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Agile Development Flight Center Model for the LPTA COTS Space Launch System

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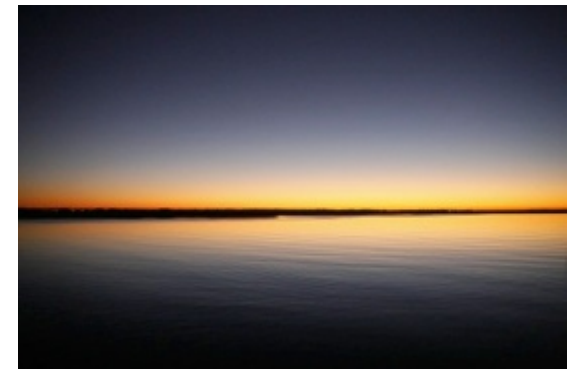


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Agile Development Flight Center Model for the LPTA COTS Space Launch System



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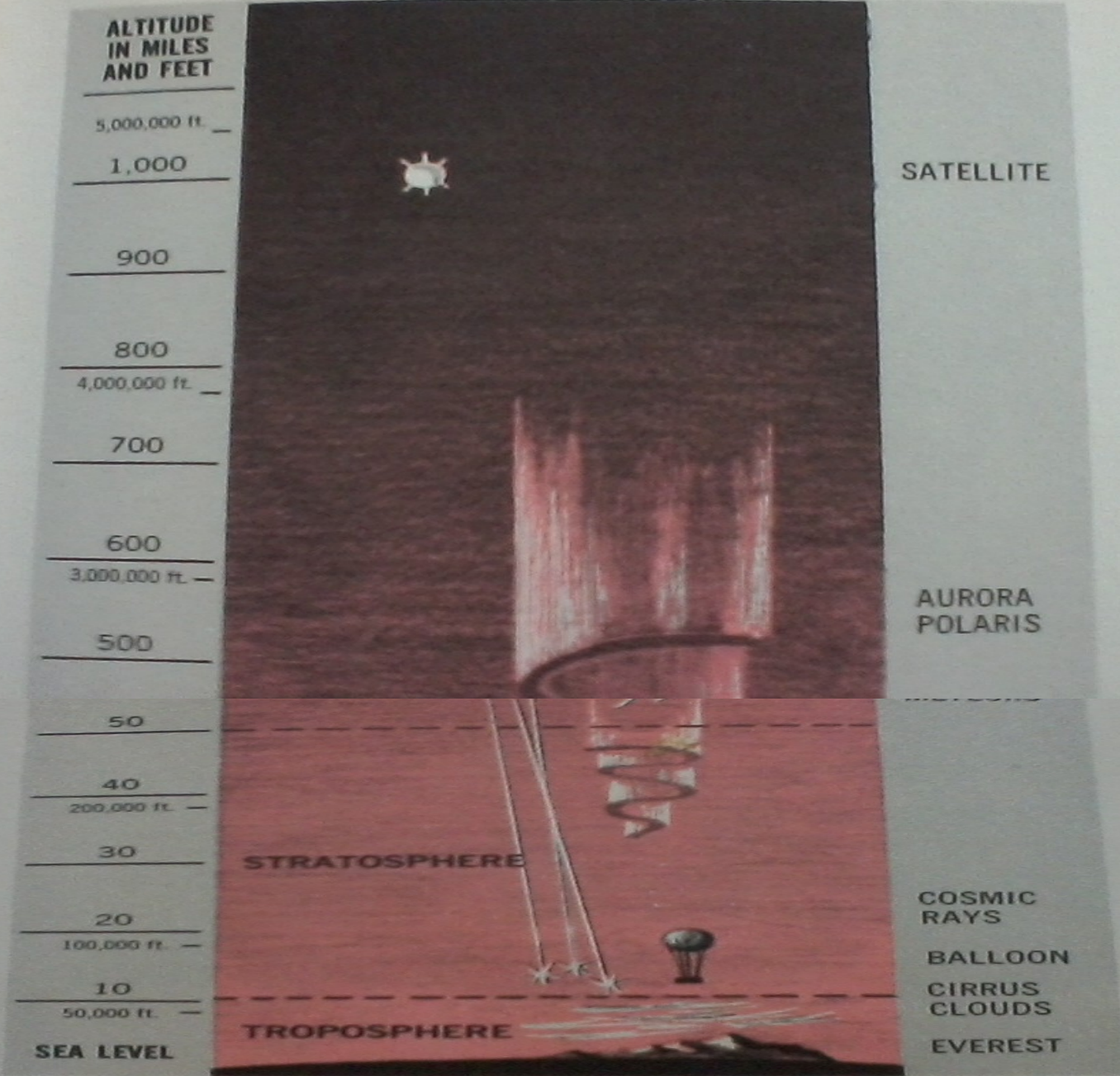
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Agile Dev. Flight Center Model

