



John F. Kennedy Space Center

LAUNCH SERVICES PROGRAM

NASA Launch Services Program

Discovery 12 AO Pre-Proposal Conference

July 1, 2010

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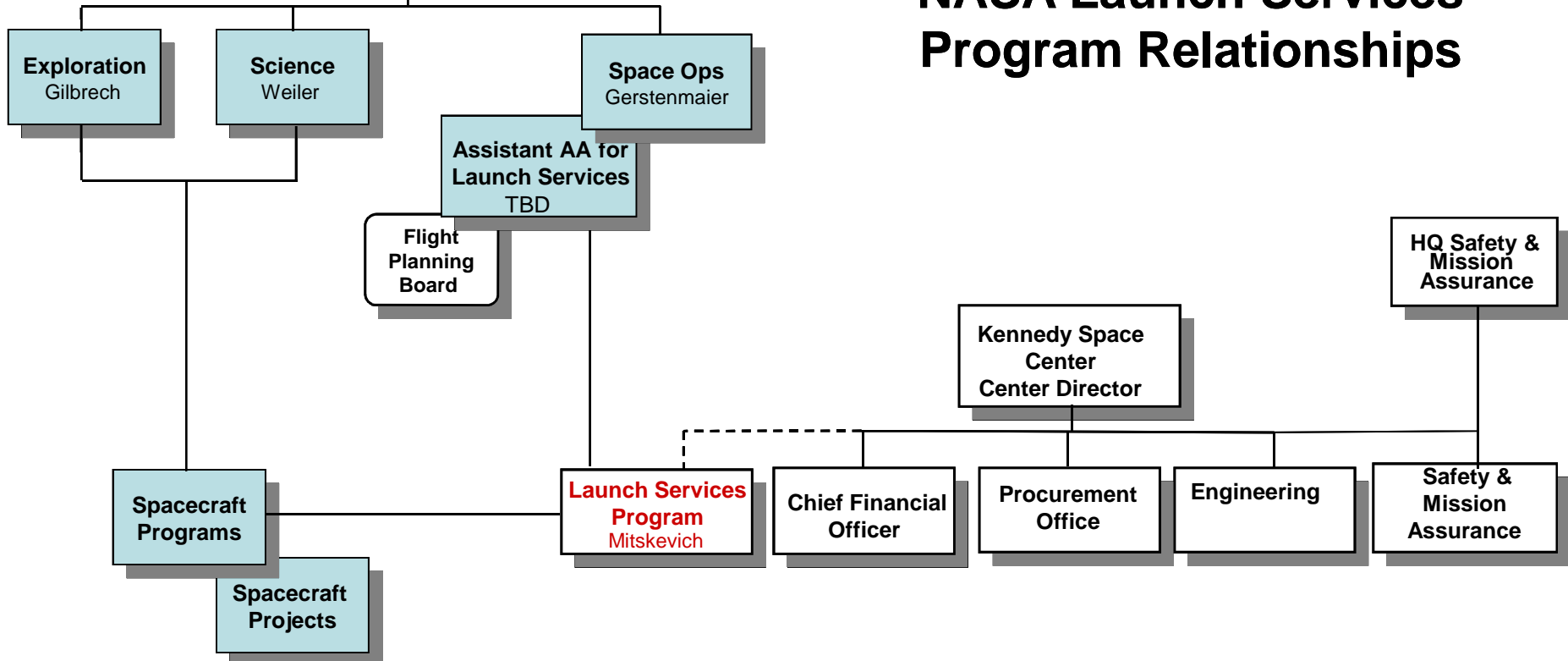


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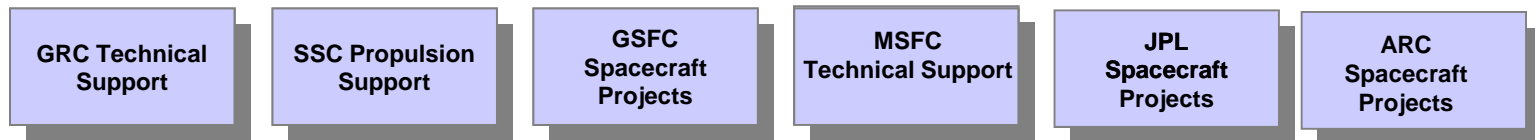
NASA HQ
Bolden

LAUNCH SERVICES PROGRAM

NASA Launch Services Program Relationships



Interfaces to other NASA Centers





Launch Services Program

The Launch Services Program provides management of the launch service, technical oversight of the launch vehicle production/test, coordinates and approves mission-specific integration activities, provides mission unique launch vehicle hardware/software development, provides payload-processing accommodations, and manages the launch campaign/countdown.

