

# Briefing on NOAA CoastWatch Okeanos Ocean Color Products

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The NOAA CoastWatch Okeanos system provides high quality ocean color operational products for the user community. These products are categorized by instrument and algorithm, as defined in *Table 1*. For each category, the products typically include daily and bi-monthly mean chlorophyll concentrations, and chlorophyll concentration anomaly compared to 61-day averages. Similar products for remote sensing reflectance at 667 nm are also available for MODIS/AQUA. The information on coverage, format, and filename format of the products for each category is listed in Tables 2 through 7. Information of Regions defined in Okeanos Ocean Color Products is given in the *Appendix A*.

All Okeanos ocean color products are accessible from <ftp://cw-okeanos.noaa.gov/pub/data1>. An overview of the directory layout for this site is given in *Table 8*. *Appendix B* is a more detailed guide to the publicly accessible ftp directories.

**Table 1 NOAA Okeanos Ocean Color Products Categories**

Instrument/Satellite	Product Category	Status
MODIS/Aqua	NASA L2gen NIR products: daily and bi-monthly Chlorophyll-a (Chl), daily Chl anomaly, and Remote Sensing Reflectance (Rrs667), for 13 CoastWatch regions	Operational
	NOAA NIR-SWIR products: daily and bi-monthly Chl, daily Chl anomaly, Rrs667, and Water attenuation Coefficient (Kd490), for 13 CoastWatch regions	Operational
	NOAA Chlorophyll frontal products from NIR products: granule and daily Chl front (magnitude), and granule Chl front (direction), for 9 CoastWatch regions	
	NOAA <i>Ehux</i> bloom products: 8-day composite map	Pre-operational
NOAA calcite concentration products: global daily and 8-day composite map		
MODIS/Terra	NASA L2gen NIR products: daily and bi-monthly Chlorophyll-a (Chl), daily Chl anomaly, and Remote Sensing Reflectance (Rrs667), for 2 CoastWatch regions	Backup

**Table 2 MODIS/Aqua Chesapeake Bay Ocean Color Products**

<b>Chlorophyll-a concentration (chlor_a)</b>	
<i>Product Name</i>	<i>File Name Format (Convention)</i>
L3 Granule-level chlor_a	MODCYCW_P<date>_<time>_CY05_closest_chlora.<sfx>  Example: MODCYCW_P2014046_1720_CY05_closest_chlora.hdf

L3 Daily Merge chlor_a	MODCYCW_P<date>_C<N>_<list_of_granule_start_times>_CY05_closest_chlora.<sfx>  Example: MODCYCW_P2014039_C2_1710_1850_CY05_closest_chlora.hdf
L4 Multi-day Merge chlor_a	MODCYCW_P<start date>_P<stop date>_F<days>_CY05_closest_chlora.<sfx>  Example: MODSCW_P2005263_P2005323_E61_EP05_closest_chlora.hdf
<b>Remote Sensing Reflectance at 667 nm (Rrs667)</b>	
<b>Product Name</b>	<b>File Name Format</b>
L3 Granule-level Rrs667	MODCYCW_P<date>_<time>_CY05_closest_Rrs667.<sfx>  Example: MODCYCW_P2014046_1720_CY05_closest_Rrs667.hdf
L3 Daily Merge Rrs667	MODSCW_P<date>_C<N>_<list_of_granule_start_times>_<reg><prj>_closest_Rrs667.<sfx>  Example: MODCYCW_P2014039_C2_1710_1850_CY05_closest_Rrs667.hdf
<b>Water Attenuation Coefficient at 490 nm (K490)</b>	
<b>Product Name</b>	<b>File Name Format</b>
L3 Granule-level K490	MODCYCW_P<date>_<time>_CY05_closest_K490.<sfx>  Example: MODCYCW_P2014046_1720_CY05_closest_K490.hdf
L3 Daily Merge K490	MODSCW_P<date>_C<N>_<list_of_granule_start_times>_<reg><prj>_closest_K490.<sfx>  Example: MODCYCW_P2014039_C2_1710_1850_CY05_closest_K490.hdf
<b>Notes</b>	<b>Coverage: CY</b> <b>Spatial Resolution: 1 km</b> <b>Suffix: hdf, png, tif</b>

