

## List of MODIS Data Products

GSFC/SPSO (9/14/93)

Preliminary

Prod #	Product Name	# of Parm	Instrument	Platform	DAAC	Time frame	Product Level	Product Type	Production Mode	Volume (GB/day)	Proc Load (MFLOPS)
MOD01	Level-1A Radiance, MODIS	1	MODIS	AM,PM	GSFC	AL	1A	Std	Routine	125.000	100.000
MOD02	Level-1B Radiance, Calibrated Geolocated,	2	MODIS	AM,PM	GSFC	AL	1B	Std	Routine	500.000	3000.000
MOD03	Geolocation Fields	10	MODIS	AM,PM	GSFC	AL	1B	Std	Routine	19.200	N/A
MOD04	Aerosol Product	2	MODIS	AM,PM	GSFC	AL	2	Std	Routine	1.520	0.390
MOD05	Precipitable Water	1	MODIS	AM,PM	GSFC	AL	2	Std	Routine	0.100	0.060
MOD06	Cloud Product	6	MODIS	AM,PM	GSFC	AL	2	Std	Routine	1.075	48.207
MOD07	O3 Total Burden	1	MODIS	AM,PM	GSFC	AL	2	Std	On-Request	0.400	0.030
MOD08	Stability (Lifted Index), Atmospheric	1	MODIS	AM,PM	GSFC	AL	2	Std	On-Request	0.400	0.060
MOD09	Surface Reflectance	5	MODIS	AM,PM	EDC	AL	2	Std	Routine	77.000	337.200
MOD10	Snow Cover	1	MODIS	AM,PM	NSIDC	AL	2	Std	Routine	1.270	1.000
MOD11	Land_sfc Temperature/Emissivity	2	MODIS	AM,PM	EDC	AL	2	Std	Routine	2.670	20.000
MOD12	Land_Cover Type	2	MODIS	AM,PM	EDC	NT	3	Std	Routine	0.040	240.000
MOD13	Vegetation Indices	2	MODIS	AM,PM	EDC	AL	2	Std	Routine	9.700	3.600
MOD14	Thermal Anomalies (Fire Size &	1	MODIS	AM,PM	EDC	AL	2	Std	Routine	1.600	0.090
MOD15	Leaf Area (LAI) & FPAR	1	MODIS	AM,PM	EDC	AL	2	Std	Routine	0.300	12.000
MOD16	Evapotranspiration	2	MODIS	AM,PM	EDC	AL	2	Std	Routine	0.300	12.000
MOD17	Vegetation Production, Net Primary (NPP)	2	MODIS	AM,PM	EDC	AL	2	Std	Routine	0.304	26.000
MOD18	Water-leaving Radiance	1	MODIS	AM,PM	GSFC	AL	2	Std	Routine	11.690	1200.000
MOD19	Pigment Conc, "CZCS"	1	MODIS	AM,PM	GSFC	AL	2	Std	Routine	1.460	0.200
MOD20	Chlorophyll Fluorescence	3	MODIS	AM,PM	GSFC	AL	2	Std	Routine	4.330	0.600
MOD21	Chlorophyll_a Pigment Concentration	2	MODIS	AM,PM	GSFC	AL	2	Std	Routine	2.920	0.400
MOD22	PAR	2	MODIS	AM,PM	GSFC	AL	2	Std	Routine	2.380	10.200
MOD23	Suspended-Solids Conc, Ocean Water	1	MODIS	AM,PM	GSFC	AL	2	Std	Routine	1.460	0.200
MOD24	Organic Matter Concentration	2	MODIS	AM,PM	GSFC	AL	2	Std	Routine	1.463	0.400
MOD25	Coccolith Conc, Detached	1	MODIS	AM,PM	GSFC	AL	2	Std	Routine	1.460	0.200
MOD26	Ocean Water Attenuation Coefficient	2	MODIS	AM,PM	GSFC	AL	2	Std	Routine	2.870	0.400
MOD27	Ocean Productivity	2	MODIS	AM,PM	GSFC	AL	2	Std	Routine	1.411	60.200
MOD28	Sea_sfc Temperature (SST)	1	MODIS	AM,PM	GSFC	AL	2	Std	Routine	2.660	500.000
MOD29	Sea_Ice Max Extent	1	MODIS	AM,PM	NSIDC	AL	2	Std	Routine	1.600	1.300
MOD30	Temperature and Moisture Profiles	2	MODIS	AM,PM	GSFC	AL	2	Std	Routine	11.200	6.000
MOD31	Phycocerythrin Conc.	1	MODIS	AM,PM	GSFC	AL	2	Std	Routine	1.460	0.200
MOD32	Calibration Data, MODIS	1	MODIS	AM,PM	GSFC	AL	2	Std	Routine	0.010	0.200
MOD33	Gridded Snow Cover	1	MODIS	AM,PM	NSIDC	NT	3	Std	Routine	0.004	0.500
MOD34	Gridded Vegetation Indices (Max NDVI & Integrated MVI)	2	MODIS	AM,PM	EDC	NT	3	Std	Routine	3.410	1.400
MOD35	<i>Ocean Water Backscatter Coef, Total *</i>	1	MODIS	AM,PM	GSFC	AL	2	Int	Routine	1.460	0.200
MOD36	<i>Absorption Coef, Total *</i>	1	MODIS	AM,PM	GSFC	AL	2	Int	Routine	1.460	0.200
MOD37	<i>Ocean Aerosol Properties *</i>	2	MODIS	AM,PM	GSFC	AL	2	Int	Routine	2.920	
MOD38	<i>Water Vapor, Atmospheric (Thermal IR) *</i>	1	MODIS	AM,PM	GSFC	AL	2	Int	Routine	0.400	0.140
MOD39	<i>Clear Water Epsilon *</i>	1	MODIS	AM,PM	GSFC	AL	2	Int	Routine	1.460	0.200

\* Italicized products indicate interim data products.

