L0 quarter plane material specs

L.Mussolin - 03-Nov-2022



29_1	A: Modal Fixed Rotativ Frequency: 1 20/06/2022	A: Modal Fixed Rotation Z - SideZ Frequency: N/A 20/06/2022 11.42		C: Copy of Modal Fixed Displacement XVZ - SideX Frequency: N/A 30/06/2022 12:00	
	Fixed Ro	tation	Fixed Displacement XYZ - SideX Components: 0;0;0, mm	Fixed Displacement	XYZ - SideX
		Cup	olas*:	Components: 0.;0.;0	, mm
		-	• Top skin: K13[D2U/EX1515,	0.2
		-	Core: Hexcel (CRIII-3/16-505600)1-3.1, <mark>8.0</mark>
		_	Bottom skin: k	K13D2U/EX1515,	0.2
ne ladders					
			QLCSs:		
ructuro ekin			- Top skin:	M55J/EX1515,	0.3 mm
			Core: CF	Honeycomb,	5.0 mm
			/ Bottom s	kin: M55J/EX1515,	0.3 mm
		/	/		
ructure skin					
			viecn struct		0.5
			- Iop skin:	VI55J/EX1515,	2.5 mm
		Tabula	ar Data Core. CF	rin: M55 I/EX1515	2.5 mm
ne ladders	~				2.0 1111
	/	$\frac{1}{1}$	77.071		
r Cupola	V	3 3.	251.24		
	Density: 36 kg/m	1 3 4.	435.51		
	Compressive mo	อปิ่นเอ้ร	s: 890 ⁴ MPa	* From Corrado's	nrecentati
	Shear modulus:	380 ¶∕	1Pa 564.58		presentall
		8 8.	788.49		
		9 9.	910.32		



ions



Cupola Top & Bottom EMI Shielding Thermal radiator Light shielding

Carbon Sandwich 75 mm thick Skin: unidirectional M55J/EX-1515 Core: Carbon Honeycomb Skin: unidirectional M55J/EX-1515

Carbon Sandwich 8.4mm thick

Skin: M46J/EX-1515, 0.2mm or K13D2U/EX1515 Core: Hexcel CRIII-3/16-5056-.001-3.1, 8mm Skin: M46J/EX-1515, 0.2mm or K13D2U/EX1515 EMI copper net embedded in the layup

Tight requirement on sensor alignment drives the design and material choice of the mechanics Corrado Gargiulo

2.5mm

70.0 mm

2.5mm

27/10/2022

Mechanics



Carbon Octo-frame

M46J/EX-1515, 8mm thick tubular structure

Plane 0 Structural

Supports and positions ladders Provides structural stiffness Provides mechanical interfaces



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A: Modal Fixed Rotation Z - SideZ Frequency: N/A 20/06/2022 11:42

C: Copy of Modal Fixed Displacement XYZ - SideX Frequency: N/A

C: Copy of Modal Fixed Displacement XYZ - SideX Frequency: N/A 30/06/2022 12:00

Fixed Displacement XYZ - SideX

Several components removed to simplify simulation

Geometries still to be simplified (close the holes/pockets)







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52.665 65.802 **77.**3 Full

77.071 **183.64 251** 1⁄4



A: Modal Fixed Rotation Z - SideZ Frequency: N/A

C: Copy of Modal Fixed Displacement XYZ - SideX Frequency: N/A

Fixed Displacement XYZ - SideX

C: Copy of Modal Fixed Displacement XYZ - SideX Frequency: N/A 30/06/2022 12:00

> Fixed Displacement XYZ - SideX Components: 0.;0.;0. mm