**Table 3 MODIS/Aqua NIR Ocean Color Products**

<b>Chlorophyll-a concentration (chlor_a)</b>	
<b>Product Name</b>	<b>File Name Format (Convention)</b>
L3 Granule-level chlor_a	MODSCW_P<date>_<time>_<reg><prj>_closest_chlora.<sfx>  Example: MODSCW_P2013334_0205_PB05_closest_chlora.hdf
L3 Daily Merge chlor_a	MODSCW_P<date>_C<N>_<list_of_granule_start_times>_<reg><prj>_closest_chlora.<sfx>  Example: MODSCW_P2013332_C8_0040_0050_2205-2215_2345-2355_PB05_closest_chlora.hdf
L4 Multi-day Merge chlor_a	MODSCW_P<start date>_P<stop date>_E61_<reg><prj>_closest_chlora.<sfx>  Example: MODSCW_P2005263_P2005323_E61_EP05_closest_chlora.hdf
L4 Swath Anomaly chlor_a ANOMALY	MODSCW_P<date>_<time>_E61_P<start date>_P<stopdate>_<reg><prj>_closest_chlorANOMALY.<suf>  <b>Example :</b> MODSCW_P2013160_2255_E61_P2013077_P2011137_PB05_closest_chlorANOMALY.hdf
L4 Daily Anomaly chlor_a ANOMALY	MODSCW_P<date>_C<N>_<list_of_granule_start_times>_E61_P<date>_<reg><prj>_closest_chlorANOMALY.<sfx>  <b>Example:</b> MODSCW_P2013312_C4_0010_0015_2315_2320_E61_P2013230_HI05_closest_chlorANOMALY.png

<b>Remote Sensing Reflectance at 667 nm (Rrs667)</b>	
<b>Product Name</b>	<b>File Name Format</b>
L3 Granule-level Rrs667	MODSCW_P<date>_<time>_<reg><prj>_closest_Rrs667.<sfx> Example: MODSCW_P2013334_0205_PB05_closest_Rrs667.hdf
L3 Daily Merge Rrs667	MODSCW_P<date>_C<N>_<list_of_granule_start_times>_<reg><prj>_closest_Rrs667.<sfx> Example: MODSCW_P2013332_C8_0040_0050_2205-2215_2345-2355_PB05_closest_Rrs667.hdf
L4 Multi-day Merge Rrs667	MODSCW_P<start date>_P<stop date>_E61_<reg><prj>_closest_Rrs667.<sfx> Example: MODSCW_P2005263_P2005323_E61_EP05_closest_Rrs667.hdf
L4 Swath Anomaly R667ANOMA LY	MODSCW_P<date>_<time>_E61_P<start date>_P<stop date>_<reg><prj>_closest_R667ANOMALY.<suf>  Example : MODSCW_P2013160_2255_E61_P2013077_P2011137_PB05_closest_R667ANOMALY.hdf
L4 Daily Anomaly R667ANOMA LY	MODSCW_P<date>_C<N>_<list_of_granule_start_times>_E61_P<date>_<reg><prj>_closest_R667ANOMALY.<sfx>  Example: MODSCW_P2013312_C4_0010_0015_2315_2320_E61_P2013230_HI05_closest_R667ANOMALY.hdff
<b>Water Attenuation Coefficient at 490 nm (K490)</b>	
<b>Product Name</b>	<b>File Name Format</b>
L3 Granule-level K490	MODSCW_P<date>_<time>_<reg><prj>_closest_K490.<sfx> Example: MODSCW_P2013334_0205_PB05_closest_K490.hdf
L3 Daily Merge K490	MODSCW_P<date>_C<N>_<list_of_granule_start_times>_<reg><prj>_closest_K490.<sfx> Example: MODSCW_P2013332_C8_0040_0050_2205-2215_2345-2355_PB05_closest_K490.hdf
<b>Notes</b>	<b>Coverage:</b> AK, CB, EA, EP, GL, GM(03,05), HI, NA, NE, PB, SE, WC <b>Spatial Resolution:</b> 1 km <b>Suffix:</b> hdf, png, tif; and nc for daily merges