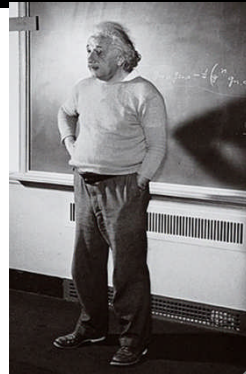


The Big Picture

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**Commercial
Launch Service
Providers**



YOU

**Spacecraft
Contractor**

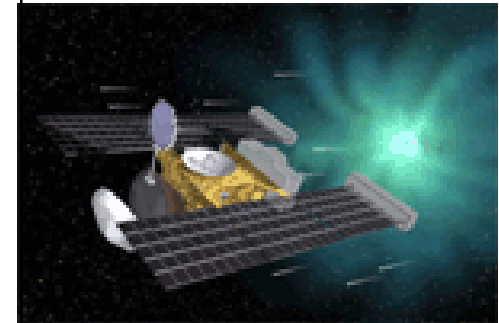
**Launch
Services Contract**

S/C Contract



**Launch
Services
Program**

**NASA Spacecraft
Center**
- GSFC
- JPL
- GRC
- MSFC
- Etc.



**NASA
Charter**



LSP Functional Structure

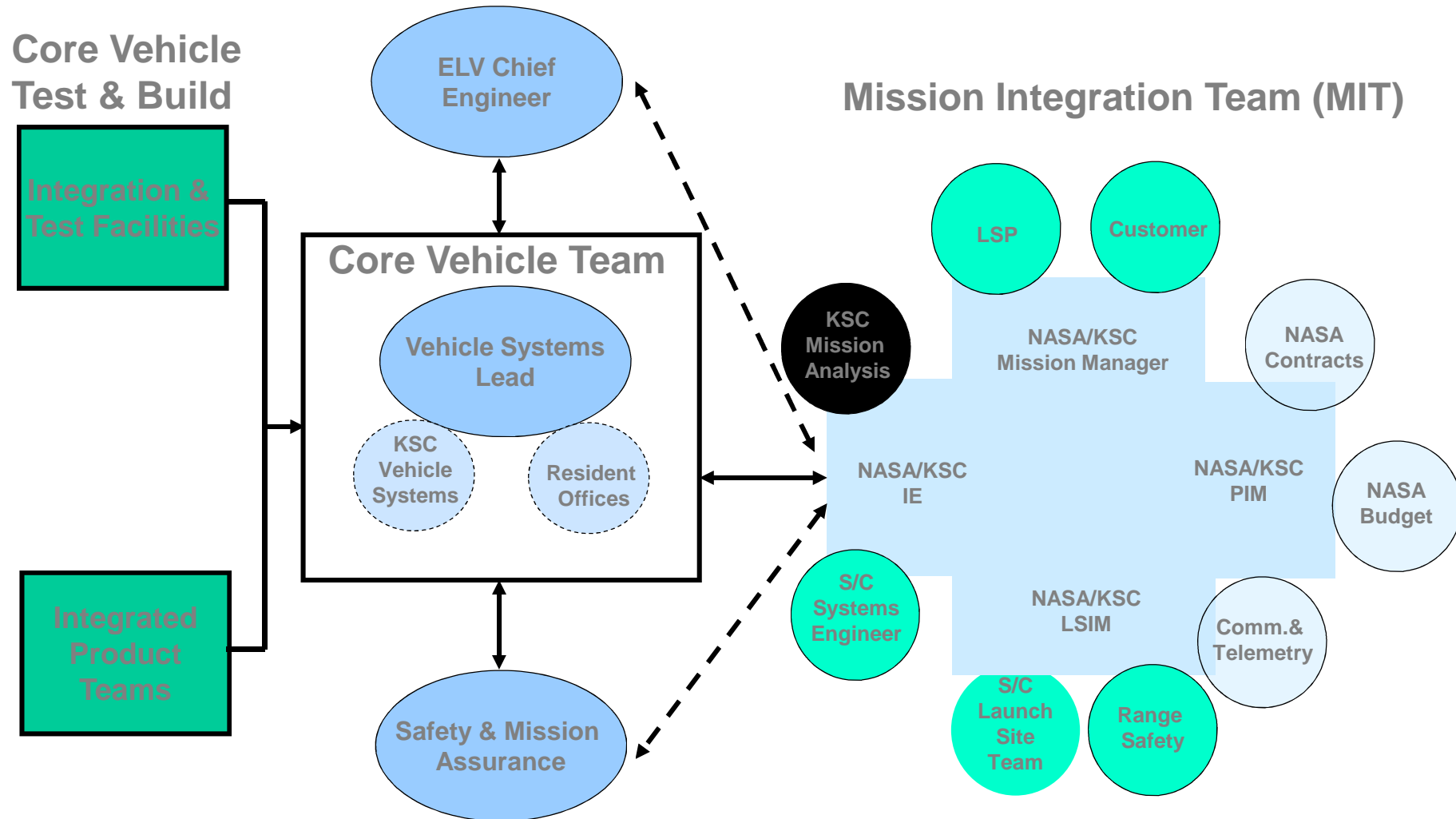
- **LSP procures/provides a Launch Service**
 - Its more than the basic launch vehicle
 - We don't buy a tail number
 - This is a commercial FFP procurement with additional insight and oversight
- **To enable this, LSP has two functional sides**
 - **Mission integration**
 - » Mission Integration team assigned to each mission
