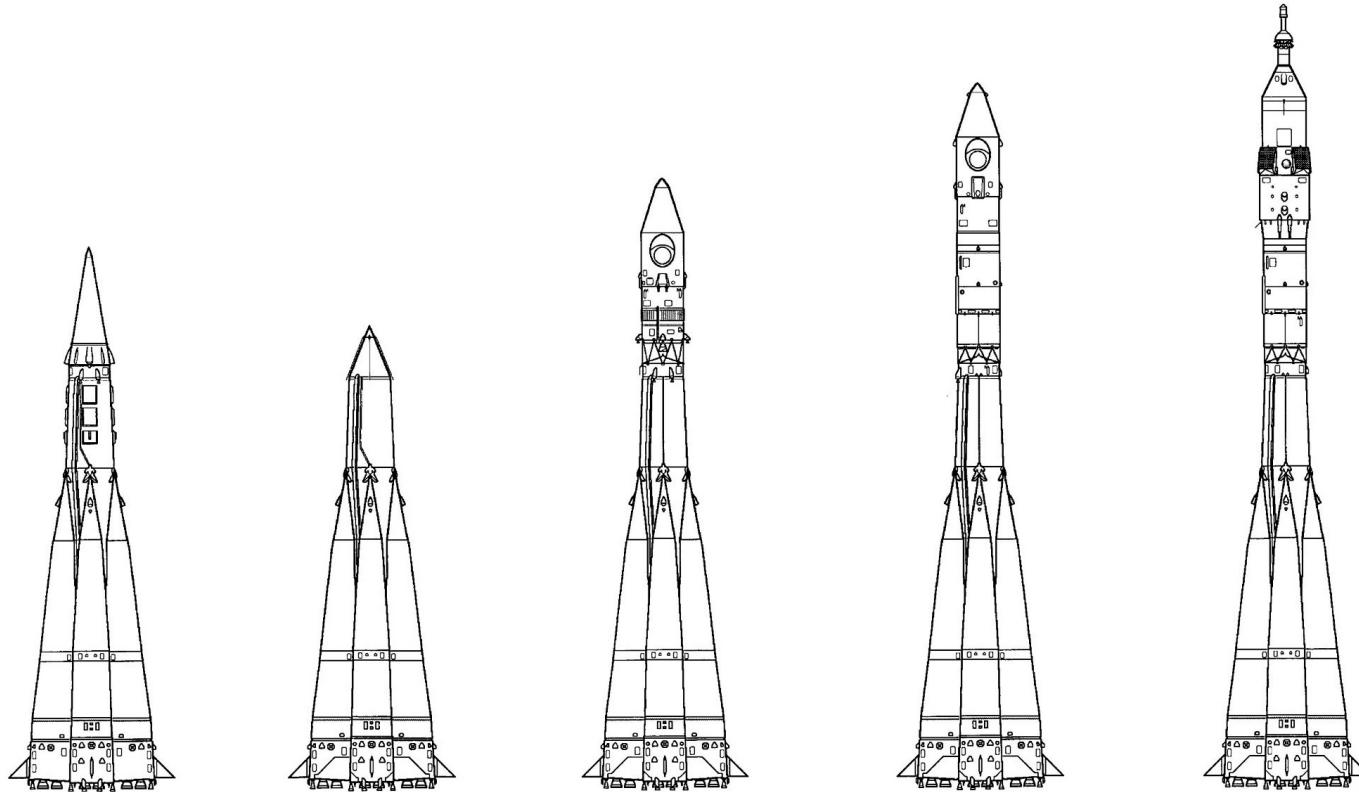


Soyuz, simplicité et fiabilité



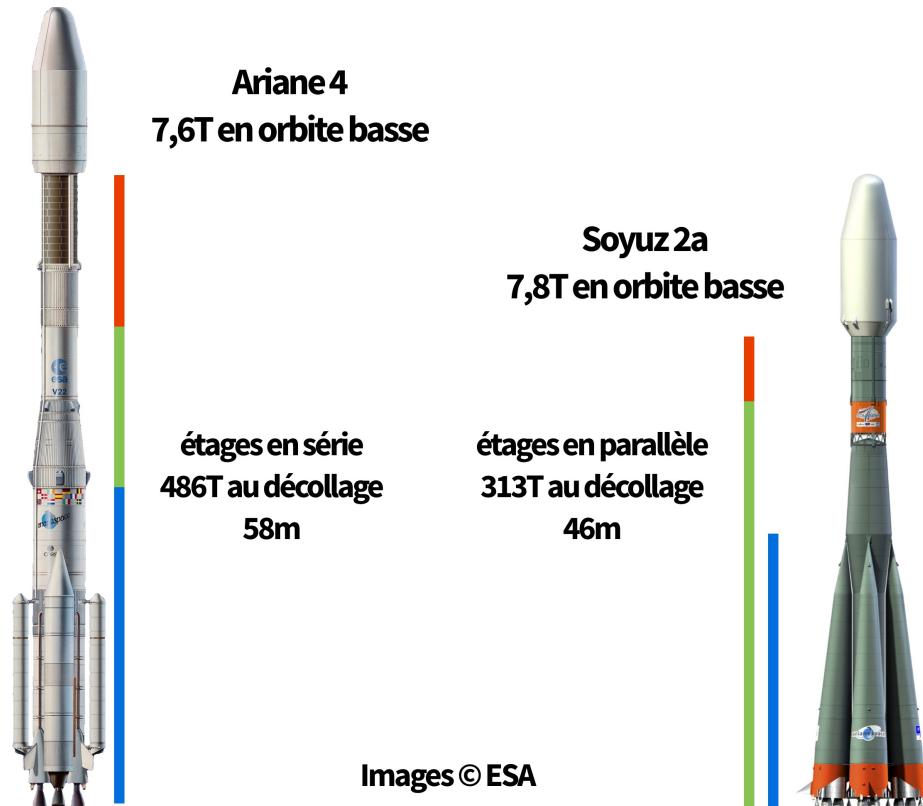
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6 juin 2013
<http://cesarparent.com/files/>

S. Korolev : du R-7 (1957)...



... au Soyuz (1967-aujourd'hui)

