GOES R REQ ID #	Observational Requirement	User(s) & Priority (LO-#) (Note 1)	LEVEL	Orthogonality/ Angular Res/Spatial or Geo Coverage	Spatial/ Horizontal/ Angular Res.	Pointing or Orient. Stability/ Mapping Accuracy	Pointing or Orient. Knowledge/ Mapping Uncrtnty	Msnmt. Range	Msmnt. Accrcy	Refresh Rate	Data Latency	Long-term stability
3.4.14 ENERGETIC PARTICLES												
3.4.14.1	Energetic Heavy Ions	GOES R	T	1 direction (tbd)	n/a	n/a	n/a	10 -200 MeV/n (tbd) 4 mass groups: He, (C,N,O), Ne-S, & Fe	25%	5 min	5 min	n/a
			O	1 direction (tbd)	n/a	n/a	n/a	10-200 MeV/n (tbd) 4 mass groups: He, (C,N,O), Ne-S, & Fe	10% (tbd)	5 min	5 min	n/a
3.4.14.2	Magnetospheric Electrons and Protons: Low Energy	GOES R	T	5 directions	n/a	n/a	n/a	Electron and Protons: 30 eV - 30 keV	25%	30 sec	1 min	n/a
			O	9 directions	n/a	n/a	n/a	Electron and Protons: 30 eV - 30 keV	10% (tbd)	10 sec	1 min	n/a
3.4.14.3	Magnetospheric Electrons and Protons: Medium & High Energy	GOES R	T	5 directions (tbd)	n/a	n/a	n/a	Electrons: 30 keV - 4 MeV Protons: 30 keV - 1 MeV	25%	30 sec	1 min	n/a
			O	9 directions (tbd)	n/a	n/a	n/a	Electrons: 30 keV - 4 MeV Protons: 30 keV - 1 MeV	10%	10 sec	1 min	n/a
3.4.14.4	Solar and Galactic Protons	GOES R	T	2 directions	n/a	n/a	n/a	1 MeV - 500 MeV, Differential Measurements	25%	1 min	1 min	n/a
			O	2 directions	n/a	n/a	n/a	1 MeV - 500 MeV, Differential Measurements; One integral measurement between 500 MeV - 1 GeV	10%	30 sec	1 min	n/a
3.4.15 MAGNETIC FIELD												
3.4.15.1	Geomagnetic Field	OAR-NWS/SEC-	T	3-axis 0.5 deg	n/a	+/- 0.25 deg	+/- 1 deg	> / = +/- 400 nT/axis	1.0 nT (per	2 samples	RT (5 s)	n/a

		1				(tbr)		(3-axis vector)	axis)	/sec		
			O	3-axis 0.5 deg	n/a	+/- 0.25 deg (tbr)	+/- 0.5 deg	> / = +/- 400 nT/axis (3-axis vector)	1.0 nT (per axis)	8 samples /sec	RT (5 s)	n/a
3.4.16 SOLAR												
3.4.16.1	Solar Flux: EUV	GOES R	T	Solar Disk (40 arcmin)	n/a	n/a	+/-2 arcmin	0.1x Sol Min 10x Sol Max	+/- 10%	30 sec	30 sec	<5% over mission
			O	Solar Disk (40 arcmin)	n/a	n/a	+/-2 arcmin	0.1x Sol Min 10x Sol Max	+/- 5%	10 sec	10 sec	<2% over mission
3.4.16.2	Solar Flux: X-Ray	GOES R	T	Solar Disk (40 arcmin)	N/A	n/a	+/-2 arcmin	XRSA: $5x10^{-9}$ to $5x10^{-4}$ W/m^2 XRSB: $2x10^{-8}$ to $2x10^{-3}$ W/m^2	+/- 10%	3 sec	3 sec	<5% over mission
			O	Solar Disk (40 arcmin)	N/A	n/a	+/-2 arcmin	XRSA: $1x10^{-9}$ to $1x10^{-3}$ W/m^2 XRSB: $1x10^{-8}$ to $4x10^{-3}$ W/m^2	+/- 5%	0.5 sec	3 sec	<5% over mission
3.4.16.3	Solar Imagery: X-Ray	GOES R	T	0.0-1.3 Solar Radii	7.0 arcsec	Stability during 24 hrs: +/- 1.0 arcmin (N-S,E-W) Stability during exposure: +/- 1.0 arcsec (E-W) +/- 1.0 arcsec (N-S) Control: +/- 15.0 arcsec	+/-2.5 arcsec	Radiance: 0.3-10^6 $ph/cm^2/arcsec/sec$ Temperature: 1-10 MK (TBS)	+/-20% in radiance	Image: <2 min Temp: <6 min	<1 min	20%
			O	0.0-1.3 Solar Radii	5.0 arcsec	Stability during 24 hrs: +/- 1.0 arcmin (N-S,E-W) Stability during exposure: +/- 1.0 arcsec (E-W) +/- 1.0	+/-2.5 arcsec	Radiance: 0.3-10^6 $ph/cm^2/arcsec/sec$ Temperature: 0.5 - 20 MK (TBS)	+/-10% in radiance	Image: <1 min Temp: <3 min	<1 min	20%

						arcsec (N-S) Control: +/- 15.0 arcsec						