

**Proposed Change Level (1, 2, 3, 4): 2**

**Proposed Change: Increase the Probe Carrier Mass Allocation from 103 kg to 122 kg.**

**Lead Engineer: Brenneman**

**Element: Probe Carrier**

**Reason for Change:**

The latest mass estimates have changed from the Probe Carrier Phase A mass estimate as follows:

- 1) The Liteband separation system is not acceptable, will now be a marmon ring: +15.60
- 2) Strut design changed to accommodate a probe of 134 kg vs. 105.32 kg., and for frequency: +9.59
- 3) Top deck changed to machined aluminum plates: -6.71
- 4) Added thermal blankets to underside of deck: +1.73
- 5) Other small changes/additions: -1.21

**Reference Documentation Summary (See attached Power Point file for additional design data)**

From the August 03 resource summary and this SCN the previous and recommended estimate, allocation and contingency are:

WAS: 93.69 Kg Estimate 103 Kg Allocation 9.94% Contingency  
NOW: 105.27 Kg Estimate 122 Kg Allocation 15.89% Contingency

Unallocated Project Margin drops from 28.18% to 21.57%

**Subsystem Impacted: (Bold indicates an impact)**

ACS	C&DH	<b>Mechanical</b>	Propulsion	Booms	IDPU S/W
Battery	EGSE	MGSE	RF Comm	EFI	SST
Bus	Harness	Mission Ops	Solar Array	ESA	SCM
Avionics Unit	I&T	Power	Thermal	FGM	
BUS S/W	Launch Vehicle			IDPU	

**Minutes Summary (Systems Engineering Meeting):**

**Approval**

**PROPRIETARY**  
YES ☐ NO ☐

**Project Manager**

Date

**Systems**

**Impacted Subsystem Lead**

**Distribution**

- Subsystem trades (level 4) can be made within the resources of the subsystem. Systems Engineer insight and involvement.
- Trades that impact subsystem/system interfaces or resource allocations (level 3/level 2) require concurrence by the Configuration Control Board (CCB): Principal Investigator, Project Manager, Mission Systems Engineer (MSE), Probe Systems Engineer, Mission Operations Manager and affected Team Leads. GSFC Mission Manager insight.
- Trades that impact Level 1 *baseline* science/programmatic requirements must include approval by Principal Investigator and GSFC Mission Manager.
- Trades that impact Level 1 *minimum* science/programmatic requirements must include approval by NASA HQ.

Date