National Aeronautics and Space Administration

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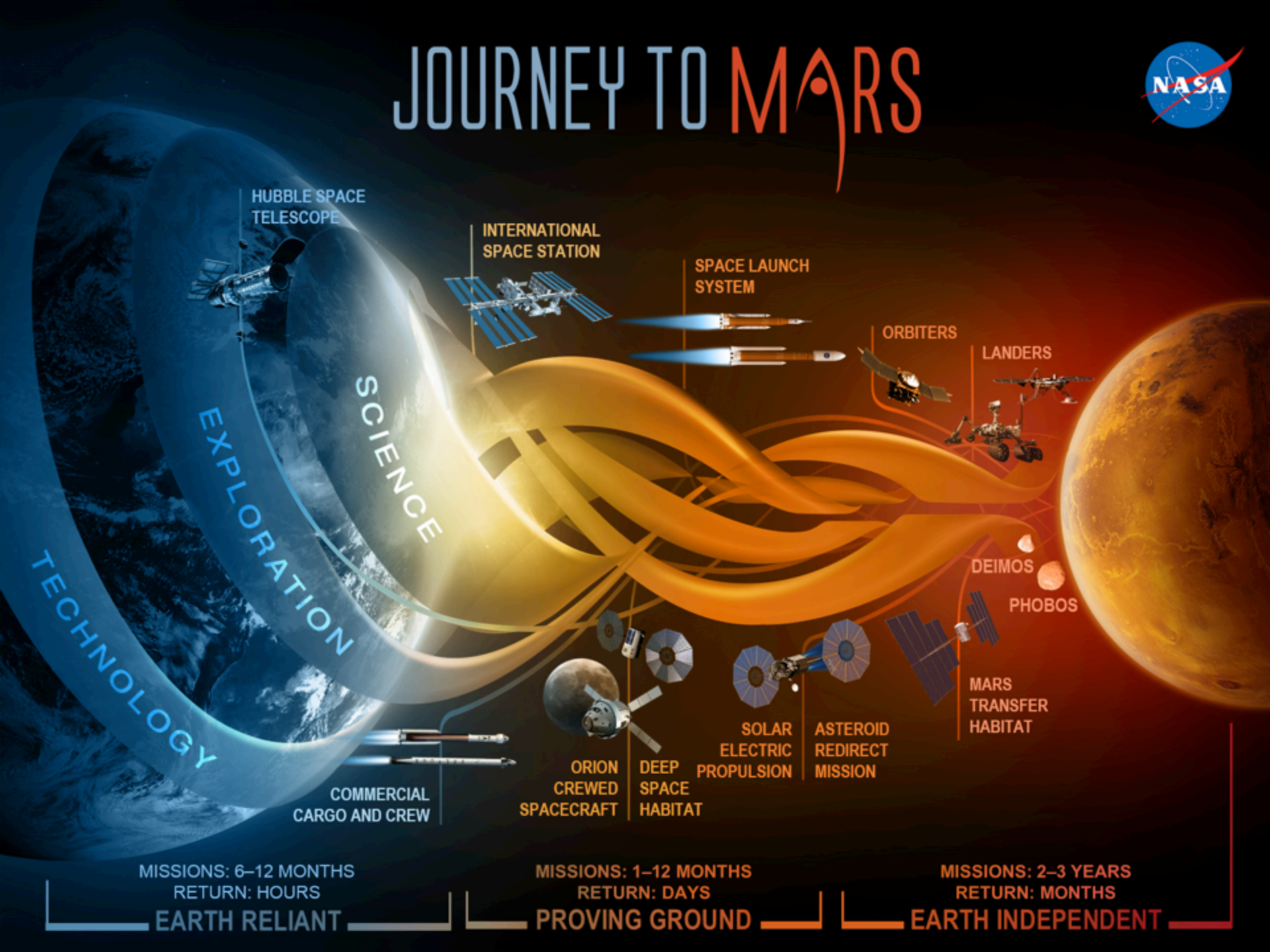
SPACE LAUNCH SYSTEM

