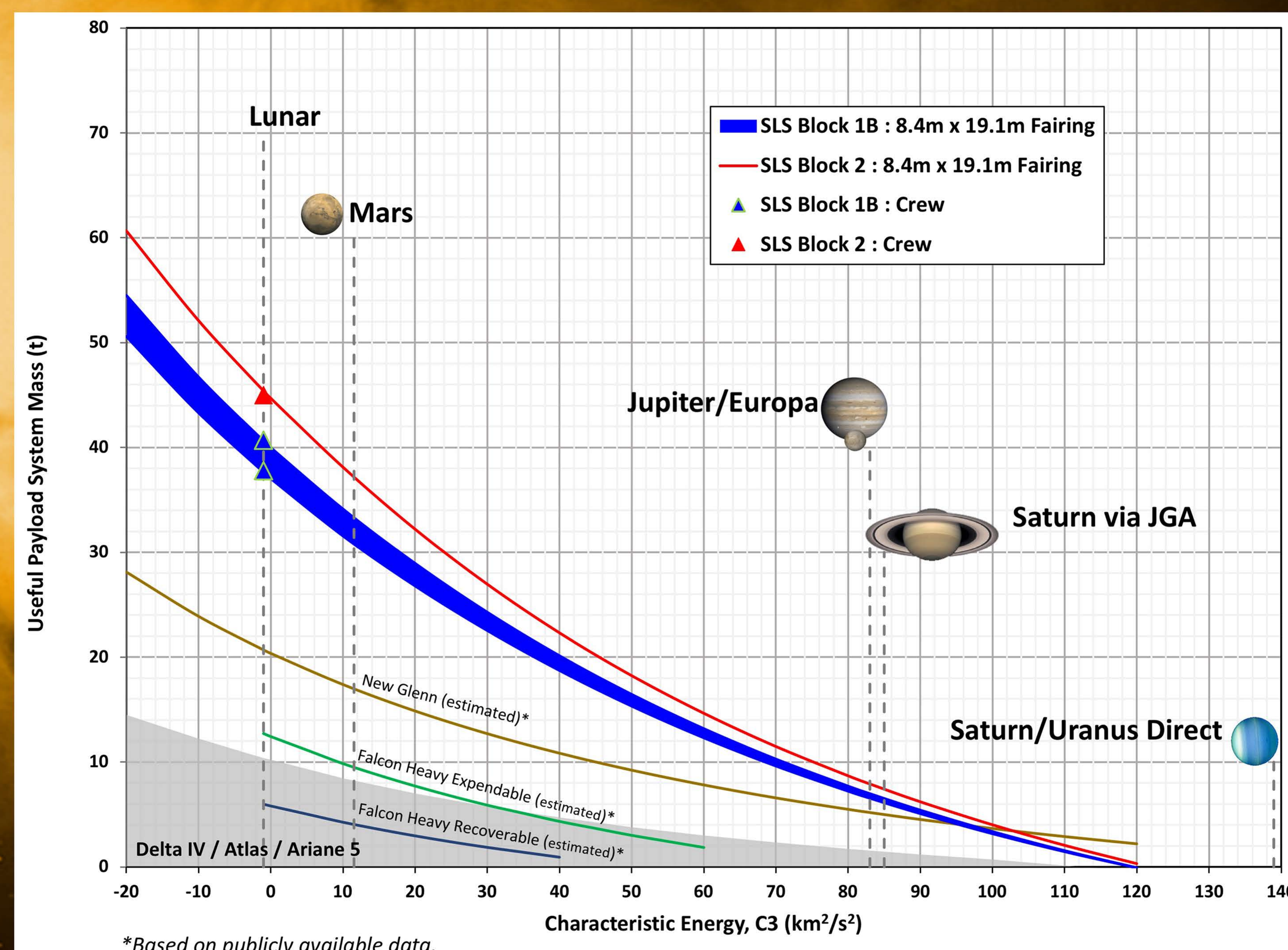