**Table 4 MODIS/Aqua NIR-SWIR Ocean Color Products**

<b>Chlorophyll-a concentration (chlor_a)</b>	
<b>Product Name</b>	<b>File Name Format (Convention)</b>
L3 Granule-level chlor_a	MODWCW_P<date>_<time>_<reg><prj>_closest_chlora.<sfx> Example: MODWCW_P2013334_0205_PB05_closest_chlora.hdf
L3 Daily Merge chlor_a	MODWCW_P<date>_C<N>_<list_of_granule_start_times>_<reg><prj>_closest_chlora.<sfx> Example: MODWCW_P2013332_C8_0040_0050_2205-2215_2345-2355_PB05_closest_chlora.hdf
L4 Multi-day Merge chlor_a	MODWCW_P<start date>_P<stop date>_E61_<reg><prj>_closest_chlora.<sfx> Example: MODWCW_P2005263_P2005323_E61_EP05_closest_chlora.hdf
L4 Swath	MODWCW_P<date>_<time>_E61_P<start date>_P<stop date>_<reg><prj>_closest_chlorANOMALY.<suf>

Anomaly chlor_a ANOMALY	<b>Example :</b> MODWCW_P2013160_2255_E61_P2013077_P2011137_PB05_closest_chlorANOMALY.hdf
L4 Daily Anomaly chlor_a ANOMALY	MODWCW_P<date>_C<N>_<list_of_granule_start_times>_E61_P<date>_<reg><prj>_closest_chlorANOMALY.<sfx>  <b>Example:</b> MODWCW_P2013312_C4_0010_0015_2315_2320_E61_P2013230_HI05_closest_chlorANOMALY.png
<b>Remote Sensing Reflectance at 667 nm (Rrs667)</b>	
<b>Product Name</b>	<b>File Name Format</b>
L3 Granule-level Rrs667	MODWCW_P<date>_<time>_<reg><prj>_closest_Rrs667.<sfx>  Example: MODWCW_P2013334_0205_PB05_closest_Rrs667.hdf
L3 Daily Merge Rrs667	MODWCW_P<date>_C<N>_<list_of_granule_start_times>_<reg><prj>_closest_Rrs667.<sfx>  Example: MODWCW_P2013332_C8_0040_0050_2205-2215_2345-2355_PB05_closest_Rrs667.hdf
L4 Multi-day Merge Rrs667	MODWCW_P<start date>_P<stop date>_E61_<reg><prj>_closest_Rrs667.<sfx>  Example: MODWCW_P2005263_P2005323_E61_EP05_closest_Rrs667.hdf
L4 Swath Anomaly R667ANOMALY	MODWCW_P<date>_<time>_E61_P<start date>_P<stop date>_<reg><prj>_closest_R667ANOMALY.<suf>  <b>Example :</b> MODWCW_P2013160_2255_E61_P2013077_P2011137_PB05_closest_R667ANOMALY.hdf
L4 Daily Anomaly R667ANOMALY	MODWCW_P<date>_C<N>_<list_of_granule_start_times>_E61_P<date>_<reg><prj>_closest_R667ANOMALY.<sfx>  <b>Example:</b> MODWCW_P2013312_C4_0010_0015_2315_2320_E61_P2013230_HI05_closest_R667ANOMALY.hdf
<b>Water Attenuation Coefficient at 490 nm (K490)</b>	
<b>Product Name</b>	<b>File Name Format</b>
L3 Granule-level K490	MODSCW_P<date>_<time>_<reg><prj>_closest_K490noaa.<sfx>  Example: MODSCW_P2013334_0205_PB05_closest_K490noaa.hdf
L3 Daily Merge K490	MODSCW_P<date>_C<N>_<list_of_granule_start_times>_<reg><prj>_closest_K490noaa.<sfx>  Example: MODSCW_P2013332_C8_0040_0050_2205-2215_2345-2355_PB05_closest_K490noaa.hdf
<b>Notes</b>	<b>Coverage:</b> AK, CB, EA, EP, GL, GM(03,05), HI, NA, NE, PB, SE, WC <b>Spatial Resolution:</b> 1 km <b>Suffix:</b> hdf, png, tif