Note: Data product information is based upon TMs' responses to the July 1993 survey.

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Param #	Parameter Name	Prod #	Instrument	Investigator	Units	Accuracy Abs :: Rel	Temporal Resolution	Horizontal Resol. :: Cover.	Vertical Resol. :: Cover.
3708	Level-1A Radiance, MODIS	MOD01	MODIS	Salomonson				0.25 km, 0.5 km, 1 km :: G	
2338	Level-1B Radiance, Calibrated Geolocated, MODIS	MOD02	MODIS	Salomonson, Barker	W/m <sup>2</sup> /sr/μm	5%(1Σ) :: RMS<NEAL	1/day	0.25 km, 0.5 km, 1 km :: G	N/A :: N/A
3660	Classification Masks, Clouds/Land/Water/Snow	MOD02	MODIS	Salomonson, Barker (with Hall)					
4336	Latitude Geodetic	MOD03	MODIS				1/day	1 km ::	
4337	Longitude Geodetic	MOD03	MODIS				1/day	1 km ::	
4338	Ground Elevation	MOD03	MODIS				1/day	1 km ::	
4339	Solar Zenith Angle	MOD03	MODIS				1/day	1 km ::	
4340	Satellite Zenith Angle	MOD03	MODIS				1/day	1 km ::	
4341	Relative Azimuth Angle	MOD03	MODIS				1/day	1 km ::	
4342	Azimuth from True North	MOD03	MODIS				1/day	1 km ::	
N/A	TBD Parameter-1	MOD03	MODIS				1/day	1 km ::	
N/A	TBD Parameter-2	MOD03	MODIS				1/day	1 km ::	
N/A	TBD Parameter-3	MOD03	MODIS				1/day	1 km ::	
2293	Aerosol Optical Depth, Spectral	MOD04	MODIS	Kaufman, Tanre	dimensionless	0.05 :: 0.02 (Ocean) 0.1 :: 0.04 (Land)	1/day	50 x 50 km :: Land; 5 x 5 km :: Ocean	N/A :: Atmos
1022	Aerosol Size-distribution (Radius-Dispersion)	MOD04	MODIS	Tanre, Kaufman	μm, dimensionless	30-50% :: 30-50%	1/day	5 x 5 :: Ocean	N/A :: Atmos
1874	Precipitable Water, Near IR	MOD05	MODIS	Kaufman, Tanre, Menzel	dimensionless ?	10-20% :: 6% (NIR; double for LWIR)	1/day	5 km :: Land	N/A :: Atmos
2081	Cloud Cover	MOD06	MODIS	Menzel, King	%	5% :: 3%	2/day (d,n), 1/mo	5 km :: G	N/A :: Cloud
1764	Cloud Particle Phase	MOD06	MODIS	King, Menzel	water/ice	90% Conf :: 90% Conf	1/day	5 km :: G	N/A :: Cloud
1780	Cloud Particle Size(Effective Radius)	MOD06	MODIS	King	μm (microns)	20% :: 5%	1/day	5 km :: G	N/A :: Cloud
2311	Cloud Optical Depth	MOD06	MODIS	King	dimensionless	10% :: 5%	1/day (d)	5 km :: G	N/A :: Cloud
1528	Cloud Properties, Top	MOD06	MODIS	Menzel	mb	50 mb :: 25 mb	2/day	0.5 deg :: G	N/A :: Cloud
N/A	TBD (Spare)	MOD06	MODIS						
1333	O3 Total Burden	MOD07	MODIS	Menzel	DU	30DU :: 20DU	2/day	5 km, 0.5 deg :: G	Column :: Atmos
1559	Stability (Lifted Index), Atmospheric	MOD08	MODIS	Menzel	C	2 C :: 1 C	2/day	5 km, 0.5 deg :: G (clear only)	N/A :: Atmos
2015	Surface Leaving Radiance	MOD09	MODIS	Kaufman, Tanre, Justice	dimensionless; W/m <sup>2</sup> /sr/μm	10% ::	1/day	0.25, 0.5, 1.0 km :: Land	N/A :: Sfc
3669	Bidirectional Reflectance (Without Topography)	MOD09	MODIS	Muller, Strahler	fraction	15% ::	9/day	1 km :: Land/R	N/A :: Sfc
4332	Bidirectional Reflectance (With Topography)	MOD09	MODIS	Muller, Strahler	fraction	5% :: 2%	9/day	1 km :: Land	N/A :: Sfc
3665	Albedo, Spectral, Land_sfc (Without Topography)	MOD09	MODIS	Muller, Strahler	fraction	10% ::	9/day	1 km :: Land/R	N/A :: Sfc
4333	Albedo, Spectral, Land_sfc (With Topography)	MOD09	MODIS	Muller, Strahler	fraction	3% :: 1%	9/day	1 km :: Land	N/A :: Sfc
3020	Snow Cover	MOD10	MODIS	Salomonson, Hall	km <sup>2</sup>	10% ::	1/day	1 km :: Land	N/A :: Sfc
2484	Land_sfc Temperature	MOD11	MODIS	Wan	C	1-4 C ::	1/day, 1/wk	1 km :: Land/R	N/A :: Sfc
3323	Land_sfc Emissivity	MOD11	MODIS	Wan	dimensionless	0.02-0.5 :: 0.005-0.02	1/mo	1 km :: Land	N/A :: Sfc
2669	Land_Cover Type	MOD12	MODIS	Strahler, Huete	categorical fraction	10% ::	1/(3 months)	1 km :: Land	N/A :: Sfc
2761	Land_Cover Change	MOD12	MODIS		categorical fraction	10% ::	1/ (3 months)	1 km :: Land	N/A :: Sfc
2749	Vegetation Indices, NDVI	MOD13	MODIS	Justice, Huete	dimensionless	0.05 ::	1/day	0.5 km :: Land	N/A :: Sfc
4334	Vegetation Indices, MVI	MOD13	MODIS	Justice, Huete	dimensionless	0.05 ::	1/day	0.5 km :: Land	N/A :: Sfc
2471	Thermal Anomalies (Fire Size & Temperature)	MOD14	MODIS	Kaufman, Justice	K	2-10 K ::	1/day (D/N)	1 km :: Land/R	N/A :: Sfc
2680	Leaf Area (LAI) & fPAR	MOD15	MODIS	Running	dimensionless	25% ::	1/(10 day)	0.5 km :: Land	N/A :: N/A
3722	Evapotranspiration	MOD16	MODIS	Running	dimensionless	25% ::	1/(10 day)	0.5 km :: Land	N/A :: N/A

