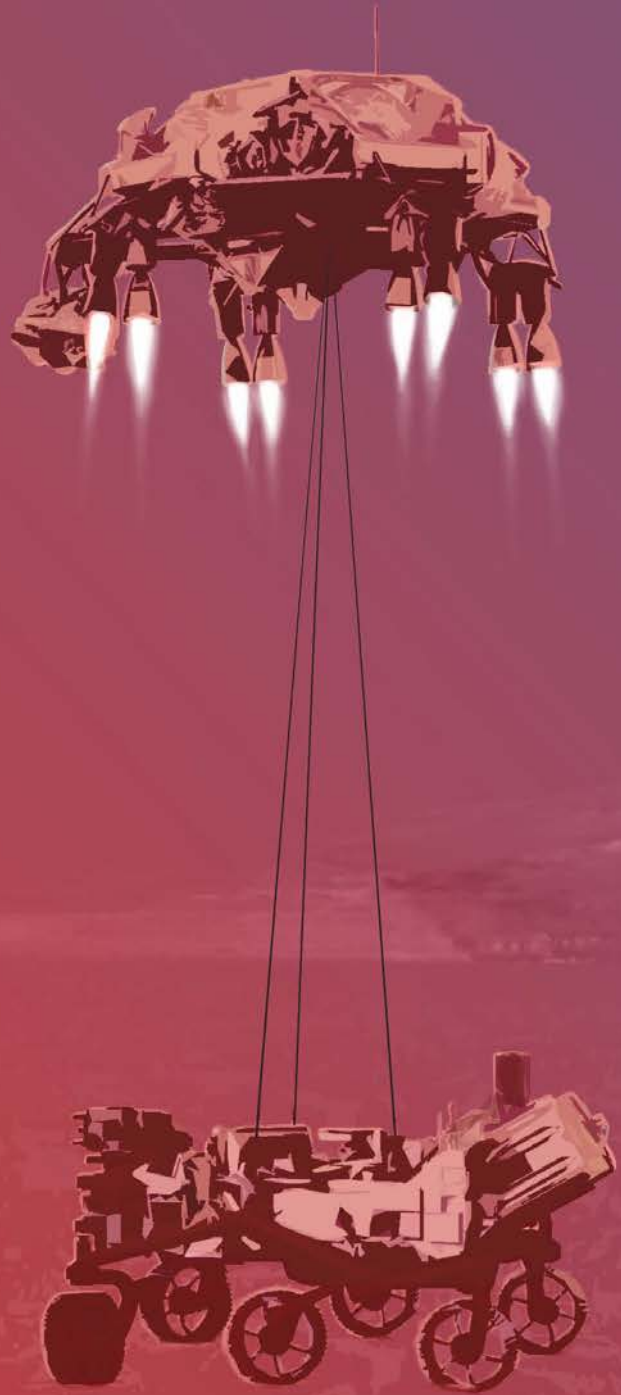


National Aeronautics and
Space Administration



MARS PERSEVERANCE





ARE YOU
READY FOR
THE NEXT
ROVER
LANDING?

**In this packet you will find
everything you will need to
join us and participate
in the historic landing of
NASA's Perseverance rover
on Mars!**

Follow us on social media:

@NASAPersevere



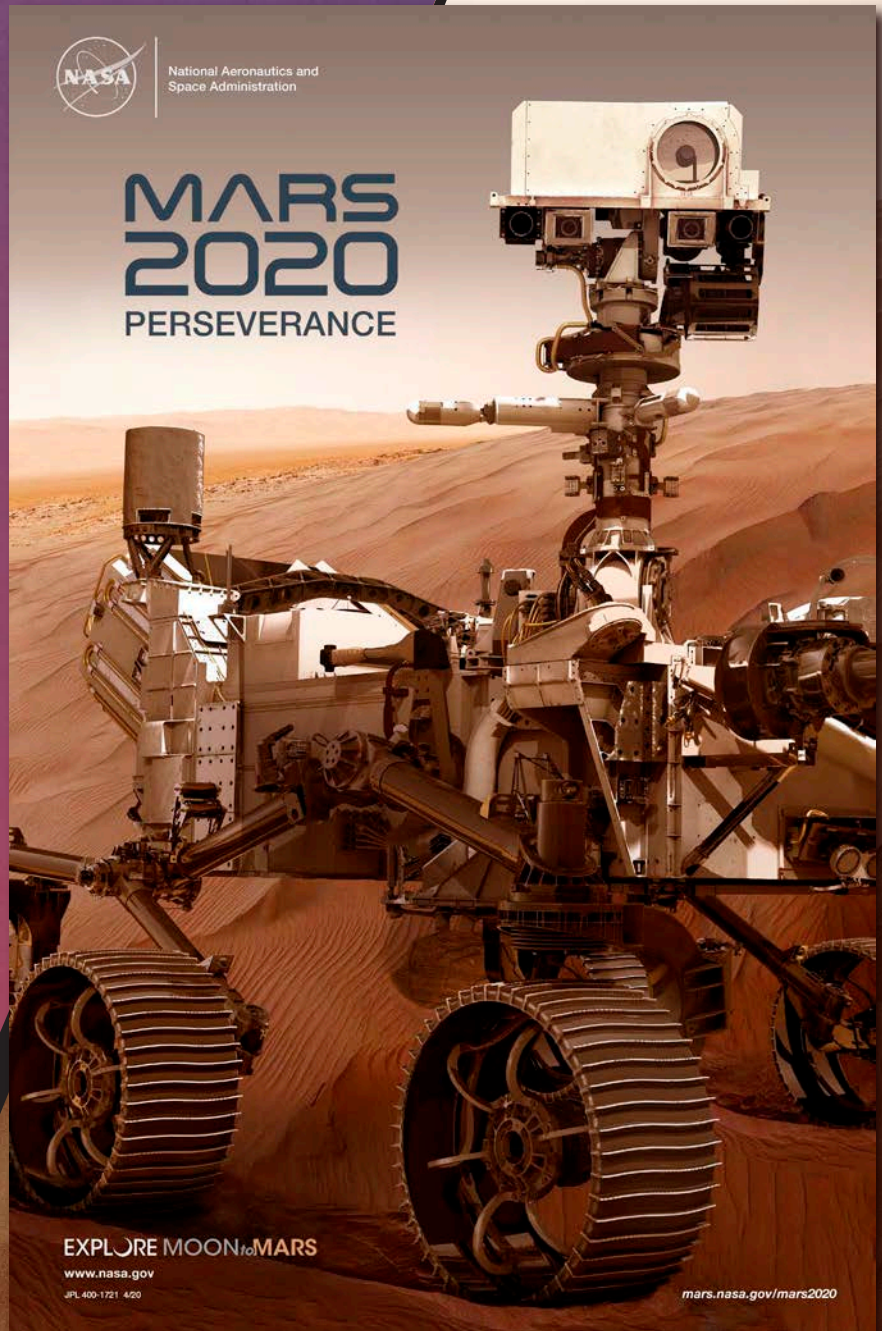
A detailed view of the Perseverance rover on the surface of Mars. The rover is shown from a low angle, highlighting its complex mechanical structure, including the mast with various sensors and cameras, the solar panels, and the six large, treaded wheels. The background is a clear, reddish-orange sky, and the foreground shows dark, rocky terrain.

MEET PERSEVERANCE

The Perseverance rover will seek signs of ancient life and collect samples of rock and regolith (broken rock and dust) for possible return to Earth.

Perseverance will land in Jezero Crater, a place that holds promise for finding evidence of past microbial life.

The rover will collect the most compelling rock samples and store them on the Martian surface for possible return to Earth by a future mission.



✦ Download this poster for your home Mission Control.