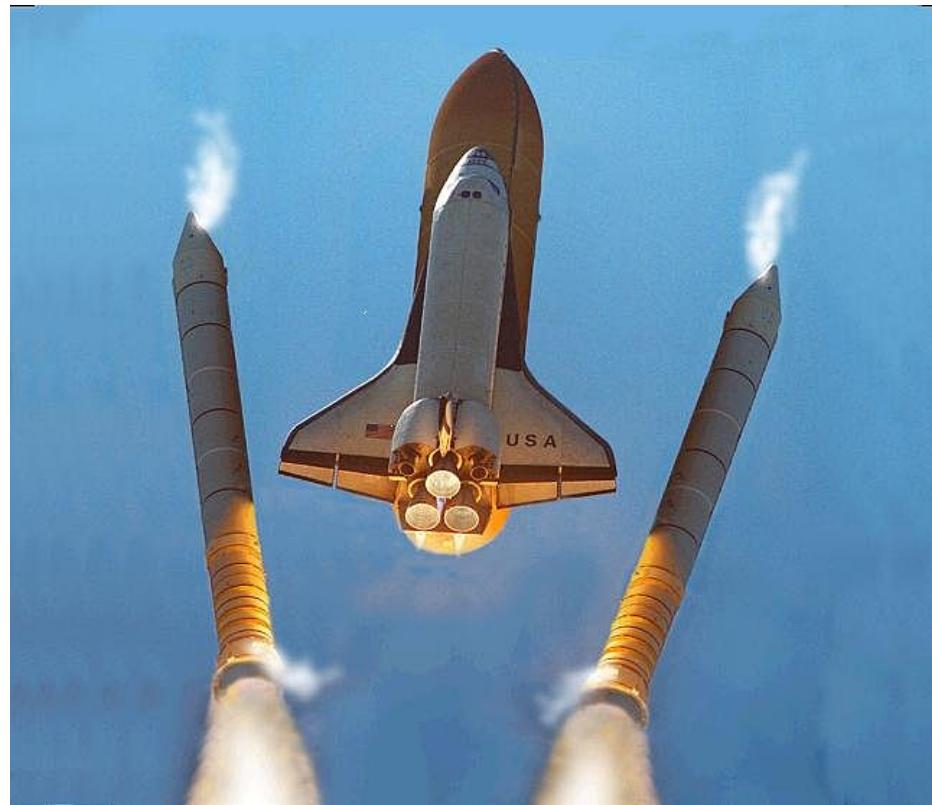
Korolev : les étages en parallèle



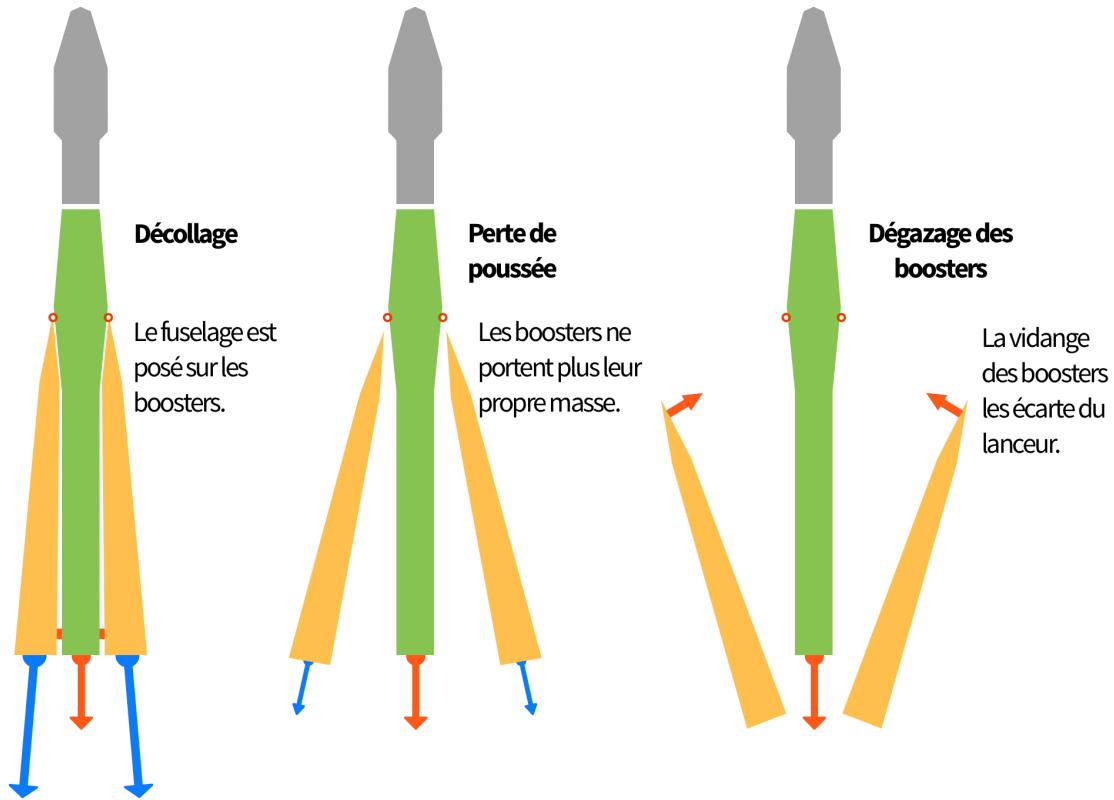
À charge égale, l'architecture parallèle est plus raide

Séparation : Navette (US)