Note: Parameter information is based upon TMs' responses to the July 1993 survey.

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Param #	Parameter Name	Prod #	Instrument	Investigator	Units	Accuracy Abs :: Rel	Temporal Resolution	Horizontal Resol. :: Cover.	Vertical Resol. :: Cover.
4335	Surface Resistance	MOD16	MODIS	Running		25% ::	1/(10 day)	0.5 km :: Land	N/A :: N/A
2703	Vegetation Production, Net Primary	MOD17	MODIS	Running	Mg/km <sup>2</sup> /yr	20% ::	1/yr	0.5 km :: Land	N/A :: N/A
3716	Photosynthesis-Respiration	MOD17	MODIS	Running		40% ::	1/(10 day)	0.5 km :: Land	N/A :: N/A
2416	Level-2 Radiance, Water-leaving	MOD18	MODIS	Gordon, et al	mW/cm <sup>2</sup> /sr/μm	0.0015 ::	1/day, 1/wk, 1/mo	1 km :: Ocean/R,L	N/A :: Sfc
2591	Pigment Conc, "CZCS"	MOD19	MODIS	Gordon, Clark	mg/m <sup>3</sup>	100% (Global); 35% (Case I, Clear Atmos) :: TBD	1/day, 1/wk, 1/mo	20 km, 1 km? :: Ocean/G,R,L?	N/A ::
2575	Chlorophyll Fluorescence Line Height	MOD20	MODIS	Abbott, Evans	mW/cm <sup>2</sup> /sr/μm	.004 W/m <sup>2</sup> /sr ::	1/day, 1/wk	4 km, 1 km? :: Ocean/G,R,L?	N/A ::
2573	Chlorophyll Fluorescence Line Curv	MOD20	MODIS	Hoge	mW/cm <sup>2</sup> /sr/μm	25% ::	1/day, 1/wk	1 km, 20 km? :: Ocean/R,G	N/A ::
3211	Chlorophyll Fluorescence Efficiency	MOD20	MODIS	Abbott	mW/cm <sup>2</sup> /sr/μm/mg-Chl/m <sup>3</sup>	TBD ::	1/day, 1/wk	1 km :: Ocean/R,L	N/A ::
2571	Chlorophyll_a Pigment Conc, Case I	MOD21	MODIS	Clark	mg/m <sup>3</sup>	30% (0.1 < [Chl] < 1); 60% (1 < [Chl] < 10); TBD ([Chl] > 10) ::	1/day, 1/wk, 1/mo	1 km :: Ocean-I/L	N/A ::
2569	Chlorophyll_a Pigment Conc, Case II	MOD21	MODIS	Carder	mg/m <sup>3</sup>	50% (0.05 < [Chl] < 1) ::	1/day, 1/wk, 1/mo	1 km :: Ocean-III/R	N/A ::
2266	PAR, Sfc (IPAR) and Incident (IPAR)	MOD22	MODIS	Carder, Tanre	quanta/m <sup>2</sup> /s	5% ::	1/day [d]	1 km :: Ocean	N/A :: Sfc
2330	PAR, Daily	MOD22	MODIS	Esaias	W/m <sup>2</sup> /day	10% ::	1/day	N/A :: G	N/A :: Atmos
3085	Suspended-Solids Conc, Ocean Water	MOD23	MODIS	Clark	g/m <sup>3</sup>	50% ::	1/day, 1/wk, 1/mo	20 km, 1 km? :: Ocean/G,R?,L?	N/A ::
2608	Organic Matter Conc, Particulate	MOD24	MODIS	Clark	mg/m <sup>3</sup>	TBD ::	1/day, 1/wk	20 km :: Ocean	N/A ::
2580	Organic Matter Conc, Dissolved	MOD24	MODIS	Carder, Parslow	g/m <sup>3</sup>	40% (open ocean best case); 100% (coastal for [Chl] < 1) ::	1/day, 1/wk, 1/mo	20 km, 1 km? :: Ocean/R	N/A ::
