseverance photographs the parachute used to slow its landing; a rocket-powered stage lowers Perseverance onto Mars in a "sky crane" manoeuvre. ■

David Stock