Boulons explosifs, fusées d'écartement



Séparation : Soyuz



Attache des boosters

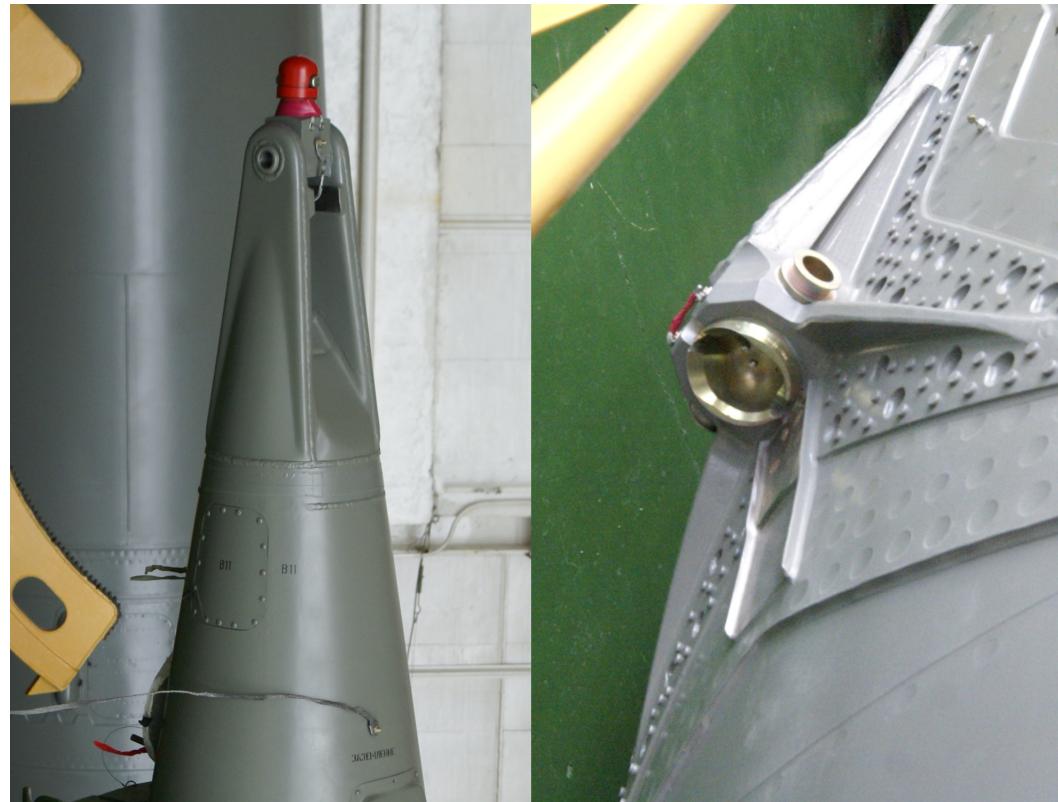
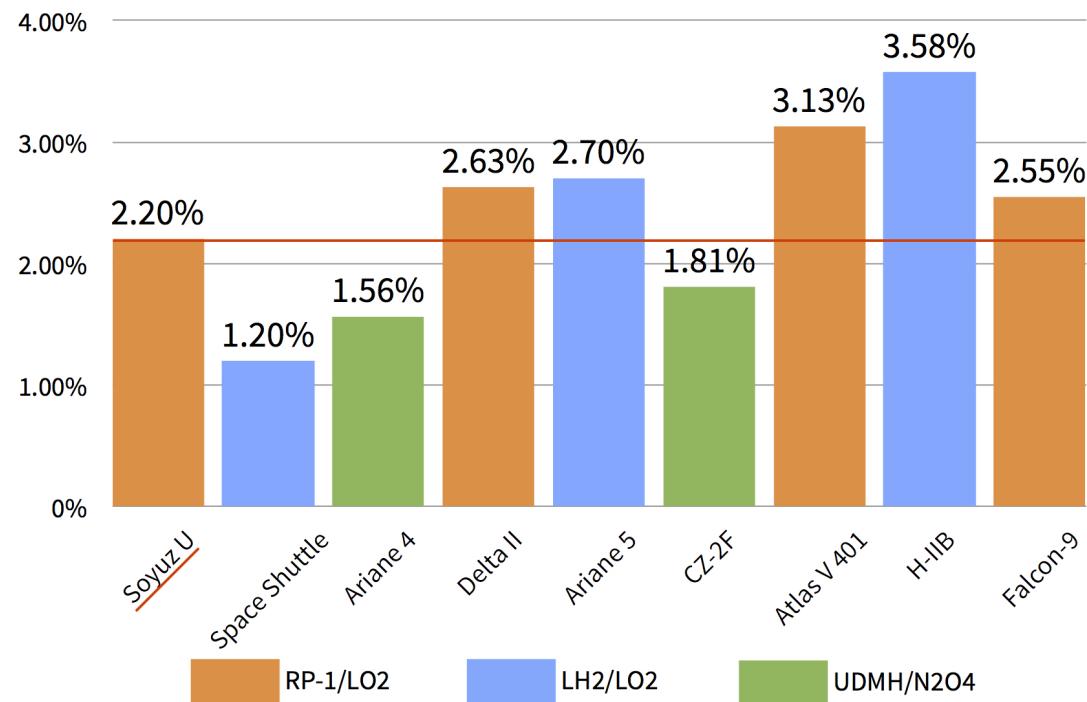


image © [Martin Trolle](#)

