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GOES R REQ ID #	Observational Requirement	User & Priority (LO-#) (Note 1)	LEVEL	Geo- graphic Coverage	Sensing Depth or Vert Cov.	Horiz- ontal Res.	Mapping Accuracy	Msmnt. Range	Msmnt. Accuracy	Refresh Rate	Data Latency	Long- term stability
3.4.13.1	Currents: Hemispheric	GOES R	T	FD	Sfc	2 km	1.0 km	0 to 5 m/s (0-18 km/hr), 0 to 360 degrees	1 km/hr	6 hr	60 min	tbd
			O	H	Sfc	2 km	0.5 km	0 to 5 m/s (0-18 km/hr), 0 to 360 degrees	1 km/hr	60 min	15 min	tbd
3.4.13.2	Currents: Mesoscale	GOES R	T	M	Sfc	2 km	1.0 km	0 to 5 m/s (0-18 km/hr), 0 to 360 degrees	1 km/hr	6 hr	60 min	tbd
			O	M	Sfc	2 km	0.5 km	0 to 5 m/s (0-18 km/hr), 0 to 360 degrees	1 km/hr	60 min	15 min	tbd
3.4.13.3	Currents: Offshore / CONUS	GOES R	T	C & US navigable waters thru EEZ	Sfc	2 km	1.0 km	0 to 5 m/s, 0 to 360o	2 m/s	180 min	60 min	tbd
			O	C & US navigable waters thru EEZ	Sfc	2 km	0.5 km	0 to 5 m/s 0 to 360o	1 m/s	60 min	15 min	tbd
3.4.13.4	Currents: Offshore / Hemispheric	GOES R	T	FD	tbd	tbd	tbd	tbd	Tbd	tbd	tbd	tbd
			O	H	n/a	5 km	5 km	tbd	speed ± 0.5 m/s	60 min	30 min	tbd
3.4.13.5	Ocean Color: Coastal (Turbidity/ Chlorophyll/ Reflectance)	GOES R	T	US navigable waters thru EEZ	tbd	300 m	<300 m	WLR: 0.01-1 mW cm ⁻² um ⁻¹ sr ⁻¹ CHL: 10 ⁻³ -10 ² microgram/liter TURBID: 10 ⁻⁴ -0.15 sr ⁻¹ REFL: 10 ⁻⁴ -0.15 sr ⁻¹	<30% error	180 min	60 min	tbd
			O	US navigable waters thru EEZ	tbd	30 m	<30 m	WLR: 0.01-1 mW cm ⁻² um ⁻¹ sr ⁻¹ CHL: 10 ⁻³ -10 ² microgram/liter TURBID: 10 ⁻⁴ -0.15 sr ⁻¹ REFL: 10 ⁻⁴ -0.15 sr ⁻¹	<30% error	60 min	30 min	tbd
3.4.13.6	Ocean Color: CONUS/Offshore	GOES R	T	US navigable waters thru EEZ	tbd	4 km	1 km	WLR: 0.01-1 mW cm ⁻² um ⁻¹	<30% error	24 hr	60 min	tbd

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	(Turbidity/ Chlorophyll/ Reflectance)							sr ⁻¹ CHL: 10 ⁻³ -10 ² microgram/liter TURBID: 10 ⁻⁴ - 0.15 sr ⁻¹ - REFL: 10 ⁻⁴ - 0.15 sr ⁻¹ (tbd)				
			O	U.S. EEZ plus Gulf of Mexico and North Pacific	tbd	1 km	<1 km	WLR: 0.01-1 mW cm ⁻² um ⁻¹ sr ⁻¹ CHL: 10-3-102 microgram/liter TURBID: 10 ⁻⁴ - 0.15 sr ⁻¹ REFL: 10 ⁻⁴ - 0.15 sr ⁻¹ (tbd)	<30% error	24 hr	60 min	tbd
3.4.13.7	Ocean Color: Offshore (Turbidity/ Chlorophyll/ Reflectance)	GOES R	T	62 degree LZA	tbd	100 km	tbd	tbd	Tbd	60 min	tbd	tbd
			O	H	tbd	4 km	2 km	WLR: 0.01-1 mW cm ⁻² um ⁻¹ sr ⁻¹ CHL: 10 ⁻³ -10 ² microgram/liter TURBID: 10 ⁻⁴ - 0.15 sr ⁻¹ REFL: 10 ⁻⁴ - 0.15 sr ⁻¹	5 %	15 min	tbd	tbd
3.4.13.8	Ocean Turbidity: Hemispheric (Turbidity/Visibility)	GOES R	T	62° LZA	0 to -10 m	5 km	2 km	0 to 100 mg/m ³	< 30% error	180 min	60 min	tbd
			O	H	0 to - 100 m	300 m	300 m	tbd	< 30% error	60 min	60 min	tbd
3.4.13.9	Optical Properties: Coastal (particulate absorption, bcksctter, fluorescence)	GOES R	T	US navigable waters thru EEZ	tbd	300 m	<300 m	Absorption: 0.01-10 m ⁻¹ Scattering: 0.01-50 m ⁻¹ Chlorophyll fluorescence: n/a	<30% error	180 min	60 min	tbd
			O	U.S. EEZ plus Gulf of Mexico and North Pacific	tbd	30 m	<30 m	.005 - 20 m ⁻¹ 0.005 - 75 m ⁻¹ Detectable signal in waters with chlorophyll from 0.1 to 50 mg/m ³ at 1 km res	<30% error	60 min	30 min	tbd