- **Q1** How will the DOD and commercial world meet the competitive demand of Space Launch and Exploration?
- **A1** The agility and alacrity of competing space launch systems will translate into lowering the cost for successful payload delivery.
- **Q2** How will agile aerospace flight frames reach the government and commercial marketplace in time for their on demand mission requirements?
- **A2** The Agile Development Flight Center (**ADFC**) Model provides a path for the accelerated adoption of Lean Space Launch Systems.
- **Q3** How can cost be driven down to meet the cutting edge of Lean Space Launch acquisition and procurement?
- **A3** *The Solution in pictures...*

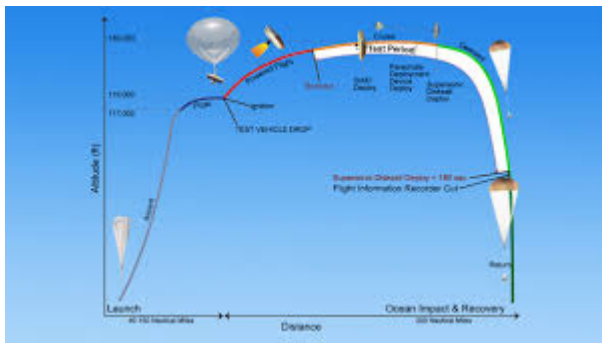
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Press Photos (c.) Boeing and Lockheed Martin

DARPA LAUNCH CHALLENGE

WILL YOU MEET THE CHALLENGE?



LAUNCH FAST

CHANGE SITES

LAUNCH FAST AGAIN

PRIZES

PAYLOAD BONUS



1ST, 2ND, AND 3RD PLACE
BASED ON

PAYLOAD WEIGHT
&
TIME TO LAUNCH

- SEPARATE LAUNCHES
- SHORT NOTIFICATION TO FIRST LAUNCH
- DAYS TO WEEKS BETWEEN LAUNCHES
- DIFFERENT PAYLOADS
- DIFFERENT ORBITS
- DIFFERENT LAUNCH SITES

FIRST LEO
LAUNCH



PRIZE

SECOND LEO
LAUNCH



DAYS TO WEEKS

DAYS TO WEEKS

DARPAlaunchchallenge.org

A new era of Lean Space
Launch...

Agile Development Flight Center (ADFC) Model

1. ADFC Model Plans and Lean Architecture
2. Rapid Prototyping and Manufacturing Parameters
3. Trusted Industry 4.0 Data Standards
4. Live Launch Activities and Control of Deployed Flight Systems

Real World and Outer Space Operations

Using Near Space to Launch to Outer Space...