BUILDING THE FUTURE OF SPACE EXPLORATION

Trey Cate
NASA Space Launch System

June 8, 2016

www.nasa.gov/sls

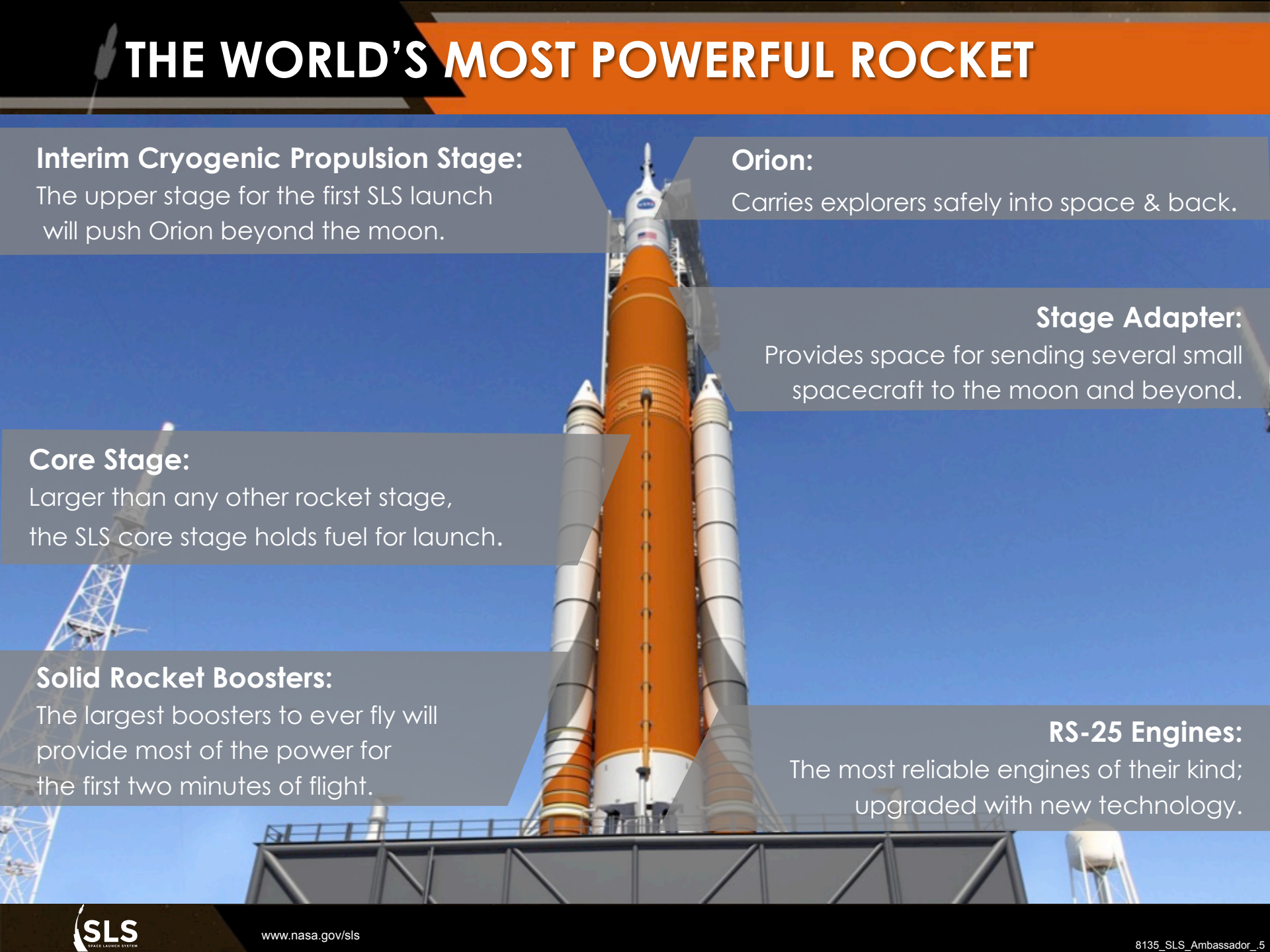

JOURNEY TO MARS
NASA
HUBBLE SPACE TELESCOPE
INTERNATIONAL SPACE STATION
SPACE LAUNCH SYSTEM
ORBITERS
LANDERS
SCIENCE
EXPLORATION
TECHNOLOGY
DEIMOS
PHOBOS
MARS TRANSFER HABITAT
SOLAR ELECTRIC PROPULSION
ASTEROID REDIRECT MISSION
ORION CREWED SPACECRAFT
DEEP SPACE HABITAT
COMMERCIAL CARGO AND CREW
MISSIONS: 6–12 MONTHS
RETURN: HOURS
EARTH RELIANT
MISSIONS: 1–12 MONTHS
RETURN: DAYS
PROVING GROUND
MISSIONS: 2–3 YEARS
RETURN: MONTHS
EARTH INDEPENDENT

LAUNCHING THE JOURNEY

In December 2014, the Journey to Mars took a huge leap forward with Orion's first flight, Exploration Flight Test-1.

