

NASA's Space Launch System **SLS** AMERICA'S EXPLORATION ROCKET

Taking Astronauts to the Moon & Beyond

Powered by Aerojet Rocketdyne

Able to carry more payload than the Space Shuttle and generate more thrust at launch than the Saturn V, SLS will send the Orion spacecraft farther into space than Apollo ever ventured... **and that's just the beginning.**



The Most Reliable, Flight Proven Booster Engine Ever Built

Four RS-25 engines providing a total of **2 million pounds of thrust**

Powered **135** Space Shuttle Missions

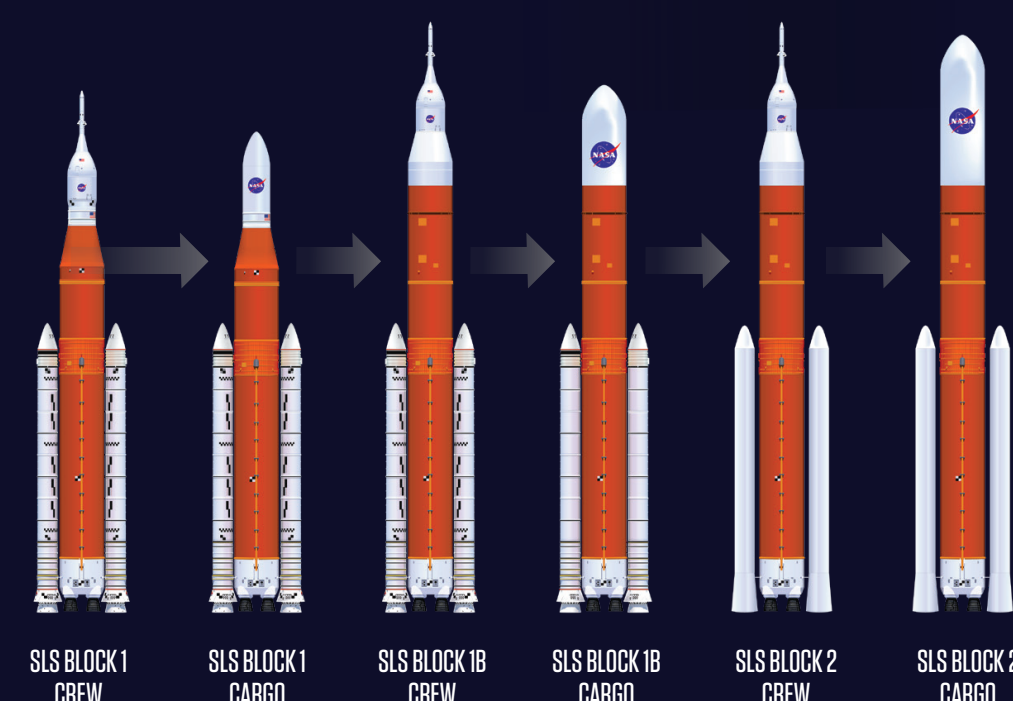
SLS RS-25 engines have a combined Shuttle flight experience of **57,193 seconds flown**

The only rocket built to send **60,000 POUNDS** to deep space

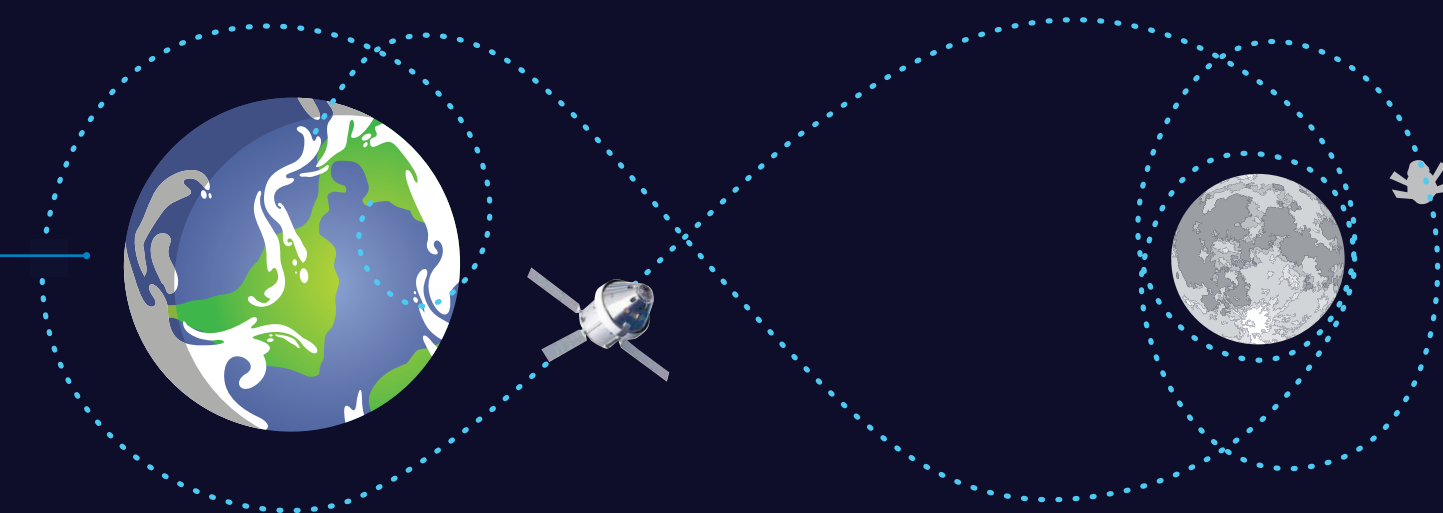
Greatest Flexibility

At 8.4 meters, a future configuration of SLS (Block 1B) will have the largest payload fairing in the world.

- Enhanced flexibility in the size and number of payloads launched at once
- More instruments and larger telescopes can be accommodated
- Greater return from the nation's highest-priority science missions
- Evolvable for human missions to Mars



SLS is the only vehicle that can send
Humans to the Moon with Orion



Two people need 1,630 pounds of supplies for a trip to the Moon.

SLS will launch even more cargo to the Moon than the Space Shuttle could send to low-Earth orbit.

Space Shuttle cargo to low-Earth orbit – 50K pounds SLS Block I cargo to the Moon – 60K pounds

Unmatched Speed

- Shorter duration trips and less exposure to harsh space environments for crew and cargo
- Great scientific discoveries will return more quickly to Earth
- Costs will be reduced as a result of these accelerated timelines
- Carry crew and cargo to deep space faster and more efficiently than any other launch vehicle
- Earlier arrival at destinations than by other means of in-space transportation

Lowest Risk

Increased payload capability requires fewer launches and less complex operations, which decreases risk and cost associated with these intricate missions.

NASA designed the Space Launch System as the foundation for a generation of human exploration missions to deep space, including missions to the Moon and Mars. SLS has the ability to send more cargo to the Moon on a single mission to make exploration simpler and safe.

NASA's Space Launch System (SLS): **Powered by Aerojet Rocketdyne,**
America's Exploration Rocket is taking humans to the Moon & beyond

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