 - » Manages mission specific procurement, integration, and analysis
 - » Includes launch site integration and processing
 - **Fleet management**
 - » Personnel assigned to each contracted rocket
 - » Includes resident offices within the production facilities of all active providers
 - » We watch the production and performance of entire fleet – we certify the manufacture's production line, not just a particular unit (tail number)
 - » We have a say in any change/upgrade/anomaly
 - » Big stick – no-go for launch
- **Interface with Safety and Mission Assurance**
 - Safety
 - Quality



Technical Information flow into the MIT

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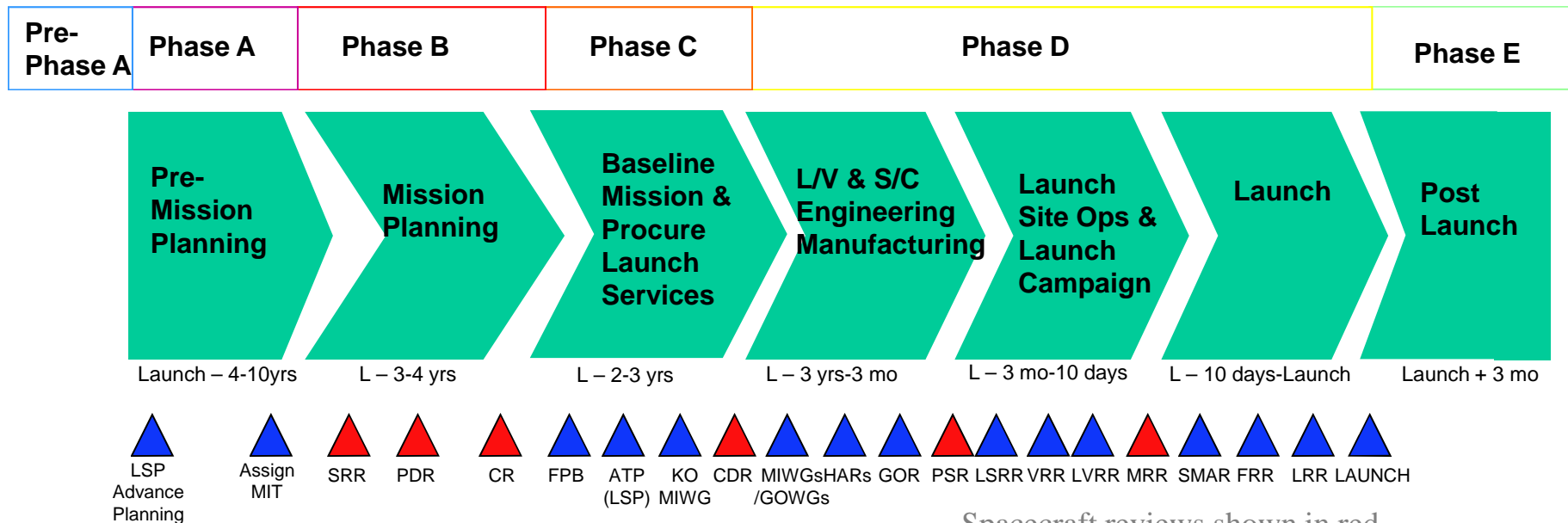