8135_SLS_Ambassador_.4

THE WORLD'S MOST POWERFUL ROCKET



Interim Cryogenic Propulsion Stage:
The upper stage for the first SLS launch will push Orion beyond the moon.

Orion:
Carries explorers safely into space & back.

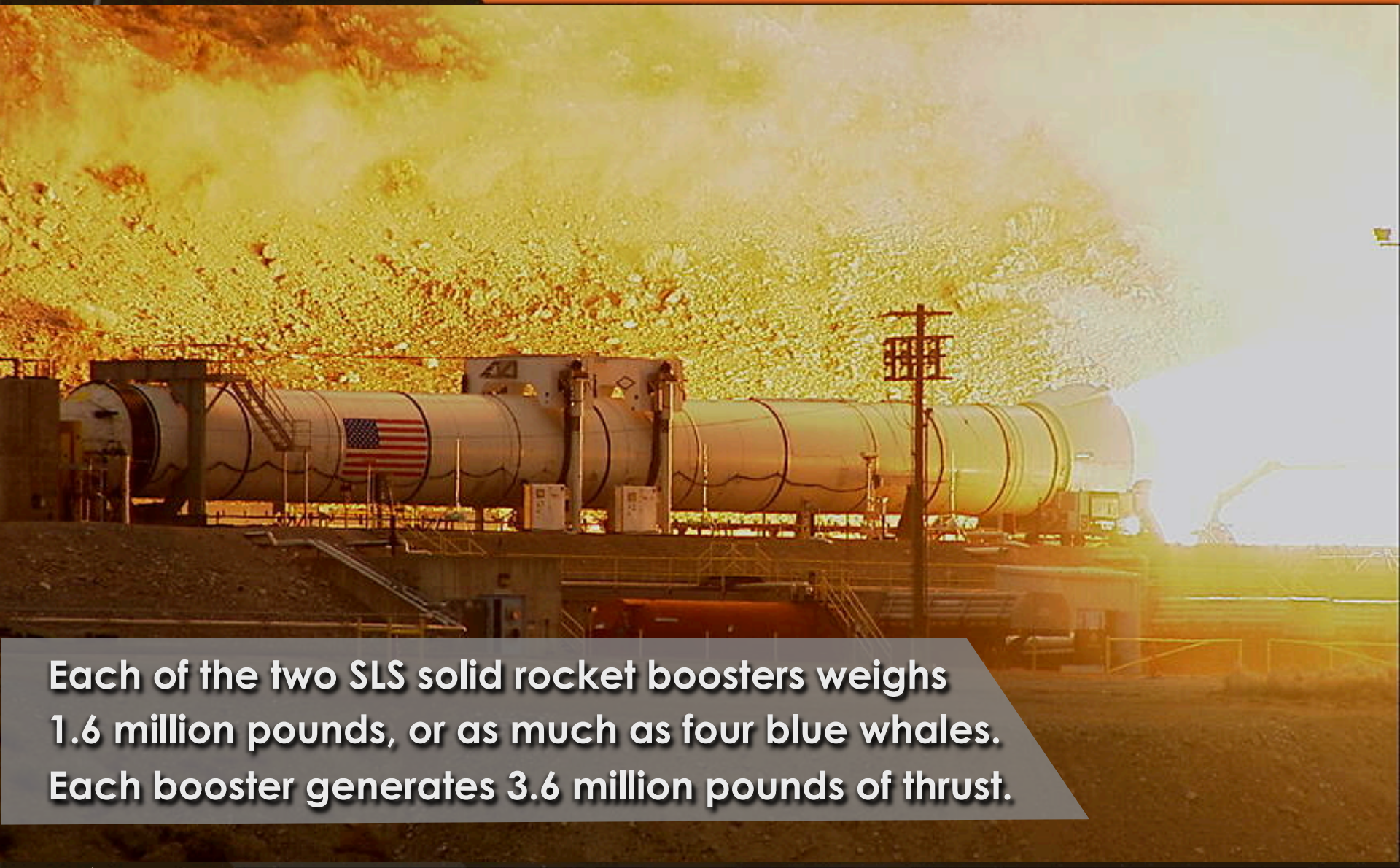
Stage Adapter:
Provides space for sending several small spacecraft to the moon and beyond.