2977	Coccolith Conc, Detached	MOD25	MODIS	Gordon	mg-CaCO <sub>3</sub> /cm <sup>3</sup>	25000/ml ::	1/day, 1/wk, 1/mo	20 km, 1 km? :: Ocean/G,R,L?	N/A ::
3199	Ocean Water Attenuation Coef@490nm	MOD26	MODIS	Clark, Gordon	/m	25% ::	1/day, 1/wk, 1/mo	20 km, 1 km? :: Ocean-I/R,L	N/A ::
3206	Ocean Water Attenuation Coef@520nm	MOD26	MODIS	Clark, Gordon	/m	35% ::	1/day, 1/wk	1 km :: Ocean	N/A ::
2602	Ocean Productivity, Primary, Daily	MOD27	MODIS	Abbott, Esaias	mg-C/m <sup>2</sup> /day	35% (Goal) ::	1/day, 1/wk	1 km :: Ocean-I/R,L	N/A ::
2606	Ocean Productivity, Primary, Global Annual	MOD27	MODIS	Esaias, Abbott	GT-C/yr	35% (Goal) ::	1/yr	20 km :: Ocean/G,R	N/A ::
2527	Sea_sfc Temperature (SST)	MOD28	MODIS	Brown, Barton	K	0.3-0.5 K ::	1/day, 1/wk, 1/mo	1 km :: Ocean/L	N/A :: Sfc
3153	Sea_Ice Max Extent	MOD29	MODIS	Salomonson, Hall	km <sup>2</sup>	TBD ::	1/day	10 km, 1 km? :: Ocean/Cryo,R?	N/A :: Sfc
3726	Temperature Profile	MOD30	MODIS	Menzel	K	0.5 K :: 1.5 K	2/day	5 km, 0.5 deg :: G (clear)	4 km :: Atmos (20 levels)
3727	Water Vapor Profile	MOD30	MODIS	Menzel		5 - 50 % ::	2/day	5 km, 0.5 deg :: G (clear)	4 km :: Atmos (15 levels)
3320	Phycocerythrin Conc.	MOD31	MODIS	Hoge	mg/m <sup>3</sup>	50% :: 15%	1/day, 1/wk, 1/mo	1 km :: Ocean/RL	N/A :: TOO
3303	Calibration Data, MODIS	MOD32	MODIS	Evans	variable		1/day, 1/wk, 1/mo	N/A :: Ocean/G,R,L	N/A :: Sfc
3020A	Snow Cover	MOD33	MODIS	Salomonson, Hall	km <sup>2</sup>	10% ::		10 km :: Land	N/A :: Sfc
2749A	Vegetation Indices, Max NDVI	MOD34	MODIS	Justice, Huete	dimensionless	0.05 ::	1/(10 day)	0.5 km :: Land	N/A :: Sfc
4334A	Vegetation Indices, Integrated MVI	MOD34	MODIS	Justice, Huete	dimensionless	0.05 ::	1/(10 day)	0.5 km :: Land	N/A :: Sfc
2559	Ocean Water Backscatter Coef, Total	MOD35	MODIS	Gordon, Parslow	/m	0.005 or 20% ::	1/day, 1/wk, 1/mo	1 km :: Ocean/R	N/A ::
3724	Absorption Coef, Total	MOD36	MODIS	Carder	/m	25% ::			
2344	Aerosol Optical Depth (@865 nm)	MOD37	MODIS	Gordon	dimensionless	>20% or 0.05 ::	1/day, 1/wk, 1/mo	1 km :: Ocean/G,R,L	N/A :: Atmos
2295	Aerosol Angstrom Exponent	MOD37	MODIS	Gordon	dimensionless	15% ::	1/day, 1/wk, 1/mo	1 km :: Ocean/R,L	N/A :: Atmos
3725	Water Vapor, Atmospheric (Thermal IR)	MOD38	MODIS	Menzel		>20% or 5 mm ::			
3707	Clear Water Epsilon	MOD39	MODIS	Carder		2% (0.9 to 1.4) ::	1/day, 1/wk, 1/mo	1 km :: Ocean	