JOIN US FOR LANDING!



PERSEVERANCE IS LANDING ON

Feb. 18, 2021

Tune in at 11:15 a.m. PST (2:15 p.m. EST)

WATCH ONLINE:

- *NASA TV*
- *NASA.gov/live*
- *YouTube.com/NASA*



- ✦ **Download the mission patch**
- ✦ **Watch Mission Trailer**

ROVER QUICK FACTS



MISSION NAME

Mars 2020

ROVER NAME

Perseverance

MAIN JOB

The Perseverance rover will seek signs of ancient life and collect samples of rock and regolith (broken rock and dust) for possible return to Earth.

LAUNCH

July 30, 2020

LANDING

Feb. 18, 2021

LANDING SITE

Jezero Crater, Mars

MARS 2020
PERSEVERANCE

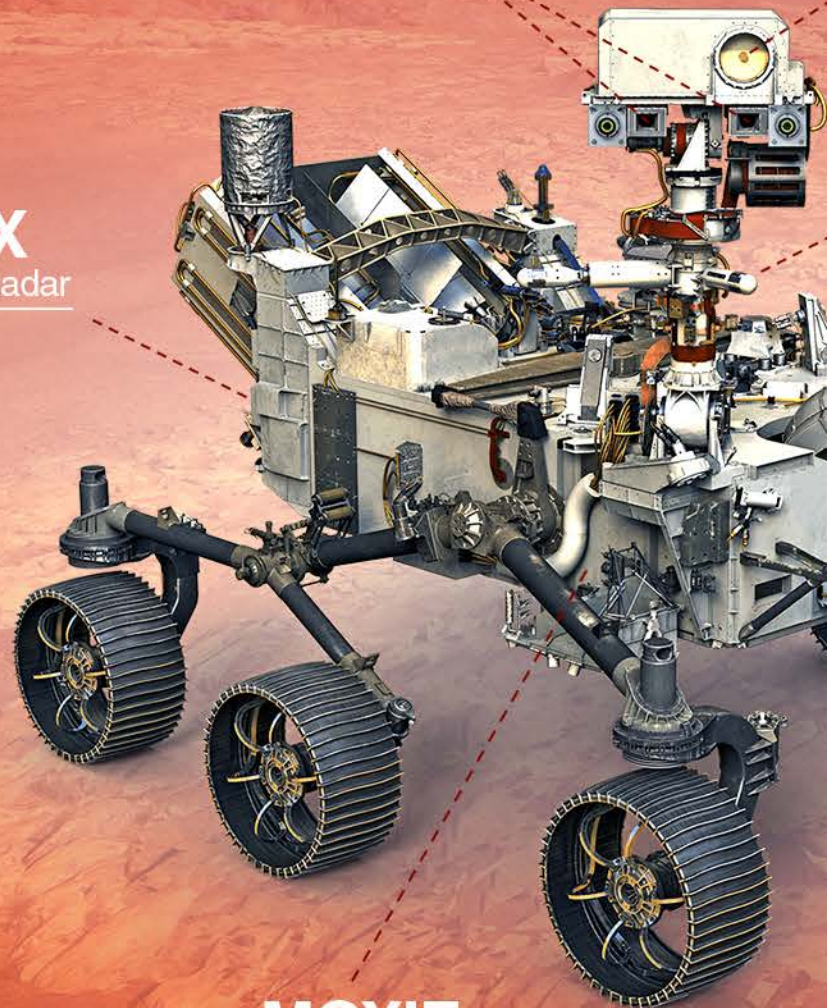


✦ [Download this sticker](#)

LEARN ABOUT THE ROVER

Mastcam-Z
Zoomable Panoramic Cameras

RIMFAX
Subsurface Radar



MOXIE
Produces Oxygen from Martian CO₂

Perseverance is the most capable rover ever sent to the Red Planet. With seven science instruments, 23 cameras and two microphones, this rover will gather more information than ever before about Mars!