Core Stage:
Larger than any other rocket stage, the SLS core stage holds fuel for launch.

Solid Rocket Boosters:
The largest boosters to ever fly will provide most of the power for the first two minutes of flight.

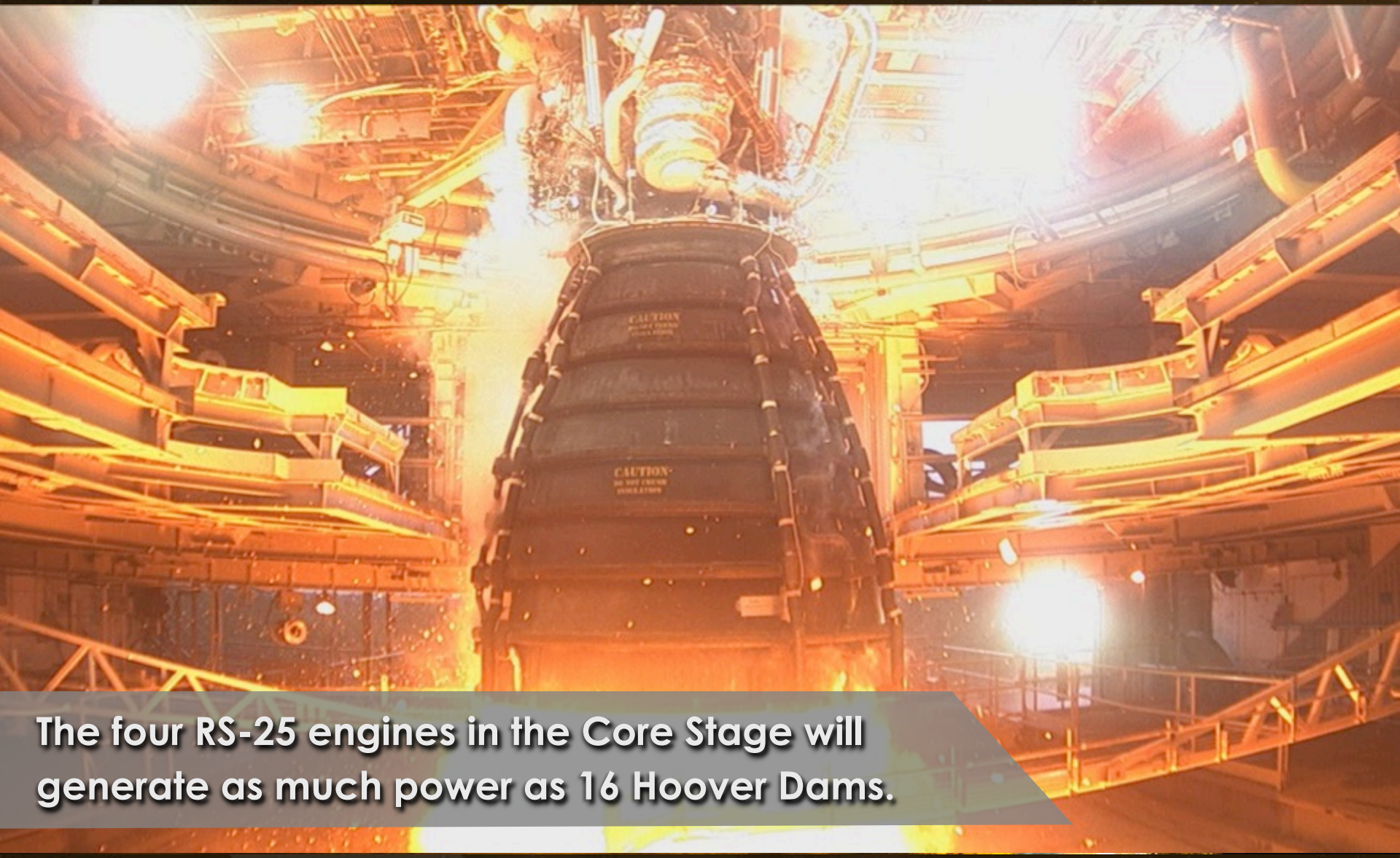
RS-25 Engines:
The most reliable engines of their kind; upgraded with new technology.