# Network Communications Requirements for Data Validation and Quality Checks

<i>Prod #</i>	<i>Product Name</i>	<i>Parameter Name</i>	<i>Parm #</i>	<i>Investigator</i>	<i>DAAC to SCF Data Transmission Rquirements</i>	<i>Total Volume (GB/day)</i>
MOD04	Aerosol Product	Aerosol Optical Depth, Spectral	2293	Kaufman, Tanre	Network QC 1.02 GB/day (0.012 MB/sec)	
		Aerosol Size-distribution (Radius-Dispersion)	1022	Tanre, Kaufman	Network QC 3.54 GB/day (0.041 MB/sec)	
		<i>Product Total</i>				
MOD05	Precipitable Water	Precipitable Water, Near IR	1874	Kaufman, Tanre, Menzel	Network QC 1.2 GB/day (0.013 MB/sec)	
		<i>Product Total</i>				
MOD06	Cloud Product	Cloud Cover	2081	Menzel, King	Network QC	
		Cloud Particle Phase	1764	King, Menzel		
		Cloud Particle Size(Effective Radius)	1780	King		
		Cloud Optical Depth	2311	King		
		Cloud Properties, Top	1528	Menzel	Network QC 2.4 GB/day (0.027 MB/sec)	
		TBD (Spare)	N/A			
<i>Product Total</i>					2.40	
MOD07	O3 Total Burden	O3 Total Burden	1333	Menzel	Network QC 1.2 GB/day (0.014 MB/sec)	
		<i>Product Total</i>				
MOD08	Stability (Lifted Index), Atmospheric	Stability (Lifted Index), Atmospheric	1559	Menzel	Network QC 1.2 GB/day (0.014 MB/sec)	
		<i>Product Total</i>				
MOD09	Surface Reflectance	Surface Leaving Radiance	2015	Kaufman, Tanre, Justice	Network QC 5.16 GB/day (0.060 MB/sec)	
		Bidirectional Reflectance (Without Topography)	3669	Muller, Strahler	Network QC 18.06 GB/day (0.209 MB/sec)	
		Bidirectional Reflectance (With Topography)	4332	Muller, Strahler	Network QC 18.06 GB/day (0.209 MB/sec)	
		Albedo, Spectral, Land_sfc (Without Topography)	3665	Muller, Strahler	Network QC 2.04 GB/day (0.024 MB/sec)	
		Albedo, Spectral, Land_sfc (With Topography)	4333	Muller, Strahler	Network QC 2.04 GB/day (0.024 MB/sec)	
		<i>Product Total</i>				
MOD10	Snow Cover	Snow Cover	3020	Salomonson, Hall	Network QC 3.81 GB/day (0.044 MB/sec)	
		<i>Product Total</i>				
MOD11	Land_sfc Temperature/Emissivity	Land_sfc Temperature	2484	Wan	Network QC 7.86 GB/day (0.071 MB/sec)	
		Land_sfc Emissivity	3323	Wan	Restored old parameter # 3323. Network QC 0.15	
		<i>Product Total</i>				

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<i>Prod #</i>	<i>Product Name</i>	<i>Parameter Name</i>	<i>Parm #</i>	<i>Investigator</i>	<i>DAAC to SCF Data Transmission Rquirements</i>	<i>Total Volume (GB/day)</i>
MOD12	Land_Cover Type	Land_Cover Type	2669	Strahler, Huete	Network QC 0.06 GB/day (0.000 MB/sec)	0.12
		Land_Cover Change	2761		Network QC 0.06 GB/day (0.000 MB/sec)	
		<i>Product Total</i>				
MOD13	Vegetation Indices	Vegetation Indices, NDVI	2749	Justice, Huete	Network QC 14.55 GB/day (0.170 MB/sec)	29.10
		Vegetation Indices, MVI	4334	Justice, Huete	New Parameter # 4334. Network QC 14.55 GB/day	
		<i>Product Total</i>				
MOD14	Thermal Anomalies (Fire Size & Temperature)	Thermal Anomalies (Fire Size & Temperature)	2471	Kaufman, Justice	Network QC 2.56 GB/day (0.030 MB/sec)	2.56
		<i>Product Total</i>				
MOD15	Leaf Area (LAI) & FPAR	Leaf Area (LAI) & FPAR	2680	Running	Network QC 1.86 GB/day (0.022 MB/sec)	1.86
		<i>Product Total</i>				
MOD16	Evapotranspiration	Evapotranspiration	3722	Running	Network QC 0.93 GB/day (0.011 MB/sec)	1.86
		Surface Resistance	4335	Running	New parameter #4335; Same QC requirements assumed as for evapotranspiration; Network QC	
		<i>Product Total</i>				
MOD17	Vegetation Production, Net Primary (NPP)	Vegetation Production, Net Primary (NPP)	2703	Running	Network QC 0.03 GB/day (0.000 MB/sec)	1.89
		Photosynthesis-Respiration	3716	Running	Network QC 1.86 GB/day (0.022 MB/sec)	
		<i>Product Total</i>				
MOD18	Water-leaving Radiance	Level-2 Radiance, Water-leaving	2416	Gordon, et al	Network QC 35.07 GB/day	35.07
		<i>Product Total</i>				
MOD19	Pigment Conc, "CZCS"	Pigment Conc, "CZCS"	2591	Gordon, Clark	Pixel RMSE compared to depth weighted in situ obs (SeaWiFS Protocols); Network QC 4.38 GB/day (0.051 MB/sec)	4.38
		<i>Product Total</i>				
MOD20	Chlorophyll Fluorescence	Chlorophyll Fluorescence Line Height	2575	Abbott, Evans	[Chl]>1 mg/cm <sup>3</sup> ; RMSE over several pixels, compared to depth weighted in situ obs. (SeaWiFS	12.99
		Chlorophyll Fluorescence Line Curv	2573	Hoge	[Chl]>1; RMSE; Network QC 4.23 GB/day (0.050	
		Chlorophyll Fluorescence Efficiency	3211	Abbott	Network QC 4.23 GB/day (0.05 MB/sec)	
		<i>Product Total</i>				
MOD21	Chlorophyll_a Pigment Concentration	Chlorophyll_a Pigment Conc, Case 1	2571	Clark	RMS vs. depth weighted ave. (SeaWiFS Protocols); in areas of efforts; in known bio-optical provinces;	