**Table 5 MODIS/Aqua Chlorophyll Frontal Ocean Color Products**

<b>Gradient Direction (graddir)</b>	
L3 Granule-level graddir	MODSCW_ P<date>_<time>_<reg><prj>_closest_chlgraddir.<sfx>  Example: MODSCW_P2014001_1925_NE05_closest_chlgraddir.tif
<b>Gradient Magnitude (4radmag)</b>	

L3 Granule-level gradmag	MODSCW_P<date>_<time>_<reg><prj>_closest_chlgradmag.<sfx>  Example: MODSCW_P2014001_2235_HI05_closest_chlgradmag.hdf
L3 Daily Merge gradmag	MODSCW_P<date>_C<N>_<list_of_granule_start_times>_<reg><prj>_closest_gradmag.<sfx>  Example: MODSCW_P2013344_C6_2000_2005_2140_2145_2320_2325_WC05_closest_chlgradmag.hdf
Notes	<b>Coverage:</b> AK, CB, EP, GL, GM(05), HI, NE, SE, WC <b>Spatial Resolution:</b> 1 km <b>Suffix:</b> png, tif; also hdf for 5 gradmag products (Daily Merge 5radmag files also include graddir information.)

**Table 6 MODIS/Aqua Ehux Bloom and Calcite Concentration Products**

<b>Regional Calcite (calcite)</b>	
L3 Granule-level calcite	MODEHCW_P<date>_<time>_<reg><prj>_closest_calcite.<sfx>  Example: MODEHCW_P2014003_1405_XY00_closest_calcite.hdf
L3 Daily Merge calcite	MODEHCW_P<date>_C<N>_<list_of_granule_start_times>_<reg><prj>_closest_calcite.<sfx>  Example: MODEHCW_P2013363_C6_0905_1040_1045_1220_1225_1400_XZ00_closest_calcite.hdf
L4 Multi-day Merge calcite	MODWCW_P<start date>_P<stop date>_D8_<reg><prj>_closest_calcite.<sfx>  Example: MODEHCW_P2012317_P2012324_D8_ZW00_closest_calcite.hdf
<b>Global Calcite (with an index of WW00)</b>	
L4 Multi-day Merge calcite	MODEHCW_P<start date>_P<stop date>_E61_<reg><prj>_closest_calcite.<sfx>  Example: MODEHCW_P2012317_P2012324_D8_ZW00_closest_calcite.hdf
<b>Global Ehux Bloom (with an index of WW00)</b>	
L4 Multi-day Merge ehux	MODEHCW_P<start date>_P<stop date>_E61_<reg><prj>_closest_ehux.<sfx>  Example: MODEHCW_P2013279_P2013286_D8_WW00_closest_ehux.hdf
Notes	<b>Coverage:</b> UW00, UX00, UY00, UZ00, VW00, VX00, VY00, VZ00, WU00, WX00, WY00, WZ00, XW00, XX00, XY00, XZ00, YW00, YX00, YY00, YZ00, ZW00, ZX00, ZY00, ZZ00, WW00 <b>Spatial Resolution except for WW00:</b> 1 km <b>Suffix:</b> hdf, png, tif; and nc for WW00 <b>Spatial Resolution of WW00:</b> 4 km

**Table 7 MODIS/Terra Products**

<b>Chlorophyll-a concentration (chlor_a)</b>	
<b>Product Name</b>	<b>File Name Format (Convention)</b>
L3 Granule-level chlor_a	MODTCW_P<date>_<time>_<reg><prj>_closest_chlora.<sfx>  Example: MODSCW_P2013334_0205_PB05_closest_chlora.hdf
L3	MODTCW_P<date>_C<N>_<list_of_granule_start_times>_<reg><prj>_closest_chlora.<sfx>