BUILDING A BETTER BOOSTER



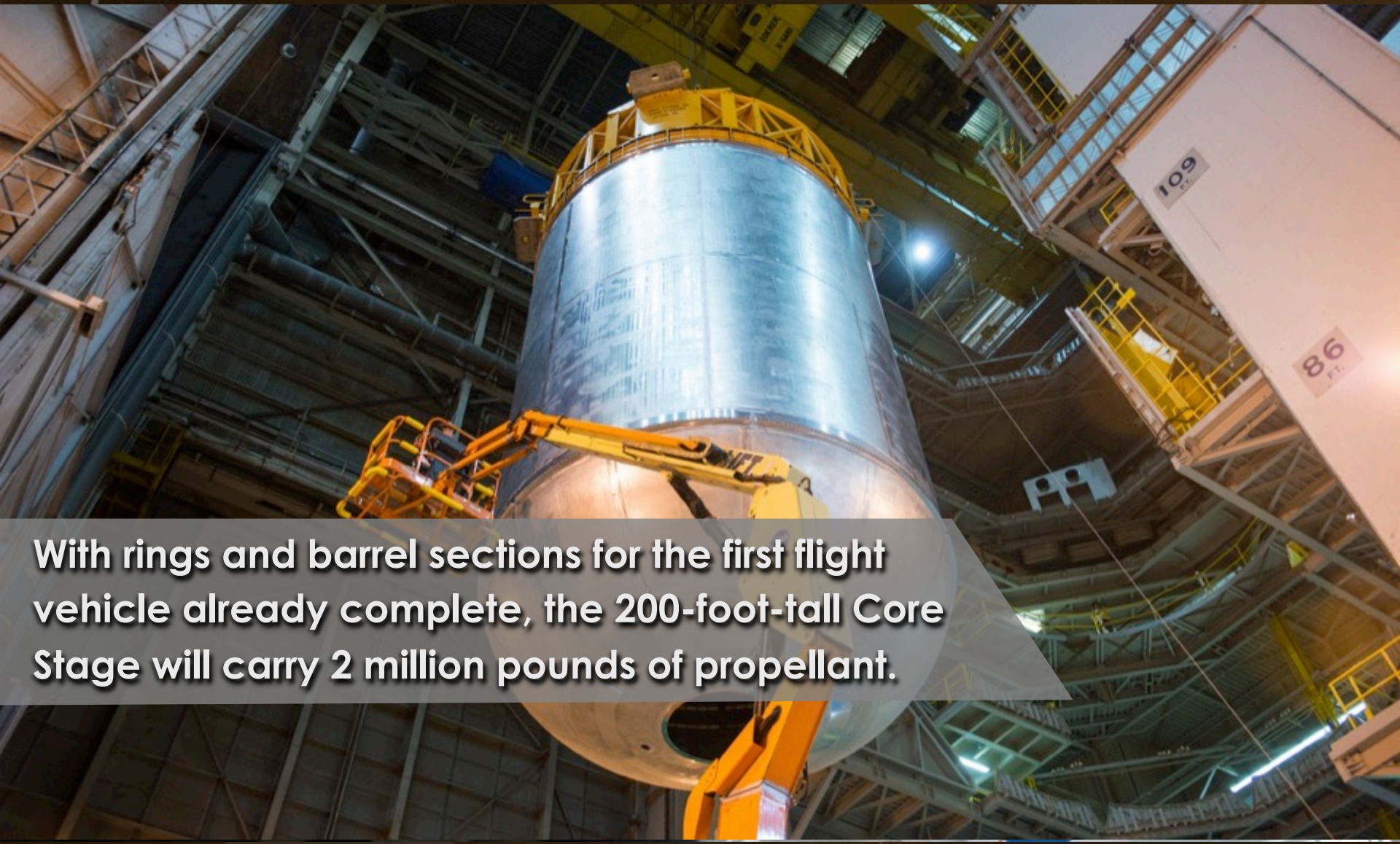
Each of the two SLS solid rocket boosters weighs 1.6 million pounds, or as much as four blue whales. Each booster generates 3.6 million pounds of thrust.

