

NASA Launch Services Program Launch Vehicle Performance Planning Assessment

This performance assessment is based on an estimate of launch vehicle capability and does not represent a performance commitment by NASA Launch Services Program or the Launch Service Contractor(s). These data have been generated using generic contract ground rules and assumptions; actual performance may decrease due to changes in assumptions, incorporation of mission specific/unique requirements and/or fluctuations in launch vehicle performance capability.

Orbit Request:

Orbit Class: High Energy

Graph Type: vs. Mass (kg)

C3 (km²/sec²): 0.264

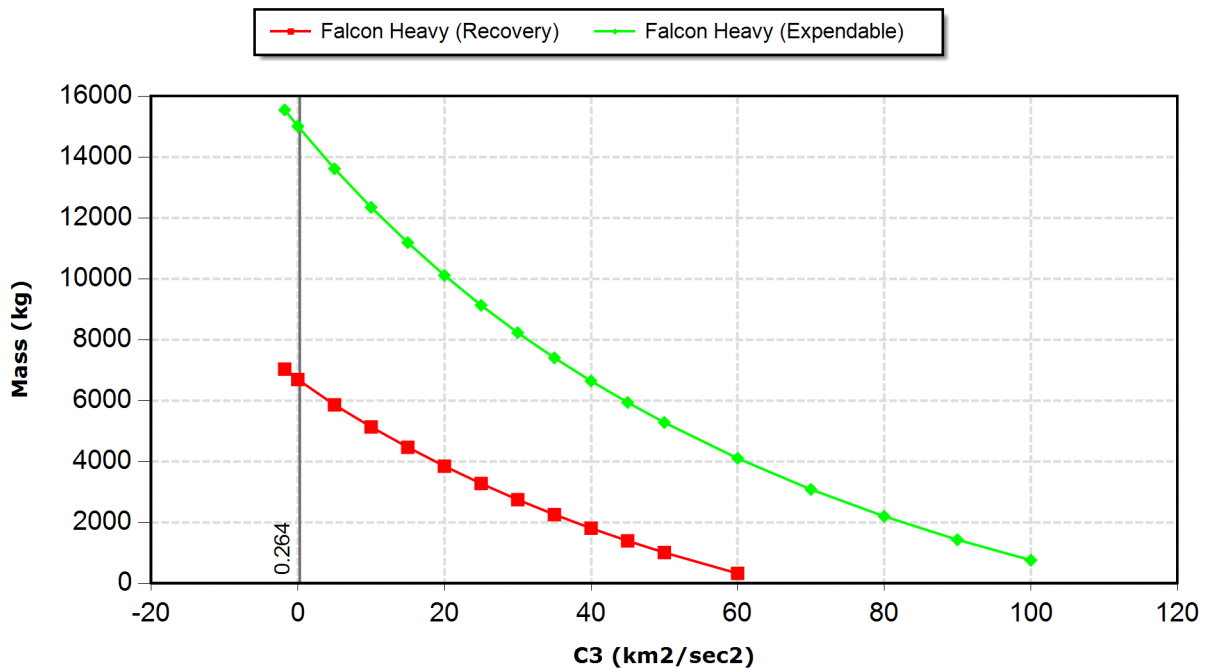
The following includes estimated launch vehicle performance data based on the NLS-2 contract. The complete set of ground rules associated with this data are provided below the table.

Estimated Performance:

Table 1
Separated Spacecraft Mass, kg

Vehicle	Launch Site	Capability, kg	Fairing	Adapter
Falcon Heavy (Recovery)	KSC	6645	5.2m	47in (1194mm)
Falcon Heavy (Expendable)	KSC	14935	5.2m	47in (1194mm)

Figure 1



Ground Rules/Assumptions:

Falcon Heavy (Expendable) (Recovery)

- First stage recovery has been accounted for in the performance capability. Recovery indicates that the performance includes the effects of recovering the booster components; Expendable indicates that the full performance of the vehicle is being used and the first stage is not recovered.
- 3-sigma guidance reserves.
- Instantaneous launch attempt. Finite window accommodations may significantly reduce performance for missions with inertially fixed targets.
- 937-mm or 1194-mm payload adapter/separation systems are available; masses of each are comparable and have been accounted for to provide separated spacecraft mass.
- 2 payload fairing doors.
- Payload mass greater than 10,000 kg (22,046 lbm) may require mission-unique adapter/accommodations, resulting in cost and/or performance impacts.
- 160 km (86 nmi) park orbit perigee altitude.
- This performance does not include the effects of orbital debris compliance, which must be evaluated on a mission-specific basis. This could result in a significant performance impact for missions in which launch vehicle hardware remains in Earth orbit.
- Performance shown is applicable for declinations between 28.5 deg. and -28.5 deg.
- Launch from SLC-39A at KSC (Kennedy Space Center).

Please direct any questions regarding this performance assessment to:
Any of the contacts listed on the NASA Launch Services Program Launch Vehicle Performance Website at: <http://elvperf.ksc.nasa.gov>