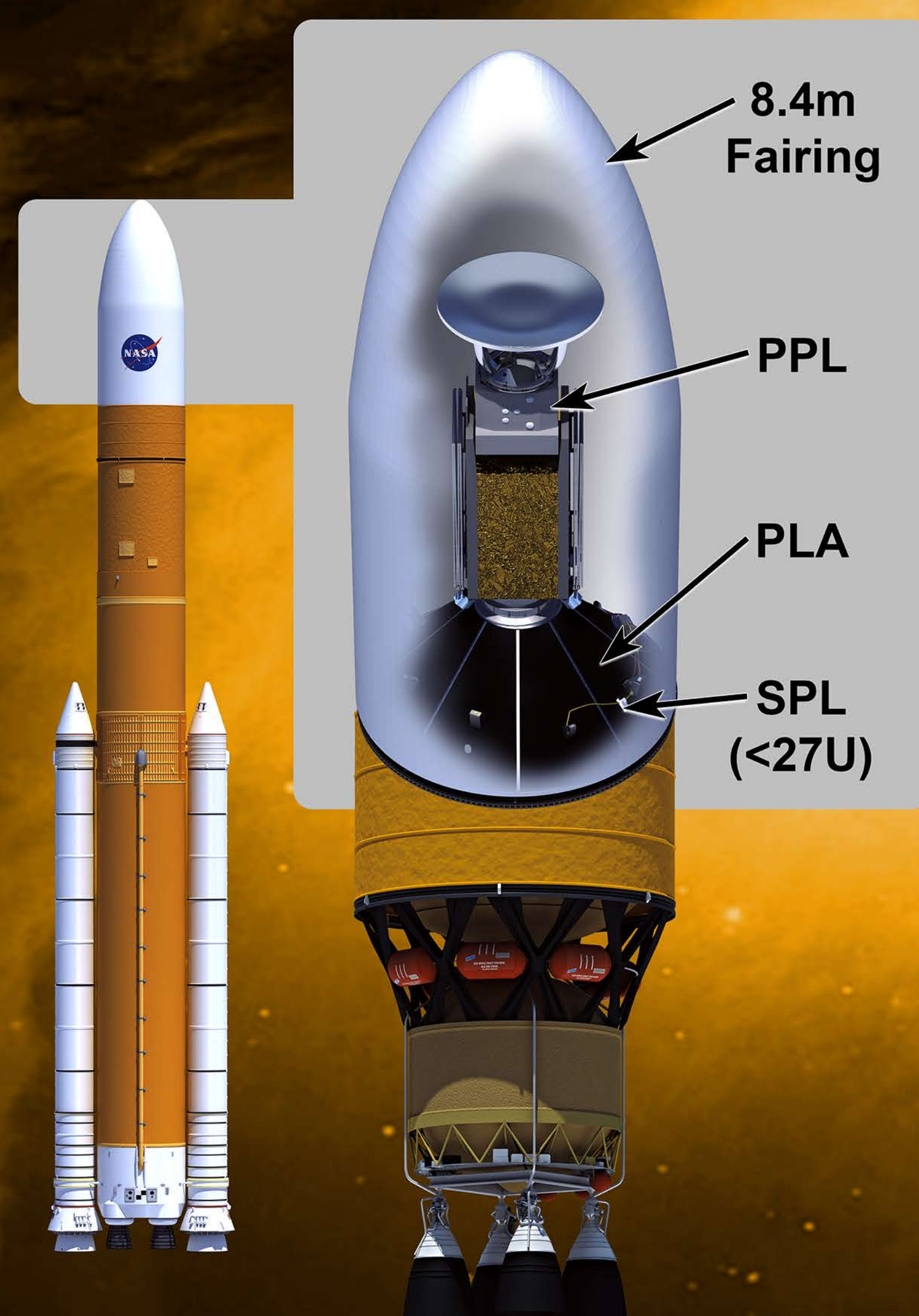