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3.4.13.10	Optical Properties: CONUS/Offshore (particulate absorption, backscatter, fluorescence)	GOES R	T	U.S. EEZ	tbd	1 km	1 km	Absorption; 0.01-10 m ⁻¹ Scattering; 0.01-50 m ⁻¹ Chlorophyll fluorescence: n/a	<30% error	24 hrs	180 min	tbd
			O	U.S. EEZ	tbd	1 km	< 1 km	.005 - 20 m ⁻¹ 0.005 - 75 m ⁻¹ Detectable signal in waters with chlorophyll from 0.1 to 50 mg/m ³ at 1 km resolution	< 30% error	60 min	60 min	tbd
3.4.13.11	Sea & Lake Ice: Age HEMISPHERIC	GOES R	T	FD	Ice Surface	1 km	3 km	Distinguish between ice free areas and first year ice.	tbd	6 hr	60 min	tbd
			O	H*	Ice Surface	1 km	1 km	Distinguish between Ice free, Nilas, Grey White, Grey White, First Year Medium, First Year Thick, Second Year, and Multiyear Smooth and Deformed Ice	95% (90% for sea Ice)	180 min	15 min	N/A
3.4.13.14	Sea & Lake Ice: Concentration: CONUS	GOES R	T	CONUS/Regional - Great Lakes and US coastal waters containing sea ice hazards to navigation	Ice Surface	3 km	< = 1.5 km	Ice concentration - 0/10 to 10/10	Ice extent 1km Ice concentration - 10%	180 min	60 min	tbd
			O	CONUS/Regional - Great Lakes and US coastal waters containing sea ice hazards to navigation	Ice Surface	1 km	< = 1 km	Ice concentration - 0/10 to 10/10	Ice extent 1km Ice concentration - 10%	60 min	30 min	tbd
3.4.13.12	Sea & Lake Ice: Concentration Hemispheric	GOES R	T	FD- Sea ice covered waters in N. & S. Hemispheres	Ice Surface	10 km	< = 5.0 km	Ice concentration - 0/10 to 10/10	Ice extent 1km Ice concentration - 10%	6 hr	180 min	tbs
			O	G - Sea ice covered waters in N. & S.	Ice Surface	5 km	< = 2.5 km	Ice concentration - 0/10 to 10/10	Ice extent 1km Ice concentration	180 min	30 min	tbs

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				Hemispheres					- 10%			
3.4.13.13	Sea & Lake Ice: Displacement and Direction Hemispheric	GOES R	T	FD	n/a	2 km	1 km	Tbd	Direction: +/- 22.5 Degs	180 min	60 min	N/A
			O	H	n/a	1 km	1.0 km	Tbd	Direction: +/- 11.25 Degs	60 min	60 min and retrospective	N/A
3.4.13.14	Sea & Lake Ice: Extent and Characterization Hemispheric	GOES R	T	FD	tbd	tbd	tbd	Tbd	1 cm	tbd	tbd	tbd
			O	H	surface	tbd	tbd	Tbd	tbd	60 min	15 min	tbd
3.4.13.15	Sea & Lake Ice: Motion CONUS	GOES R	T	Great Lakes and Chesapeake and Delaware Bays	n/a	5 km	< = 2.5 km	Direction: 0 - 360 Degrees Displacement: 0 - 0.6 m/s	Direction: +/- 15 Degs	3 hr	60 min	tbs
			O	Great Lakes and Chesapeake and Delaware Bays	n/a	3 km	< = 1 km	Direction: 0 - 360 Degrees Displacement: 0 - 0.6 m/s	Direction: +/- 10 Degs	1 hr	30 min	tbs
3.4.13.16	Sea & Lake Ice: Motion Hemispheric	GOES R	T	G* - Sea ice covered waters in N. & S. Hemispheres	n/a	15 km	< = 7.5 km	Direction: 0 - 360 Degrees Displacement: 0 m/s to 0.6 m/s	Direction: +/- 15 Degs	6 hr	180 min	tbs
			O	G - Sea ice covered waters in N. & S. Hemispheres	n/a	10 km	< = 5.0 km	Direction: 0 - 360 Degrees Displacement: 0 m/s to 0.6 m/s	Direction: +/- 10 Degs	3 hr	30 min	tbs
3.4.13.17	Sea Surface Temps: CONUS/Offshore	GOES R	T	C & US navigable waters thru EEZ	n/a	2 km	1.0 km	270-313 K	1.0 K	180 min	60 min	tbd
			O	C & US navigable waters thru EEZ	n/a	0.5 km	0.2 km	243-313 K	0.1 K	15 min	30 min	tbd
3.4.13.18	Sea Surface Temps: Hemispheric	GOES R	T	FD	n/a	2 km	1.0 km	271-313 K	1 K	60 min	15 min	tbd
			O	H	n/a	0.5 km	0.2 km	271-313 K	0.1 K	15 min	5 min	tbd
3.4.13.19	Sea Surface Temps: Mesoscale	GOES R	T	M	n/a	2 km	1.0 km	270-313 K	1 K	60 min	15 min	tbd
			O	M	n/a	0.5 km	0.2 km	270-313 K	1 K	15 min	5 min	tbd