DESIGNED FOR PERFORMANCE



The four RS-25 engines in the Core Stage will generate as much power as 16 Hoover Dams.

FUELING THE FLAMES

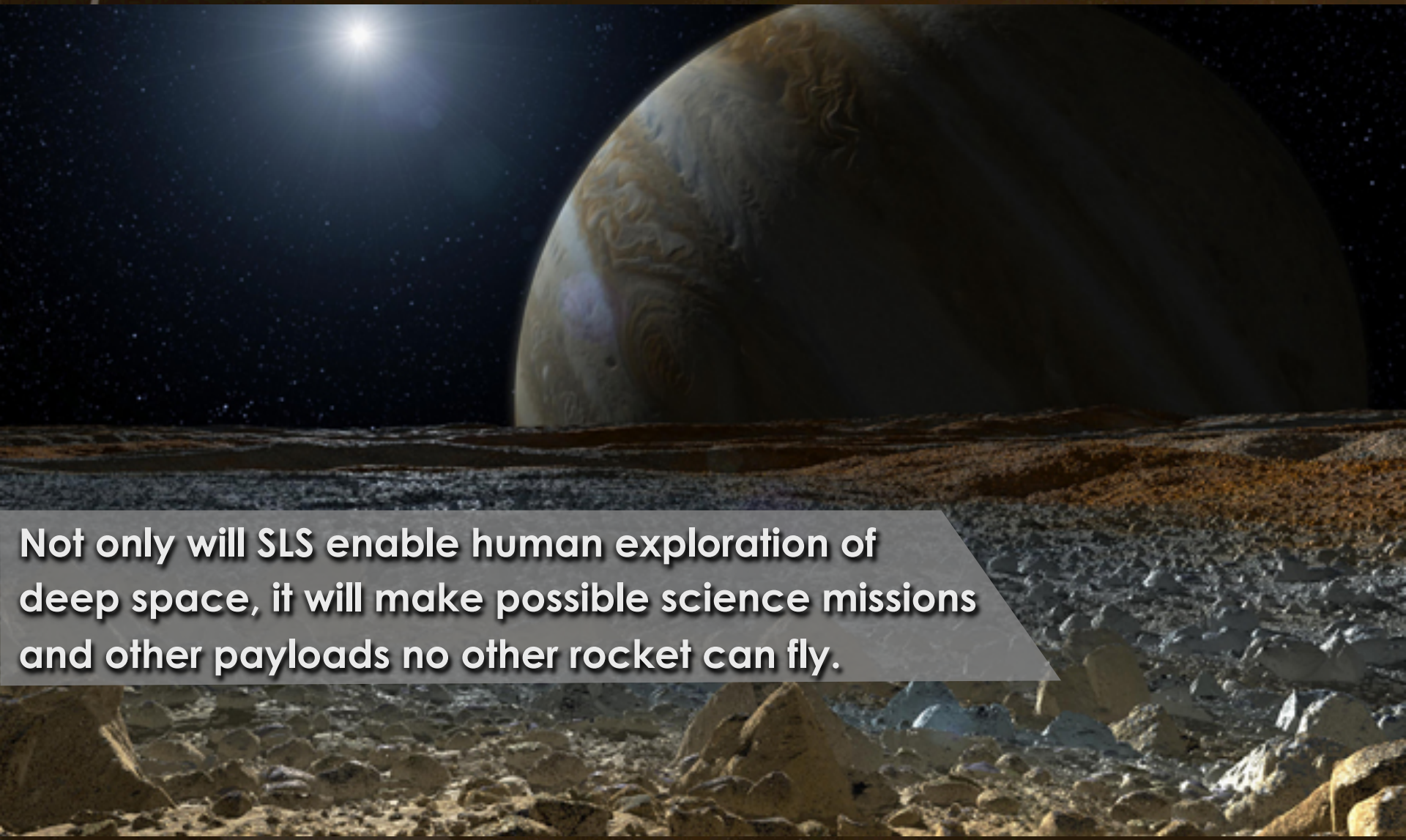


With rings and barrel sections for the first flight vehicle already complete, the 200-foot-tall Core Stage will carry 2 million pounds of propellant.

