Qualification Random Vibration Specification 01 October 2001.

Draft spec, for comments only. Is to be implemented in next issue of Mechanical-ICD.

The hereafter listed tables specify the qualification input levels for the subsystems. Flight levels are a factor 2.25 lower in PSD, which is a factor of 1.5 lower in g-rms. There are jumps of ∞ dB/oct, if your shaker can't handle that, try 24 dB/oct. Even it out over frequency range. to both sides of jump.

Duration of qualification run 120 seconds. Sorry about that, but it is specified by ESA.

S-Mec

Axis (S/C)	ramp up	plateau	ramp down	g-rms
X	+6 dB/oct 20-100 Hz	0.2 g^2/Hz 100 - 300 Hz	-6 dB/oct 300-2000 Hz	~10.2
Y	+6 dB/oct 20-100 Hz	0.4 g^2/Hz 100 - 200 Hz 0.1 g^2/Hz 200 - 400 Hz	-6 dB/oct 400-2000 Hz	~11.3
Z	+6 dB/oct 20-100 Hz	0.3 g^2/Hz 100 - 200 Hz	-6 dB/oct 200-2000 Hz	~9.9

Mirrors

Axis (S/C)	ramp up	plateau	ramp down	g-rms
X/Y/Z	+6 dB/oct 20-100 Hz	0.35 g^2/Hz 100 - 400 Hz	-6 dB/oct 300-2000 Hz	~16

BSM as for S-Mec except

Axis (S/C)	ramp up	plateau	ramp down	g-rms
Y	+6 dB/oct 20-100 Hz	0.7 g^2/Hz 100 - 200 Hz 0.1 g^2/Hz 200 - 400 Hz	-6 dB/oct 400-2000 Hz	~11.3