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<i>Prod #</i>	<i>Product Name</i>	<i>Parameter Name</i>	<i>Parm #</i>	<i>Investigator</i>	<i>DAAC to SCF Data Transmission Requirements</i>	<i>Total Volume (GB/day)</i>
MOD21	Chlorophyll_a Pigment Concentration	Chlorophyll_a Pigment Conc, Case II	2569	Carder	Regionally iff: a) a_g440/a_phi440<2, b) a_rho440/a_phi440<1, c) b_bp<0.1m^-1, d)	
		<i>Product Total</i>				
MOD22	PAR	PAR, Sfc (IPAR) and Incident (IPAR)	2266	Carder, Taure	conditions as #2344; >20km from clouds; Pixel RMSE to data sets; Network QC 3.57 GB/day (0.04)	
		PAR, Daily	2330	Esaias	ISCCP; RMSE vs. ship and shore stations; 350-700nm; W/mi^2/day; Network QC 3.57 GB/day	
		<i>Product Total</i>				
MOD23	Suspended-Solids Conc, Ocean Water	Suspended-Solids Conc, Ocean Water	3085	Clark	Conditions as #2571 and #2569; Network QC 4.38	
MOD23	Suspended-Solids Conc, Ocean Water	<i>Product Total</i>			Network QC 4.38 GB/day (0.051 MB/sec)	4.38
MOD24	Organic Matter Concentration	Organic Matter Conc, Particulate	2608	Clark	Subset of #3085; Network QC 0.01 GB/day (0.000)	
		Organic Matter Conc, Dissolved	2580	Carder, Parslow	Regionally - terrigenous fraction, fulmic/fulvic ratio; Network QC 4.38 GB/day (0.051 MB/sec)	
		<i>Product Total</i>				
MOD25	Coccolith Conc, Detached	Coccolith Conc, Detached	2577	Gordon	Optically weighted concentration; E. Huxleyi;	
		<i>Product Total</i>				4.38
MOD26	Ocean Water Attenuation Coefficient	Ocean Water Attenuation Coef@490nm	3199	Clark, Gordon	Chl 1 caveats; Pixel RMSE compared with K490 SeaWiFS Protocols; Network QC 4.38 GB/day	
		Ocean Water Attenuation Coef@520nm	3206	Clark, Gordon	Chl 1 caveats; Pixel, SeaWiFS Protocols; Network	
		<i>Product Total</i>				
MOD27	Ocean Productivity	Ocean Productivity, Primary, Daily	2602	Abbott, Esaias	Regional profiles; UML Model; P_b, alpha, Prim.Prod., Chl-a, K_lambda, phi, I_0; RMSE to	
		Ocean Productivity, Primary, Global Annual	2606	Esaias, Abbott	GT Carbon/yr; -60dg<lat<60dg; RMS vs. selected regional time series; clean 14C techniques/IGOP'S	
		<i>Product Total</i>				
MOD28	Sea_sfc Temperature (SST)	Sea_sfc Temperature (SST)	2527	Brown, Barton	RMSE per pixel vs. sfc. radiometric obs. ships & a/c; if uncertainty in Abs. Acc. in BD, <=0.10 for 20,22,23,31,32 and NEAT<=0.05 for 20,22,23,31,32	
		<i>Product Total</i>				7.98
MOD29	Sea_ice Max Extent	Sea_ice Max Extent	3153	Salomonson, Hall	Network QC 4.80 GB/day (0.056 MB/sec)	
		<i>Product Total</i>				4.80
MOD30	Temperature and Moisture Profiles	Temperature Profile	3726	Menzel	Following M. King's recommendation during IWG Atmospheric Panel meeting; Network QC 16.80	
		Water Vapor Profile	3727	Menzel	Following M. King's recommendation during IWG Atmospheric Panel meeting; Network QC 16.80	