Daily Merge chlor_a	Example: MODTCW_P2013332_C8_0040_0050_2205-2215_2345-2355_PB05_closest_chlora.hdf
L4 Multi-day Merge chlor_a	MODTCW_P<start date>_P<stop date>_E61_<reg><prj>_closest_chlora.<sfx>  Example: MODTCW_P2005263_P2005323_E61_EP05_closest_chlora.hdf
L4 Swath Anomaly chlor_a ANOMALY	MODTCW_P<date>_<time>_E61_P<start date>_P<stop date>_<reg><prj>_closest_chlorANOMALY.<suf>  Example : MODTCW_P2013160_2255_E61_P2013077_P2011137_PB05_closest_chlorANOMALY.hdf
L4 Daily Anomaly chlor_a ANOMALY	MODTCW_P<date>_C<N>_<list_of_granule_start_times>_E61_P<date>_<reg><prj>_closest_chlorANOMALY.<sfx>  Example: MODTCW_P2013312_C4_0010_0015_2315_2320_E61_P2013230_HI05_closest_chlorANOMALY.png
<b>Remote Sensing Reflectance at 667 nm (Rrs667)</b>	
<b>Product Name</b>	<b>File Name Format</b>
L3 Granule-level Rrs667	MODTCW_P<date>_<time>_<reg><prj>_closest_Rrs667.<sfx>  Example: MODTCW_P2013334_0205_PB05_closest_Rrs667.hdf
L3 Daily Merge Rrs667	MODTCW_P<date>_C<N>_<list_of_granule_start_times>_<reg><prj>_closest_Rrs667.<sfx>  Example: MODTCW_P2013332_C8_0040_0050_2205-2215_2345-2355_PB05_closest_Rrs667.hdf
L4 Multi-day Merge Rrs667	MODTCW_P<start date>_P<stop date>_E61_<reg><prj>_closest_Rrs667.<sfx>  Example: MODTCW_P2005263_P2005323_E61_EP05_closest_Rrs667.hdf
L4 Swath Anomaly R667ANOMALY	MODTCW_P<date>_<time>_E61_P<start date>_P<stop date>_<reg><prj>_closest_R667ANOMALY.<suf>  Example : MODTCW_P2013160_2255_E61_P2013077_P2011137_PB05_closest_R667ANOMALY.hdf
L4 Daily Anomaly R667ANOMALY	MODTCW_P<date>_C<N>_<list_of_granule_start_times>_E61_P<date>_<reg><prj>_closest_R667ANOMALY.<sfx>  Example: MODTCW_P2013312_C4_0010_0015_2315_2320_E61_P2013230_HI05_closest_R667ANOMALY.hdff
<b>Water Attenuation Coefficient at 490 nm (K490)</b>	
<b>Product Name</b>	<b>File Name Format</b>
L3 Granule-level K490	MODTCW_P<date>_<time>_<reg><prj>_closest_K490.<sfx>  Example: MODTCW_P2013334_0205_PB05_closest_K490.hdf
L3 Daily Merge K490	MODTCW_P<date>_C<N>_<list_of_granule_start_times>_<reg><prj>_closest_K490.<sfx>  Example: MODTCW_P2013332_C8_0040_0050_2205-2215_2345-2355_PB05_closest_K490.hdf
<b>Notes</b>	<b>Coverage:</b> GM03, GM05, HI05 <b>Spatial Resolution:</b> 1 km <b>Suffix:</b> hdf, png, tif; and nc for daily merges

**Table 8 Okeanos ocean color products directory structure on <ftp://cw.okeanos.noaa.gov/pub/data1>**

<i>Directory Name</i>	<i>Function</i>
CLASS	Directory for CLASS archive data pull for use by CLASS
CPC	Example data for use by CPC
data_products	All files currently available on the ftp server. Undifferentiated; includes all products and file types Note: contains MANY files, so ftp listings can be very <b>slow! It's preferable</b> to use the other folders for faster performance
dds_geonet	Storage of files to be pushed to the dds for use by DDS
EHUX_data_experimental	EHUX global weekly files. Available, but pre-operational
FRONTAL	Modis Aqua Frontal product files
HAB	Modis Aqua files for Harmful Algal Bloom (HAB) pull
png_archive	Archived png files from all products
Products_by_type	Product files sorted by stream and product type
Modis	Product files sorted by level (L1, L2, L3 L4)
Temp	Not currently used

## **Acknowledgements**

Thank the NOAA CoastWatch team led by Kent Hughes for their developing the processing software for NOAA ocean color products that are generated in the Okeanos Systems. Thank also go to Edmond Rodriguez, Derek Van Pelt, and Sterling Spangler for their great contribution to the Okeanos ocean color products QA monitoring tool development.



