

Solar B - EIS

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SOLAR-B EIS MASS BUDGET

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CHANGE RECORD

ISSUE	DATE	PAGES CHANGED	COMMENTS
01	17 April 2000	All new	
02	29 June 2000	3	Removal of margin
03	1 November 2000	all	All masses updated in response to a request at the PDR. Expected growth in mass estimates added to the table.
04	15 July 2002	All	All masses updated based on the measured weights of the MTM model and estimates of flight model weights.
05	14 Sept 2004	all	To reflect measured weights for FM.

Explanatory notes

The table below represents the most up to date estimates of the Solar B EIS instrument mass. For each item in the list the estimated mass is given; this represents the best estimate of the mass of the component at the date shown in the 'date of last revision' column. We expect that with strong management of the mass we will keep the flight total below 63.43kg (excluding the mass of the external harness supplied by ISAS) as specified at PDR.

NB All masses are shown in kg

Item	Acronym	Owner	Measured Mass	Comments
Structure	STR	BU	28.26	Estimate based on total structure measurement*
Mirror end thermal shield			1.00	Estimated
Forward Extension Shroud			0.43	Measured
Mirror, mount and mechanism	Optics	NRL	3.34	Measured
Grating, mount and mechanism	GRA	NRL	1.56	Measured
Slit Assembly and shutter	SLA/SHT	NRL	0.96	Measured
Focal Plane Assembly	FPA	MSSL	0.69	Measured
ROE and radiation shielding	ROE	MSSL	2.78	Measured
Radiator	RAD	BU	3.5	Measured
Contamination Monitors	QCM	RAL	0.24	Measured
Multilayer Insulation	MLI	BU	2.5	Measured
Clamshell and filters	CLM	BU	3.1	Measured
Mechanism & Heater Control	MHC	MSSL	2.94	Measured
Purge Harness	PUR	BU	0.5	Estimated
Internal Harness	IHR	MSSL	3.25	Estimated from XMM OM harness (driven by sensor/heater no.)
Sub Total			55.05	
Instrument Control Unit	ICU	MSSL	5.53	Measured
Total			60.58	

Note that the eyebolt weighs 0.7kg so that the total mass of the structure is estimated to be 54.35kg (including bagging material).

* This measurement was performed at RAL and gave a mass of 51.12kg. It included eyebolt and bagging but did not include MLI, Mirror end thermal shield or forward extension shroud.