NASA: Low Density Supersonic Decelerator

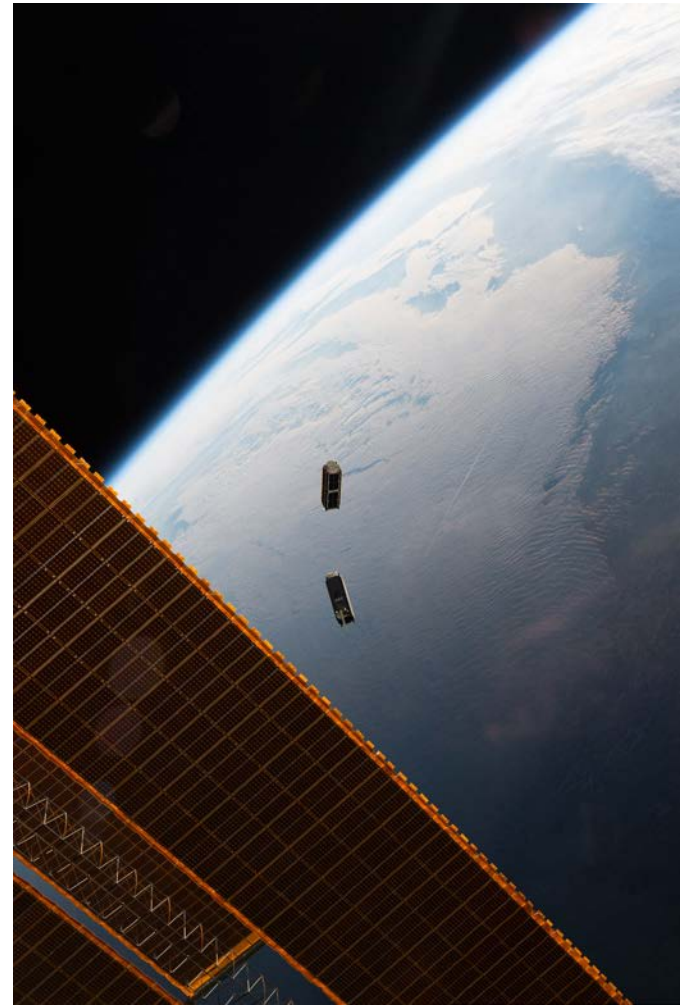
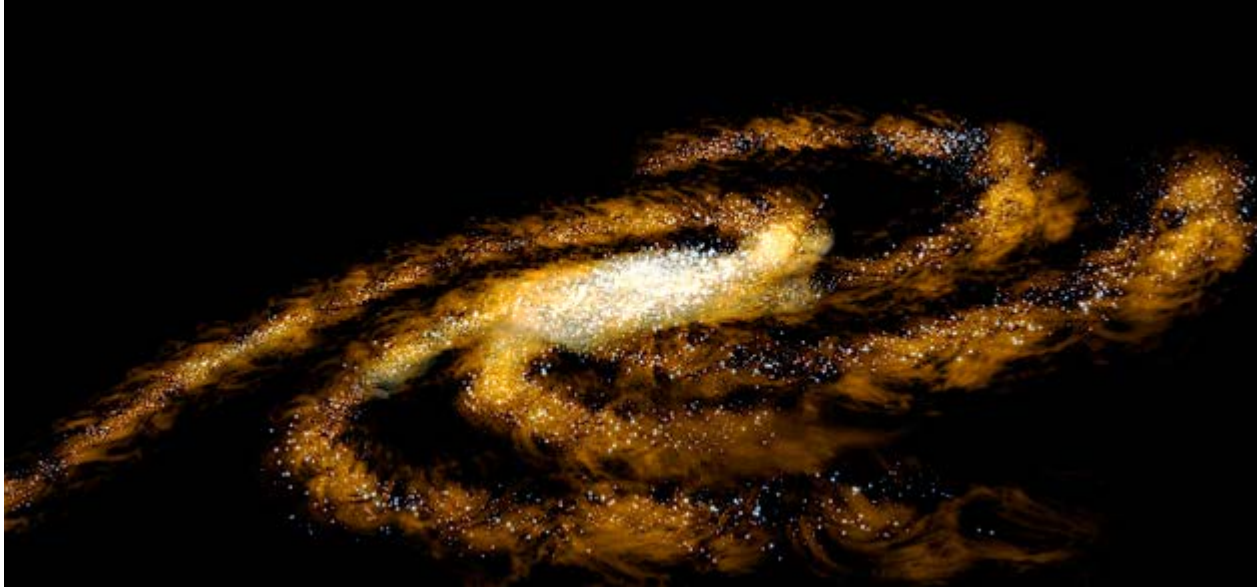
Boeing: MQ-25A Stingray, **LMCO:** Skunk Works P791

DARPA Launch Challenge: Various Competitors

MQ-25A Stingray: This agile vehicle has the best Acquisition and Procurement data flow. Lessons learned from real world Unmanned Aerial Systems of Systems activity will provide excellent guidance. The Government and Commercial markets will need to follow similar plans and architecture currently in use for the entire MQ-25A Program.

...The **DARPA** Launch Challenge will also provide lessons from the cutting edge of actual launch activities and successful payload deliveries.

Real World Challenge: *Open Innovation and Intellectual Property Rights*





Questions?

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