

EHIS Performance Requirements (1/2)

Parameter	Reference	Requirement	EHIS Design Concept
Particle energy range	PORD156	10 MeV/nucleon to 200 MeV/nucleon	10 MeV/nucleon to 200 MeV/nucleon
Particle energy bands	PORD158	5 logarithmically spaced	5 logarithmically spaced
Particle mass bands	PORD157 ; Appendix I	H through Ni, individually	H through Ni, individually
Particle flux range (cm ² s sr MeV/nuc) ⁻¹	PORD167	Maximum: 5.0 x 10 ⁴ (E/nuc) ^{-2.3} Minimum: 5.5 x 10 ⁻² (E/nuc) ^{-1.0}	Maximum: 5.0 x 10 ⁴ (E/nuc) ^{-2.3} Minimum: 5.5 x 10 ⁻² (E/nuc) ^{-1.0}
Maximum flux sensitivity	PORD169	No rollover through x3 max	No rollover through x3 max
Minimum flux sensitivity	PORD168	10 counts above background in each band (mass and energy) in a 5-minute period	10 counts above background in each band (mass and energy) in a 5-minute period
Flux measurement accuracy	PORD160	25% via ground calibration	25% via ground calibration
Out-of-band response	PORD97	<10% after ground processing	<10% after ground processing
Viewing Direction	PORD162	-Z (anti-Earthward)	-Z (anti-Earthward)
Sensor FOV	PORD162	<=30 deg cone half angle	28 deg cone half angle
Data refresh rate	PORD164	5 minutes	5 minutes
Data latency	PORD165	<5 sec	<5 sec EHIS + DPU
Noise	PORD86	<10% thresholds >100 keV	<10% thresholds > 100 keV
Energy band stability	PORD88	< +/- 3%	< +/- 3%

EHIS Performance Requirements (2/2)

Parameter	Reference	Requirement	EHIS Design Concept
Size	UIID47		15,080 cm ³ EHIS CBE
Maximum Dimension	UIID48	<=40 cm	35.4 cm (chassis)
Power	UIID36		6.3 W EHIS CBE
Mass	UIID44		4.5 kg EHIS CBE
Data rate	UIID27		512 bps EHIS CBE
EHIS Modes	PORD52 PORD59 PORD61 PORD90	Safe Mode Normal Mode Diagnostic Mode In Flight Calibration	Safe Mode Normal Mode Diagnostic Mode In Flight Calibration