NASA's SPACE LAUNCH SYSTEM BLOCK 1B

Fastest Transit to Outer Planets

CARGO

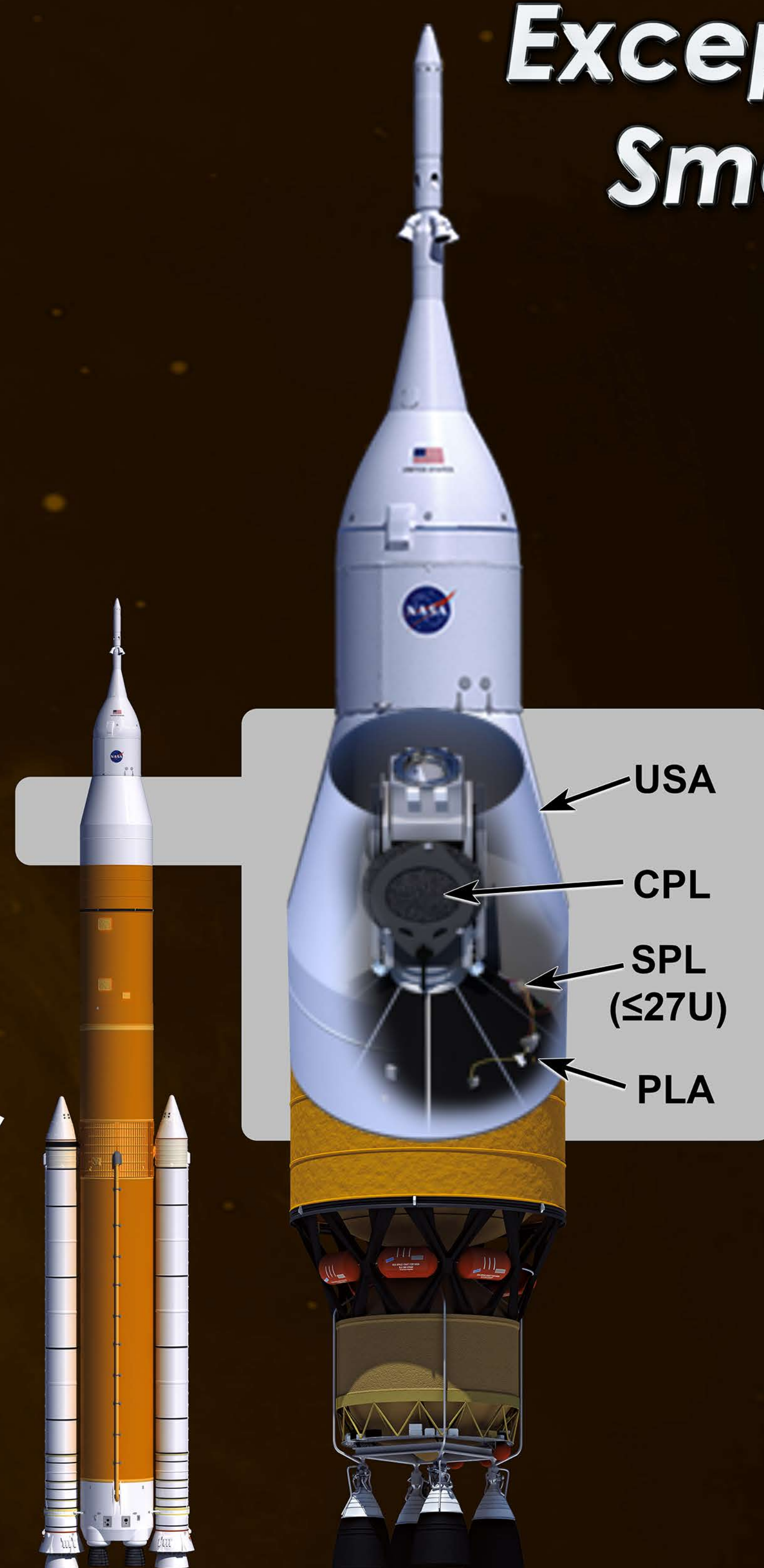
- Up to 7.5m diameter x 17.5m long payloads
- Exploration Upper Stage
- 1x Primary Payload
- Capability for ESPA-type payload carriers



Exceptional Opportunities for Smallsats to Deep Space

CREW

- Up to 4.5m diameter x 8.4m long payloads
- Exploration Upper Stage
- 1x Co-Manifested Payload
- Capability for ESPA-type payload carriers
- Accommodations for 6U, 12U and 27U Payloads
 - e.g., 10x 6U, 2x 12U, 2x 27U



DEPLOYMENT OPPORTUNITIES

- 1 First opportunity for deployment, clear 1st radiation belt
- 2 Clear both radiation belts plus ~1 hour
- 3 Halfway to the moon
- 4 At the moon, closest proximity (~250 km from surface)
- 5 Past the moon plus ~12 hours (lunar gravitational assist)

~DISTANCE

26,700 km	
64,500 km	
192,300 km	3 days
384,500 km	6 days
411,900 km	7 days

~FLIGHT TIME

3 hours	34 minutes
7 hours	51 minutes
6 hours	12 minutes
11 hours	57 minutes
0 hours	16 minutes

Distances and flight times indicated are based on a 6.5-day trip to the moon.

NOTES: Block 1 launching in fiscal year 2020, 26 t to TLI, Block 1B Crew launching in 2023, >34 t to TLI, 286 m³ payload volume;

Block 1B Cargo, >37 t to TLI, 537 m³ payload volume; Block 2 cargo >45 to TLI

EUS – Exploration Upper Stage USA – Universal Stage Adapter PPL – Primary Payload PLA – Payload Adapter SPL – Secondary Payload CPL – Co-Manifested Payload