Ground Rules

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- ~~Any acquisition of a non-contributed domestic expendable launch vehicle proposed for this AO will be procured and managed by the NASA/Launch Services Program (LSP) via the NASA Launch Services (NLS) contract.~~
- The LSP will competitively select a launch service provider for these missions based on customer requirements and NASA Flight Planning Board (FPB) approval.





Available Vehicles

- Assumption of a specific launch vehicle configuration as part of this AO proposal will not guarantee that the proposed LV configuration will be selected for award of a launch service competitive procurement
 - Firm technical rationale for sole source justification is required in the proposal, and NASA would have to obtain appropriate approvals.
- The Agency policy, NPD 8610.7, “Risk Mitigation Policy for NASA-Owned and/or NASA-Sponsored Payloads/Mission” has been modified so newer launch service providers are eligible earlier to compete for any of NASA’s missions.



Available Vehicles - Continued

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- Most likely candidate vehicles for Discovery 12 that are available on the NLS contract are
 - Atlas V
 - Delta IV
 - Falcon 9 – (Horizontal mate to Launch Vehicle)
- Bidders must remain compatible with vehicles that provide their performance requirements

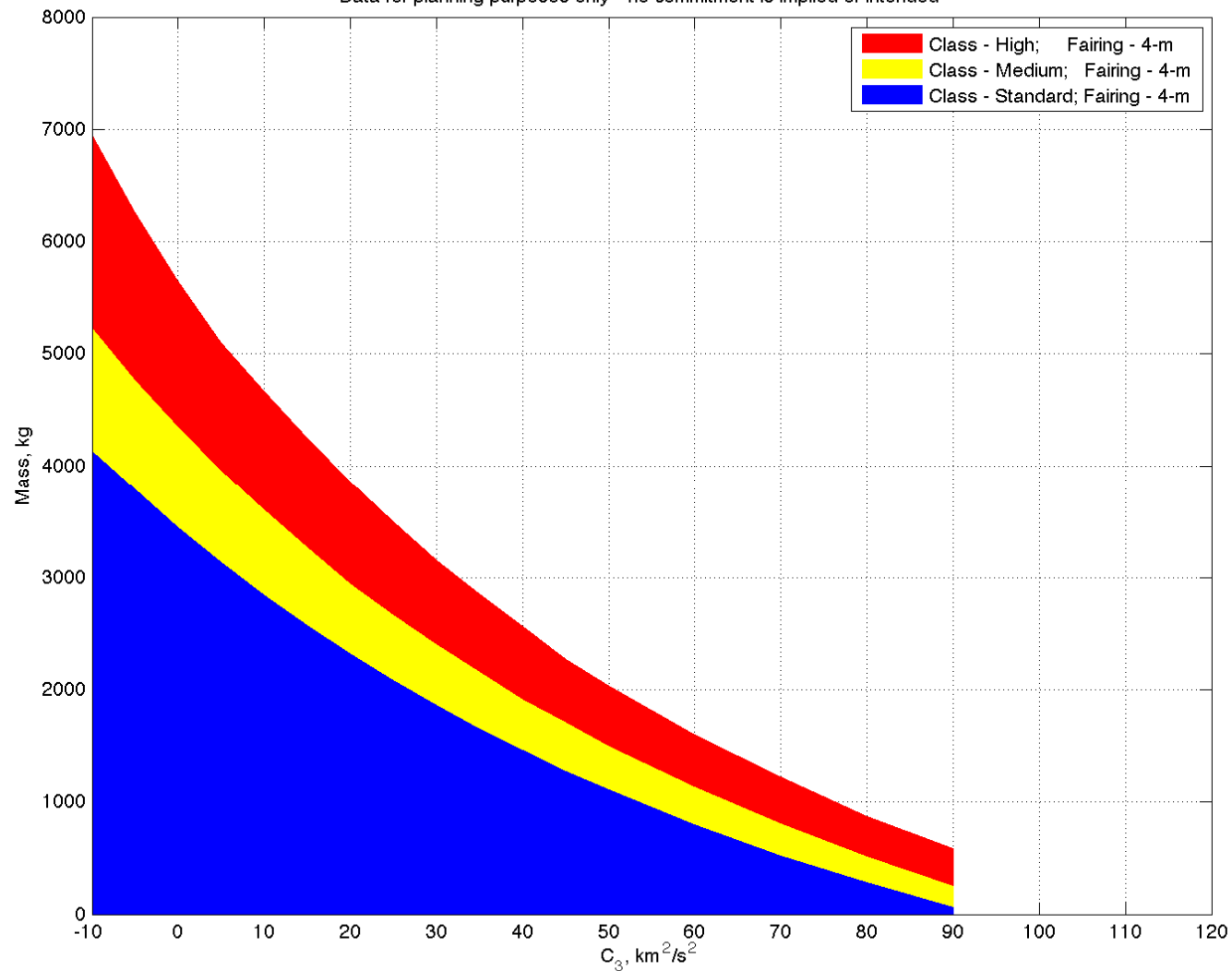


4 Meter Fairing

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Representative Performance for High Energy Missions: 4-m Fairing
Data for planning purposes only - no commitment is implied or intended