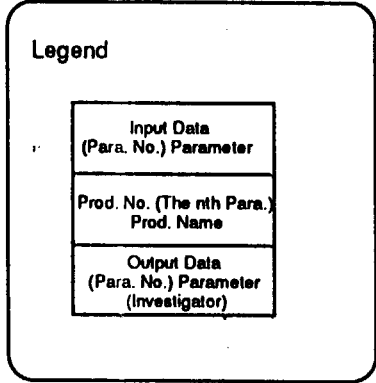
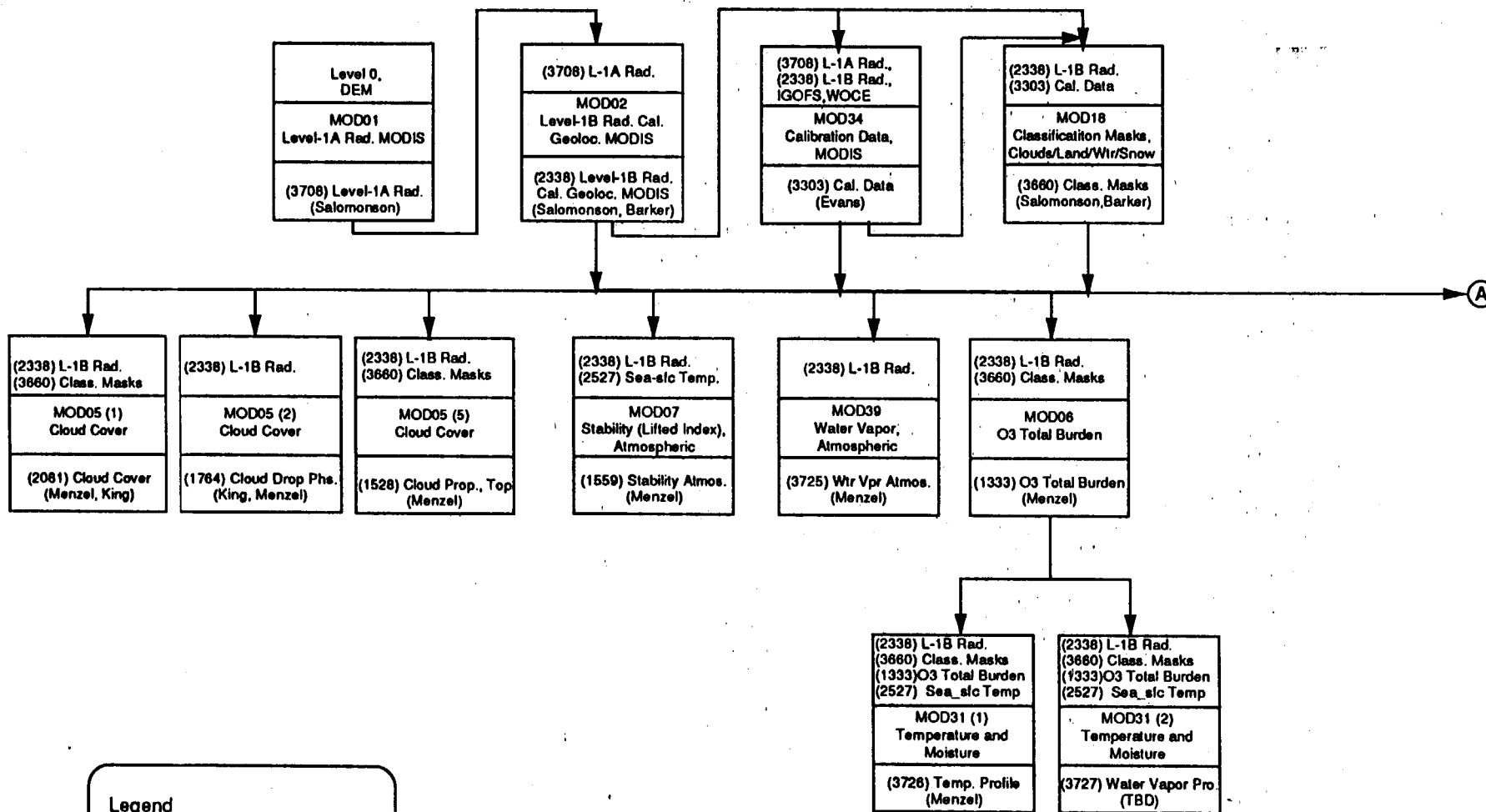
Note: All information is based on TMs' response to the July 1993 survey.

# Network Communications Requirements for Data Validation and Quality Checks

<i>Prod #</i>	<i>Product Name</i>	<i>Parameter Name</i>	<i>Parm #</i>	<i>Investigator</i>	<i>DAAC to SCF Data Transmission Requirements</i>	<i>Total Volume (GB/day)</i>
MOD30	Temperature and Moisture Profiles	<i>Product Total</i>				33.60
MOD31	Phycoerythrin Conc.	Phycoerythrin Conc.	3320	hoge	Network QC 4.38 GB/day (0.051 MB/sec)	
		<i>Product Total</i>				4.38
MOD32	Calibration Data, MODIS	Calibration Data, MODIS	3303	Evans	ships, buoys; include n.l.w's, [Chl-a], optical properties, bio-optical properties, Lsky; IR	
		<i>Product Total</i>			Network QC 0.03 GB/day (0.000 MB/sec)	0.03
MOD33	Gridded Snow Cover	Snow Cover	3020A	Salomonson, Hall	Network QC 0.01 GB/day (0.000 MB/sec)	
		<i>Product Total</i>				0.01
MOD34	Gridded Vegetation Indices (Max NDVI & Integrated MVI)	Vegetation Indices, Max NDVI	2749A	Justice, Huete	New Parameter, use #2749A for now, rather than 4335. Network QC 7.44 GB/day (0.086 MB/sec)	
		Vegetation Indices, Integrated MVI	4334A	Justice, Huete	New parameter. Use 4334A for now rather than 4336. Network QC 2.79 GB/day (0.032 MB/sec)	
MOD34	Gridded Vegetation Indices (Max NDVI & Integrated MVI)	<i>Product Total</i>				10.23
MOD35	Ocean Water Backscatter Coef, Total	Ocean Water Backscatter Coef, Total	2559	Gordon, Parslow	Range=0.002-0.05; Pixel RMSE compared to depth weighted in situ obs. (SeaWiFS Protocols);	
		<i>Product Total</i>				4.38
MOD36	Absorption Coef, Total	Absorption Coef, Total	3724	Carder	Range=412-555nm; Pixel RMS to data sets; $\Delta\rho > 0.002$ ; 2569 Pixel RMSE compared to depth	
		<i>Product Total</i>			Network QC 4.38 GB/day (0.056 MB/sec)	4.38
MOD37	Ocean Aerosol Properties	Aerosol Optical Depth (@ 865 nm)	2344	Gordon	Old MOD37, merged as parameter into Ocean Aerosol Properties product [Processing load est.:	
		Aerosol Angstrom Exponent	2295	Gordon	Old MOD38, merged as parameter [Processing load est.: "Included in Water Leaving Radiance	
		<i>Product Total</i>			Merged product includes old MOD37 and MOD38. Network QC 8.76 GB/day (0.112 MB/sec)	8.76
MOD38	Water Vapor, Atmospheric (Thermal IR)	Water Vapor, Atmospheric (Thermal IR)	3725	Menzel	RMS over several pixels; Subject to sensor	
		<i>Product Total</i>			Network QC 1.2 GB/day (0.014 MB/sec)	1.20
MOD39	Clear Water Epsilon	Clear Water Epsilon	3707	Carder	Subject to cal accuracy; values estimated over 530-665 nm; validated by internal consistency with water	
		<i>Product Total</i>			Network QC 4.38 GB/day (0.056 MB/sec).	4.38

