18 consecutive successful launches of new vehicle configurations:

- STARBIRD
- TCMP-I
- TCMP-II
- MSLS
- ait-1
- ait-2
- NTW/QRLV
- Minotaur I
- Minotaur II/TLV
- LRALT
- NFIRE TLV
- Minotaur IV Lite (HTV-2)
- Minotaur IV
- E-LRALT
- Juno
- Minotaur V
- Falcon 9 1.1
- Janus

...5 different launch vehicle contractors

- Orbital Sciences/Orbital ATK
- Lockheed Martin
- L-3 Coleman/AR Coleman
- Space Vector
- SpaceX

... From 7 different Ranges

- Wallops
- Cape Canaveral
- Wake
- Vandenberg
- Kodiak
- PMRF
- RTS
Defense budget establishes a “small launch” program with a dedicated funding line of $192.5 million over five years.

WASHINGTON — It’s been widely reported that the U.S. military views its satellites in space as prime targets of enemy aggression. But opinions diverge over how to deter and defeat potential attacks.

One school of thought is that satellites could be made less attractive targets if the military were able to launch new ones into orbit at will, within minutes or hours of an attack. This approach appears to be gaining traction especially as the commercial “new space” industry produces increasingly sophisticated vehicles in smaller sizes.

Air Force Secretary Heather Wilson said the goal is to “have a variety of launch capabilities in order to have assured access to space.”
Increasing Small Space Launch Manifest

Current
- STP-2 (SpaceX)
- NRO-111, -129, -174 (Orbital ATK)
- IceCAP (Spaceflight)
- Rapid Agile Launch Initiative (3x STP-S27s) (VOX et. al.)

Planned within next 12 months
- STP (STP-S28) (OSP-4)
- ORS-8 (OSP-4)
- Monolith (OTA)
- ASLON (SRP-O)

Increasing budget
- Next Slide
RSLP Launch/Support Contracts Overview

CURRENT

<table>
<thead>
<tr>
<th>Sub</th>
<th>Orbital</th>
<th>AS</th>
<th>MA</th>
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<tr>
<td>FY13</td>
<td>FY14</td>
<td>FY15</td>
<td>FY16</td>
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<td>Sounding Rocket Program - 3</td>
<td>Orbital/Suborbital Program – 3 Lane 1 (400 – 4,000 lb to LEO)</td>
<td>Aging Surveillance</td>
<td>Launch Services Mission Assurance (LSMA)</td>
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<td>FY19</td>
<td>FY20</td>
<td>FY21</td>
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<td>Small Rocket Program – Orbital (0 – 400 lb to LEO)</td>
<td>Orbital Services Program – 4 (400 – 8,000 lb to GTO)</td>
<td>Aging Surveillance Follow-On</td>
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FUTURE

- FY18: Sounding Rocket Program - 4
- FY19: Small Rocket Program – Orbital (0 – 400 lb to LEO)
- FY20: Orbital Services Program – 4 (400 – 8,000 lb to GTO)
- FY21: Aging Surveillance Follow-On
- FY22: LSMA Follow On
- FY23: Est End Dec 29
- FY24: Est End Nov 29
- FY25: Est End TBD
- FY26: Est End TBD

Building the Future of Military Space
Planned OSP-4/SRP-0 Acquisition Schedule

Timeline assumes the following SMC pre-solicitation activities already accomplished:

- ESIS
- ASRB
- ASP
- ASD
- SRB

Mission Initiation

Funding to ILC (24-30 Months)

Market Research (2 Months)

Requirement Development (1 Month)

RFP Finalization (2 Months)

Proposal Eval & Selection (4 Months)

Launch System Build Launch Service Execution (18-24 Months)

Initiate Mission/Contract Definition

Funding Commitment

RFP Release

Launch Services Award

Initial Launch Capability
• Provider “Continuity”
  • Movement away from IDIQ leaves providers “hanging” between missions
    • Personnel/Facility Security Issues
  • No “pool” to support special studies

• Solutions we’re exploring
  • IDIQ “On the side”
    • For all SRP-O/OSP-4 technically acceptable offerors
    • No limit to the competitive pool
      • Reverse on tradition - competing for a mission gets you into the IDIQ
**Small Launch Struggles – #2 of 4**

**Mission Assurance Capability**

<table>
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<tr>
<th>Provider</th>
<th>Comm’l</th>
<th>Cat 0 (OTA)</th>
<th>Cat “1-“ (OTA or SRP-O)</th>
<th>Cat 1 (SRP-O)</th>
<th>Cat “1+“ (SRP-O)</th>
<th>Cat 2 (SRP-O)</th>
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**Gov PWS Content**
- N/A
- 10
- 15
- 137
- 180
- 238

**PWS Deliverables**
- N/A
- 4
- 9
- 59**
- 80**
- 153**

**Certification**
- FAA
- FAA
- FAA
- FAA
- FAA
- FAA
- SMC
- SMC

**Indemnification**
- FAA
- FAA
- FAA
- FAA
- FAA
- FAA
- USAF

**Reliability**
- 80-90%
- 80-90%
- 90-95%
- 95%
- 95%-99%
- 99%

* - Not an OTA Prototype Candidate
** - Some are multiple/recurring
• **Rideshare vs Dedicated**
  • Rideshare is Always less expensive
  • Dedicated is Always more desirable
  • This truth has always limited USG Small Launch, BUT:
    • You are Moving the Tradespace from 10:1>3:1
Avoiding Duplicate Work

- Launch Vehicle and Launch Service Contractor capability must be evaluated, BUT
- Not more than ONCE (unless/except…)

Solutions we’re exploring

- “Credit” for prior proposals, either:
  - Within OSP-4 and/or SRP-O
    - Proposal: “We offer the same vehicle previously evaluated…”
  - Inclusive of EELV Certification
    - Proposal: “We offer the certified version of…”