

A portrait of Julia Khodabandeh, a woman with blonde hair and bangs, smiling. She is wearing a black V-neck shirt. The background is a blurred industrial setting with blue and brown tones.

JULIA KHODABANDEH

BOOSTER SUBSYSTEM MANAGER AT MSFC



SLS
SPACE LAUNCH SYSTEM

1

00:00:00,000 --> 00:00:04,600

Hi, my name is Julia Khodabandeh, and I'm a booster subsystem manager

2

00:00:04,680 --> 00:00:07,740

NASA's Marshall Space Flight Center in Huntsville, Alabama.

3

00:00:08,680 --> 00:00:11,400

This is Rocket Science in 60 Seconds.

4

00:00:13,500 --> 00:00:15,700

The five-segment solid rocket booster

5

00:00:15,780 --> 00:00:19,600

are the largest, most powerful solid propellant booster ever built for flight.

6

00:00:19,820 --> 00:00:24,460

Each of the two boosters will produce more than 3.6 million pounds of thrust,

7

00:00:24,540 --> 00:00:26,900

launching the Artemis missions to the Moon.

8

00:00:29,920 --> 00:00:33,680

Because the SLS rocket is built for deep space missions,

9

00:00:33,740 --> 00:00:36,440

the SLS boosters are designed to be faster

10

00:00:36,520 --> 00:00:38,440

and more powerful than the space shuttle.

11

00:00:38,560 --> 00:00:41,900

The biggest difference is the addition of a fifth propellant segment

12

00:00:42,000 --> 00:00:45,160

so the SLS rocket can send more weight — farther.

13

00:00:46,840 --> 00:00:49,840

The booster motor segments are stacked and mated