ADVANCING THE STATE OF THE ART

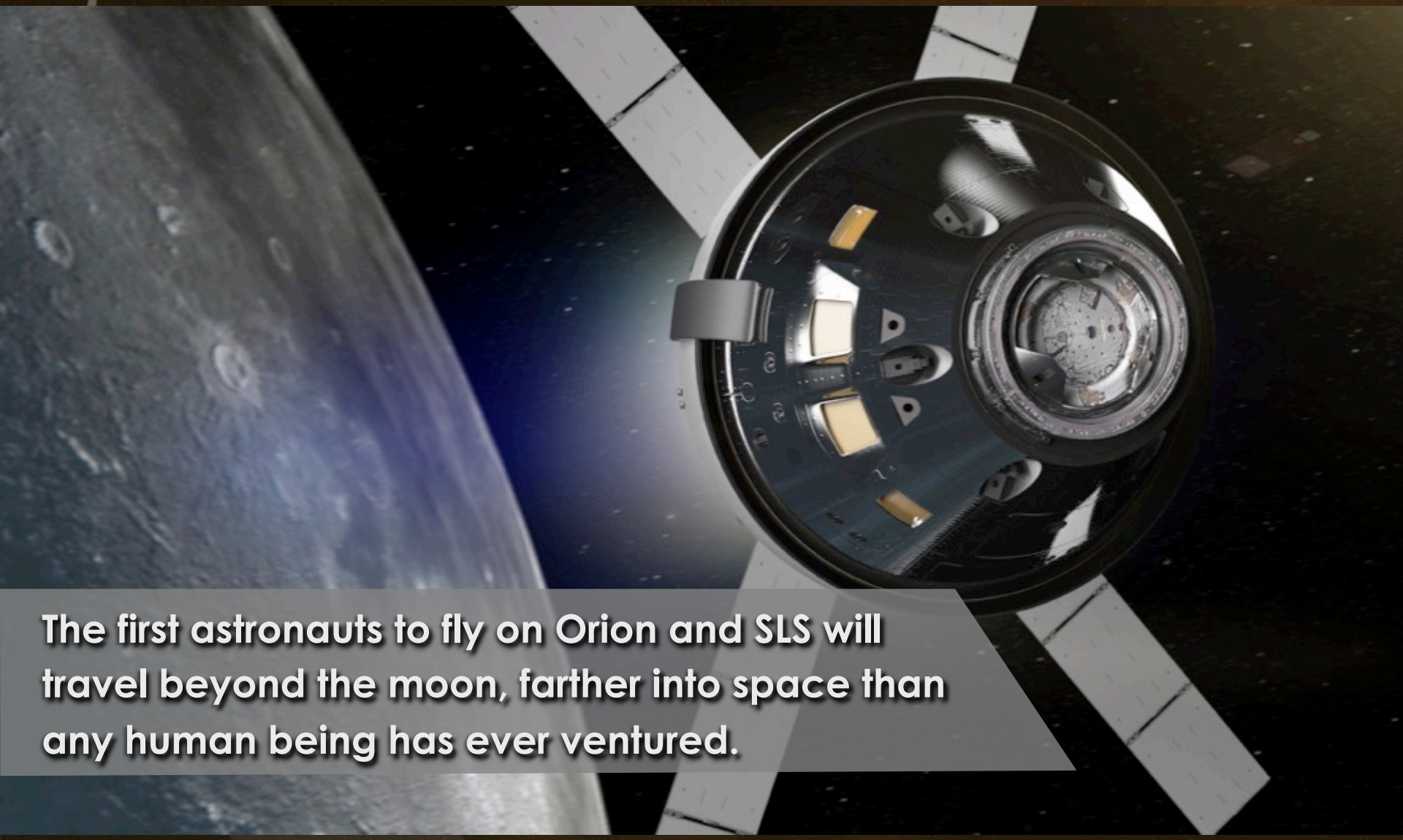
Investments in new technologies will keep SLS state-of-the-art as it upgrades to greater power, and will have benefits outside NASA.