## Appendix A. Information of Regions defined in Okeanos Ocean Color Products

**Table A.1 Key for the 12 CoastWatch Region Codes**

		Western Longitude	Eastern Longitude	Northern Latitude	Southern Latitude
AK	Alaska	-175	-126	64	50
CB	Caribbean	-80	-60	30	8
CY	Chesapeake Bay	-142	-80	30	8
EA	Equatorial Atlantic	-60	0	30	-10
EP	Eastern Tropical Pacific	-93	-75	51	38
GL	Great Lakes	-99	-79	31	17
GM	Gulf of Mexico	-167	-147	29	10
HI	Hawaii	-60	0	60	20
NA	North Atlantic	-79	-61	46	31
NE	Northeast (US Coast)	-180	-140	50	0
PB	Pacific Basin	-88	-72	37	22
SE	Southeast (US Coast)	-142	-112	51	29
WC	West Coast (US)	-175	-126	64	50

**Table A.2 Key for the 24 Global Region Codes**

		Western Longitude	Eastern Longitude	Northern Latitude	Southern Latitude
UW		-180	-120	-45	-90
UX		-180	-120	0	-45
UY		-180	-120	45	0
UZ		-180	-120	90	45
VW		-120	-60	-45	-90
VX		-120	-60	0	-45
VY		-120	-60	45	0
VZ		-120	-60	90	45
WU		-60	0	-45	-90
WX		-60	0	0	-45
WY		-60	0	45	0
WZ		-60	0	90	45
XW		0	60	-45	-90
XX		0	60	0	-45
XY		0	60	45	0
XZ		0	60	90	45
YW		60	120	-45	-90
YX		60	120	0	-45
YY		60	120	45	0
YZ		60	120	90	45

**Table A.3 Key for File Name Format Codes in Tables 1-6**

<date>	4 digit year and 3digit Julian day
<time>	Time of swath or granule (1 <sup>st</sup> entry)

<start_date>	4 digit year and 3digit Julian day (start date)
<stop_date>	4 digit year and 3digit Julian day (stop date)
<reg>	2 character region code
<prj>	2 digit projection code
<N>	number of granules in the merge
<days>	number of days in the multi-day merge
<sfx>	3 character file suffix

**Appendix B. Detailed Director Tree Information on Ocean Color Product Files**  
on <ftp://cw-oceanos.noaa.gov/pub/data1>

**Table B.1 Okeanos ocean color products in /modis (products by level)**

<i>Directory Name</i>	<i>Function</i>
modis/L1/hdf	Modis Aqua and Modis Terra L1 hdf files
modis/L2/hdf	Modis Aqua and Modis Terra L2 hdf files
modis/L3/browse modis/L3/hdf modis/L3/thumb (thumbnail images) modis/L3/tiff	Modis Aqua and Modis Terra L3 png files Modis Aqua and Modis Terra L3 hdf files Modis Aqua and Modis Terra L3 png files Modis Aqua and Modis Terra L3 tif files
modis/L4/browse modis/L4/hdf modis/L4/thumb (thumbnail images) modis/L4/tiff	Modis Aqua and Modis Terra L4 png files Modis Aqua and Modis Terra L3 hdf files Modis Aqua and Modis Terra L4 png files Modis Aqua and Modis Terra L4 tif files

**Table B.2 Okeanos ocean color products /Products\_by\_type**

<i>Directory Name</i>	<i>Function</i>
products_by_type/aqua/chesapeake	All Modis Aqua Chesapeake Bay files
products_by_type/aqua/ehux	<b>All Modis Aqua Ehux files</b>
products_by_type/aqua/frontal	All Modis Aqua Frontal product files
products_by_type/aqua/nasa-nir	All Modis Aqua NIR product files
products_by_type/aqua/noaa-nir-swir	All Modis Aqua NIR-SWIR product files