✦ **Download this fact sheet**

SuperCam
Laser Micro-Imager

MEDA
Weather Station

SHERLOC
Ultraviolet Spectrometer
WATSON (Camera)

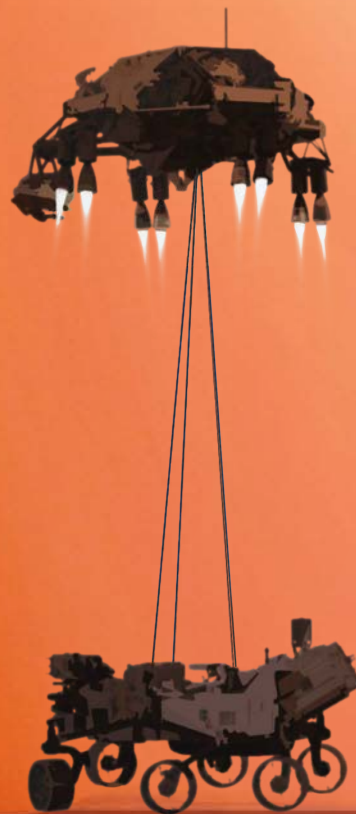
PIXL
X-ray Spectrometer



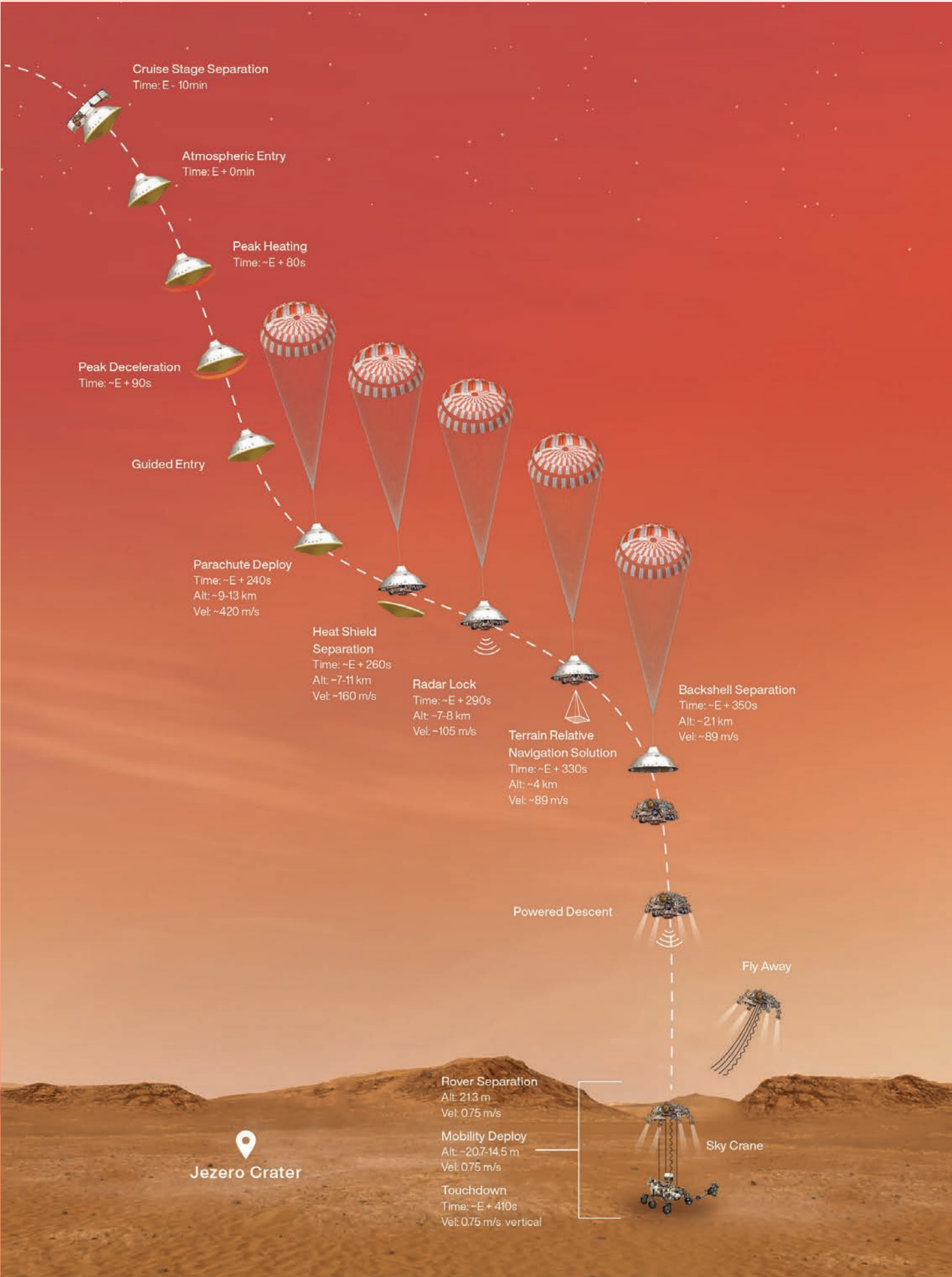
HOW TO LAND ON MARS

Entry, Descent, and Landing (EDL) is the shortest and most intense phase of the mission. In the seven-minute trip from the top of the atmosphere to the surface of Mars, hundreds of critical events must execute perfectly for a safe touchdown.

✦ **Learn more about landing**



Follow the steps as Perseverance lands in Jezero Crater. >





RETRIEVE
YOUR
BOARDING
PASS!

If you submitted your name to the “Send Your Name to Mars” campaign, your name will LAND on Mars!

Get your boarding pass NOW and tune in to watch the landing online!



Didn't participate yet?

Your name can fly on our NEXT mission to Mars.

✦ Get my boarding pass

5 THINGS TO KNOW ABOUT THE MARS HELICOPTER INGENUITY

- 1** The first test of powered flight on another planet.
- 2** Built to be light and strong enough to stow away under the rover while on the way to Mars, and survive the harsh Martian environment after arrival. The helicopter weighs less than 4 pounds (1.8 kilograms).
- 3** Powerful enough to lift off in the thin Mars atmosphere. The atmosphere of Mars is very thin: less than 1% the density of Earth's.
- 4** The helicopter may fly for up to 90 seconds, to distances of almost 980 feet (300 meters) at a time and about 10 to 15 feet above the ground. That's no small feat compared to the first 12-second flight of the Wright Brothers' airplane.
- 5** The helicopter flies on its own, without human control. It must take off, fly and land, with minimal commands from Earth sent in advance.

National Aeronautics and Space Administration



Mars Helicopter



When NASA's Mars 2020 rover lands on February 18, 2021, it will be carrying a passenger onboard: the first helicopter ever designed to fly in the thin Martian air.

The Mars Helicopter is a small, autonomous aircraft that will be carried to the surface on the Mars 2020 rover. Its mission is experimental in nature and completely independent of the Mars 2020 science mission. In the months after landing, the helicopter will be placed on the surface to test – for the first time ever – powered flight in the thin Martian air. Its performance during these experimental test flights will help inform decisions relating to considering small helicopters for future Mars missions, where they could perform in a support role as robotic scouts, surveying terrain

from above, or as full standalone science craft carrying instrument payloads. Taking to the air would give scientists a new perspective on a region's geology and even allow them to peer into areas that are too steep or slippery to send a rover. In the distant future, they might even help astronauts explore Mars.

The project is solely a demonstration of technology; it is not designed to support the Mars 2020 mission, which is searching for signs of ancient life and collecting samples of rock and sediment in tubes for potential return to Earth by later missions.

NASAfacts

✦ **Download this fact sheet**

✦ **Watch trailer**

