

Growing use of private launch contractors

Three launch failures in eight months have raised questions about NASA's plan to outsource missions to the International Space Station instead of building its own spacecraft



Apr 2015: *Progress 59* freighter, launched by **Roscosmos** (*Russian space agency*), tumbles out of control shortly after launch

Launch record: Successful **46** / failures **2**

Launch cost: **\$96 million**

Jun 28, 2015: *Falcon 9* rocket, launched by **SpaceX**, disintegrates 148 seconds after blastoff

18 / 1

\$140m

Oct 2014: *Antares* rocket, operated by **Orbital ATK**, explodes during liftoff

4 / 1

\$238m

Space Shuttle
NASA

(1981-2011)

133 / 2

\$450m



Atlas and Delta
ULA (Boeing-Lockheed Martin)

96 / 2

\$164-\$350m

Orbital



**A
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T
A
R
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S**

Antares



**S
P
A
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