**Table B.3 Okeanos ocean color products file types, detailed**

<b>EHUX_data_experimental</b>	<b>EHUX global weekly product files</b>
	MODEHCW_P*closest_calcite.hdf
	MODEHCW_P*closest_calcite.hdf.md5
	MODEHCW_P*closest_calcite.nc
	MODEHCW_P*closest_calcite.nc.md5
	MODEHCW_P*closest_calcite.tif
	MODEHCW_P*closest_calcite.png
	TMODEHCW_P*closest_calcite.png
	MODEHCW_P*closest_ehux.hdf
	MODEHCW_P*closest_ehux.hdf.md5
	MODEHCW_P*closest_ehux.nc
	MODEHCW_P*closest_ehux.nc.md5

	MODEHCW_P*closest_ehux.tif
	MODEHCW_P*closest_ehux.png
	TMODEHCW_P*closest_ehux.png
<b>FRONTAL</b>	<b>Modis Aqua Frontal product files</b>
	MODSCW_P*closest_chlgradmag.hdf
	MODSCW_P*closest_chlgradmag.hdf.md5
	MODSCW_P*closest_chlgradmag.png
	TMODSCW_P*closest_chlgradmag.png
	MODSCW_P*closest_chlgraddir.hdf
	MODSCW_P*closest_chlgraddir.hdf.md5
	MODSCW_P*closest_chlgraddir.nc
	MODSCW_P*closest_chlgraddir.nc.md5
	MODSCW_P*closest_chlgraddir.tif
	MODSCW_P*closest_chlgraddir.png
	TMODSCW_P*closest_chlgraddir.png
<b>GUI</b>	<b>Files for Okeanos GUI monitoring tool</b>
	*.txt
<b>HAB</b>	<b>Modis Aqua files for Harmful Algal Bloom (HAB)</b>
	MODSCW_P*closest_chlora.hdf
	MODSCW_P*closest_chlora.hdf.md5
	MODSCW_P*closest_chlora.hdf.png
	MODSCW_P*closest_chlora.hdf.tif
	TMODSCW_P*closest_chlora.hdf.png
	MODSCW_P*closest_Rrs667.hdf
	MODSCW_P*closest_Rrs667.hdf.md5
	MODSCW_P*closest_Rrs667.hdf.png
	MODSCW_P*closest_Rrs667.hdf.tif
	note:GM03 granule and multi-day merge only
<b>modis/L1/hdf</b>	<b>Modis Aqua and Modis Terra L1 hdf files</b>
	MOD021KM.P*.hdf
	MOD021KM.A*.hdf
<b>modis/L2/hdf</b>	<b>Modis Aqua and Modis Terra L2 hdf files</b>
	P*.L2_hdf_CBAY
	MODCYCW*.hdf
	P*.L2_hdf_EHUX
	MODEHCW*.hdf
	P*.L2_hdf
	MODSCW*.hdf
	MODSCW*l2frontal.hdf
	A*.L2_hdf
	MODTCW*.hdf
	P*L2_hdf_NSWIR
	MODWCW*.hdf
<b>modis/L3/browse</b>	<b>Modis Aqua and Modis Terra L3 png files</b>

	MODCYCW*.png
	MODEHCW*.png
	MODSCW*.png
	MODSCW*gradmag.png
	MODSCW*graddir.png
	MODTCW*.png
	MODWCW*.png
<b>modis/L3/hdf</b>	<b>Modis Aqua and Modis Terra L3 hdf files</b>
	MODCYCW*.hdf
	MODCYCW*.hdf.md5
	MODEHCW*.hdf
	MODEHCW*.hdf.md5
	MODSCW*.hdf
	MODSCW*.hdf
	MODSCW*gradmag.hdf
	MODSCW*gradmag.hdf.md5
	MODSCW*graddir.hdf
	MODSCW*graddir.hdf.md5
	MODTCW*.hdf
	MODTCW*.hdf.md5
	MODWCW*.hdf
	MODWCW*.hdf.md5
<b>modis/L3/thumb</b>	<b>Modis Aqua and Modis Terra L3 png files (thumbnail images)</b>
	TMODCYCW*.png
	TMODEHCW*.png
	TMODSCW*.png
	TMODSCW*gradmag.png
	TMODSCW*graddir.png
	TMODTCW*.png
	TMODWCW*.png
<b>modis/L3/tiff</b>	<b>Modis Aqua and Modis Terra L3 tif files</b>
	MODCYCW*.tif
	MODEHCW*.tif
	MODSCW*.tif
	MODSCW*gradmag.tif
	MODSCW*graddir.tif
	MODTCW*.tif
	MODWCW*.tif
<b>modis/L4/browse</b>	<b>Modis Aqua and Modis Terra L4 png files</b>
	MODCYCW*.png
	MODEHCW*.png
	MODSCW*.png