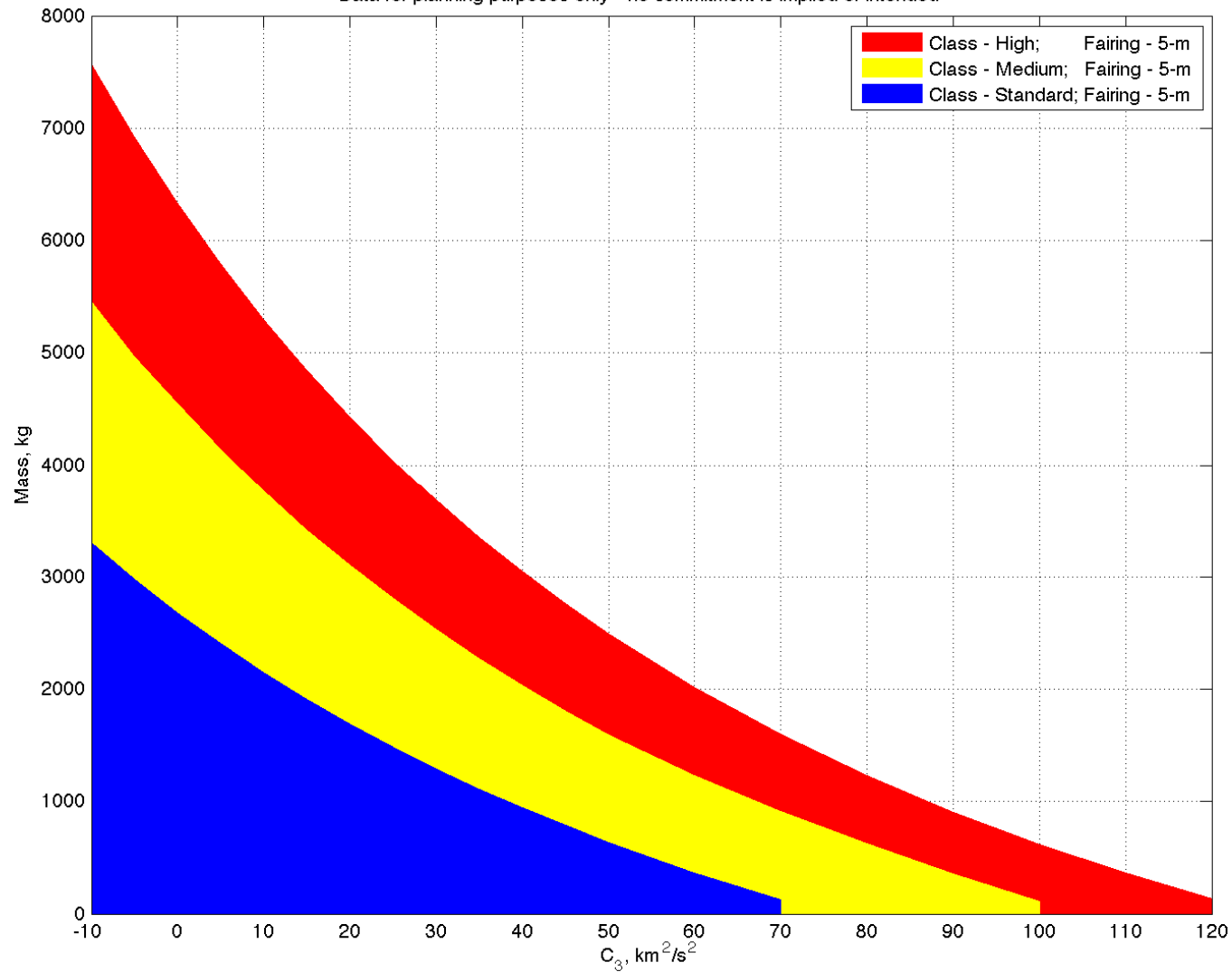


5 Meter Fairing

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Representative Performance for High Energy Missions: 5-m Fairing
Data for planning purposes only - no commitment is implied or intended





Options

- **A PI may choose to fly an RHU or an Advanced Stirling Radioisotope Generator (ASRG) as part of his S/C**
 - LSP provides launch approval and radiological source services as required
 - There is an additional charge for this if you fly the RHU without the ASRG (see AO for price details)
- **Most other typical rocket features would be considered within the price bounds already covered by HQ**
- **A-typical mission uniques might be**
 - New or modified payload adapter
 - New, non-standard door in fairing
 - Planetary Protection
 - Other



LSP Role in Nuclear Approval Process

- **Launch Vehicle Data Book information acquisition, development & approval**
- **Managing launch vehicle data required for the NEPA/Launch Approval process**
- **Generating and submitting SOWs for data required from Launch Service Contractor (LSC)**
- **Reviewing data provided from LSC's and independent contractors**
- **Coordinating LSC approval of data generated by NEPA & LA community**

- **NOTE: The process can take longer than the LV integration cycle, so it must start early and potentially cover multiple vehicles until selection is complete**



Launch Service Budget

- **For Discovery 12, the launch service costs will be held by NASA Headquarters.**
- **The launch service includes:**
 - **The launch vehicle, engineering, analysis, and minimum performance standards and services provided by the contract.**
 - **Launch Site Processing**
 - **Range Support**
 - **Down Range Telemetry support (launch vehicle only)**
 - **Standard Mission Uniques – these are items typically necessary to customize the basic vehicle hardware to meet spacecraft driven requirements. Already budgeted for are items like Pre-ATP studies such as coupled loads and/or trajectories analysis, a GN2 or pure air purge prior to T-0 and 10,000 Class integration environment.**
 - **Budget does not include launch delays.**



Summary

- It is the Launch Service Program's goal to ensure the highest practicable probability of mission success while managing the launch service technical capabilities, budget and schedule.
- Questions must be officially submitted to michael.h.new@nasa.gov; LSP will gladly respond as quickly as possible.