MAKING THE IMPOSSIBLE POSSIBLE



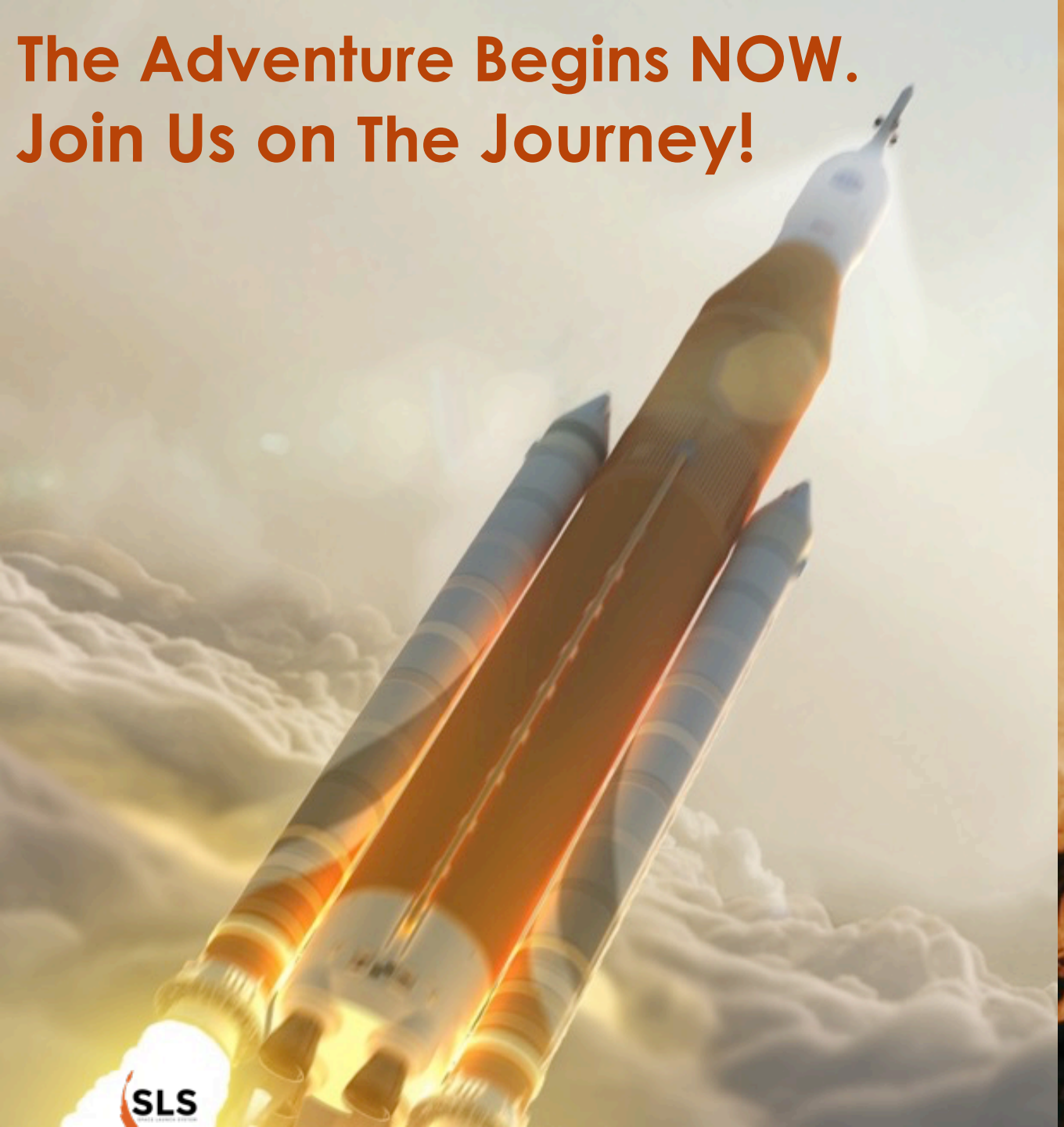
Not only will SLS enable human exploration of deep space, it will make possible science missions and other payloads no other rocket can fly.

RETURNING TO DEEP SPACE



The first astronauts to fly on Orion and SLS will travel beyond the moon, farther into space than any human being has ever ventured.

The Adventure Begins NOW.
Join Us on The Journey!



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