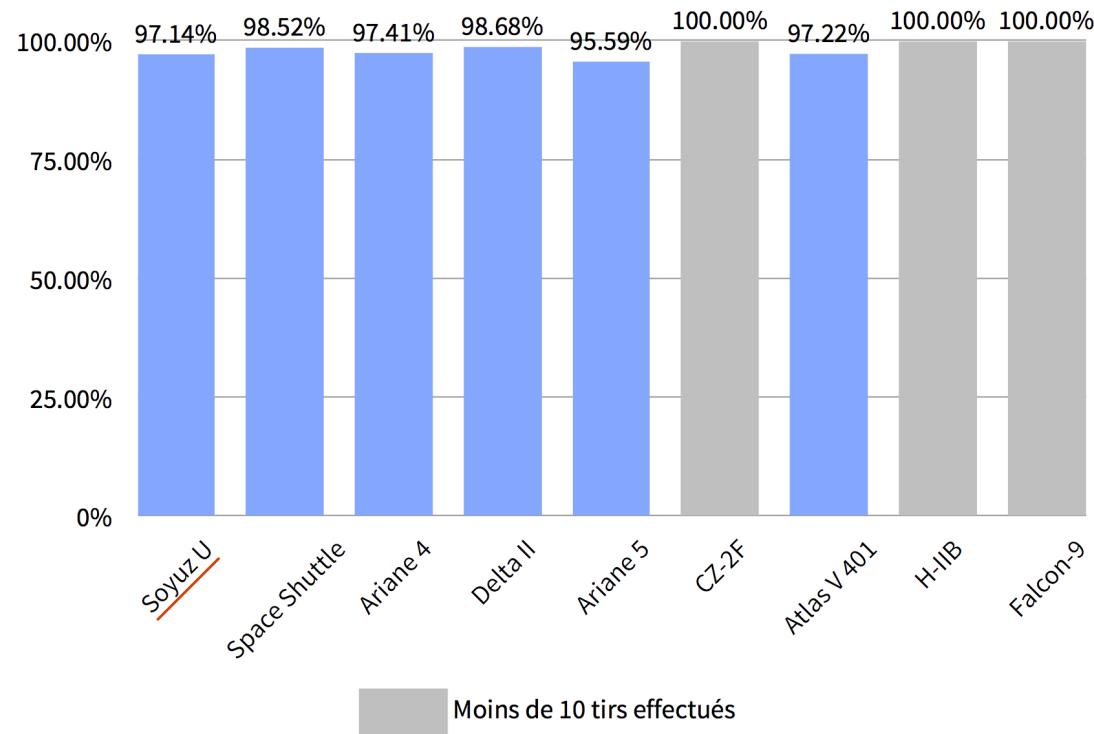
Comparaison avec quelques lanceurs

Qualité massique



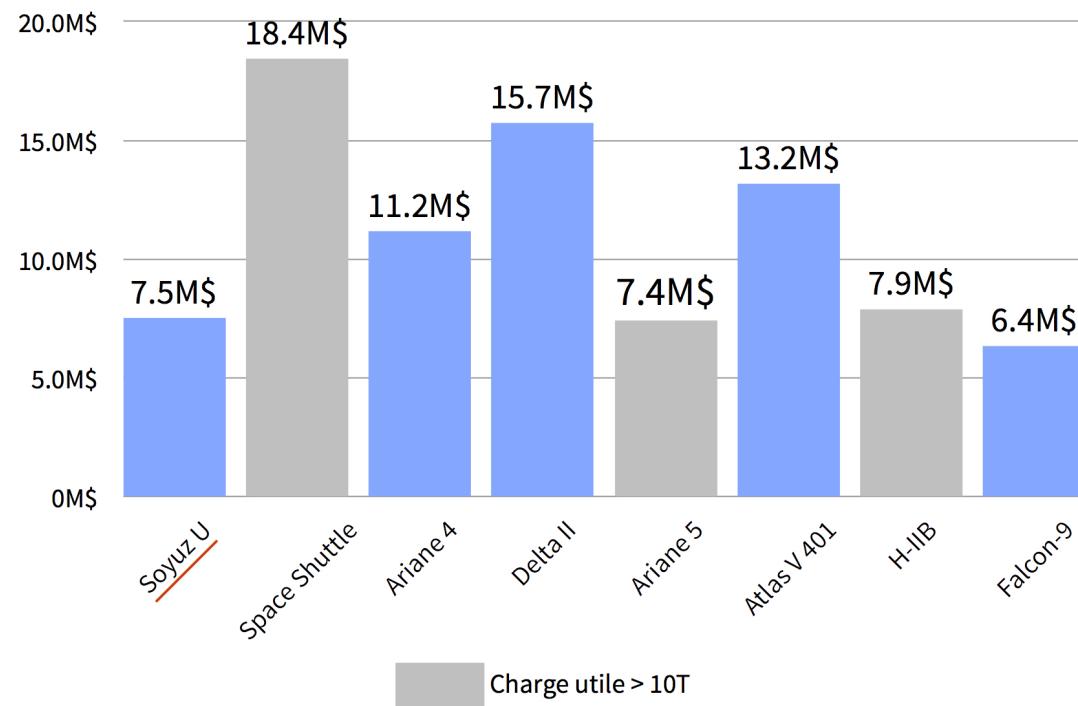
Sources : nasa.gov, arianespace.com, spacex.com, capcomespace.net, wikipedia.org

Fiabilité



Sources : nasa.gov, arianespace.com, spacex.com, capcomespace.net, wikipedia.org

Coût de lancement par tonne en orbite



Sources : usinenouvelle.com, astronautix.com, spacedaily.com, spacex.com, nasa.gov

Conclusion



image © [Martin Trolle](#)