	MODTCW*.png
	MODWCW*.png
<b>modis/L4/hdf</b>	<b>Modis Aqua and Modis Terra L3 hdf files</b>
	MODCYCW*.hdf
	MODCYCW*.hdf.md5
	MODEHCW*.hdf
	MODEHCW*.hdf.md5
	MODSCW*.hdf
	MODSCW*.hdf
	MODTCW*.hdf
	MODTCW*.hdf.md5
	MODWCW*.hdf
	MODWCW*.hdf.md5
<b>modis/L4/thumb</b>	<b>Modis Aqua and Modis Terra L4 png files (thumbnail images)</b>
	TMODCYCW*.png
	TMODEHCW*.png
	TMODSCW*.png
	TMODTCW*.png
	TMODWCW*.png
<b>modis/L4/tiff</b>	<b>Modis Aqua and Modis Terra L4 tif files</b>
	MODCYCW*.tif
	MODEHCW*.tif
	MODSCW*.tif
	MODTCW*.tif
	MODWCW*.tif
<b>products_by_type/aqua/chesapeake</b>	<b>All Modis Aqua Chesapeake Bay files</b>
	MODCYCW*.hdf
	MODCYCW*.hdf.md5
	MODCYCW*.tif
	MODCYCW*.png
	TMODCYCW*.png
<b>products_by_type/aqua/ehux</b>	<b>All Modis Aqua Ehux files</b>
	MODEHCW_P*closest_calcite.hdf
	MODEHCW_P*closest_calcite.hdf.md5
	MODEHCW_P*closest_calcite.nc
	MODEHCW_P*closest_calcite.nc.md5
	MODEHCW_P*closest_calcite.tif
	MODEHCW_P*closest_calcite.png
	TMODEHCW_P*closest_calcite.png
	MODEHCW_P*closest_ehux.hdf
	MODEHCW_P*closest_ehux.hdf.md5
	MODEHCW_P*closest_ehux.nc
	MODEHCW_P*closest_ehux.nc.md5
	MODEHCW_P*closest_ehux.tif

	MODEHCW_P*closest_ehux.png
	TMODEHCW_P*closest_ehux.png
<b>products_by_type/aqua/frontal</b>	<b>All Modis Aqua Frontal product files</b>
	MODSCW_P*closest_chlgradmag.hdf
	MODSCW_P*closest_chlgradmag.hdf.md5
	MODSCW_P*closest_chlgradmag.png
	TMODSCW_P*closest_chlgradmag.png
	MODSCW_P*closest_chlgraddir.hdf
	MODSCW_P*closest_chlgraddir.hdf.md5
	MODSCW_P*closest_chlgraddir.nc
	MODSCW_P*closest_chlgraddir.nc.md5
	MODSCW_P*closest_chlgraddir.tif
	MODSCW_P*closest_chlgraddir.png
	TMODSCW_P*closest_chlgraddir.png
<b>products_by_type/aqua/nasa-nir</b>	<b>All Modis Aqua NIR product files</b>
	MOD021KM.P*.hdf
	MOD021KM.A*.hdf
	MODSCW*.hdf
	MODSCW*.hdf.md5
	MODSCW*.tif
	MODSCW*.png
	TMODSCW*.png
	MODTCW*.hdf
	MODTCW*.hdf.md5
	MODTCW*.tif
	MODTCW*.png
	TMOTSCW*.png
<b>products_by_type/aqua/nasa-nir</b>	<b>All Modis Aqua NIR-SWIR product files</b>
	MODWCW*.hdf
	MODWCW*.hdf.md5
	MODWCW*.tif
	MODWCW*.png
	TMODWCW*.png
<b>png_archive</b>	<b>not currently in use</b>
<b>Temp</b>	<b>not currently in use</b>