Note: All information is based on TMs' response to the July 1993 survey.

# MODIS Level 2 Atmosphere and Land Data Products I (DRAFT)

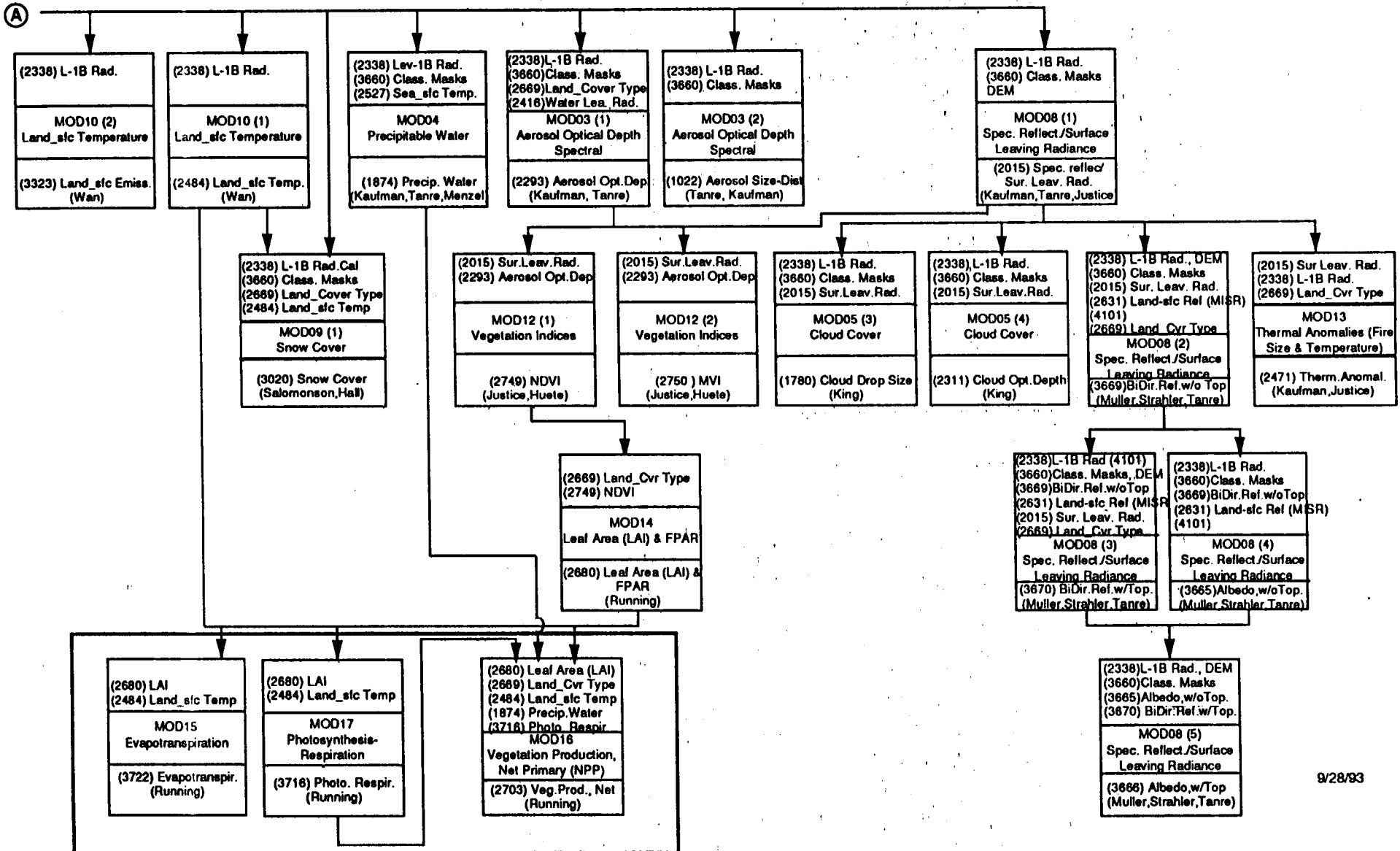


Note: (1) Parameter 2527 is Oceans Data Product  
 (2) Parameter 2669 is Level 3 Data Product

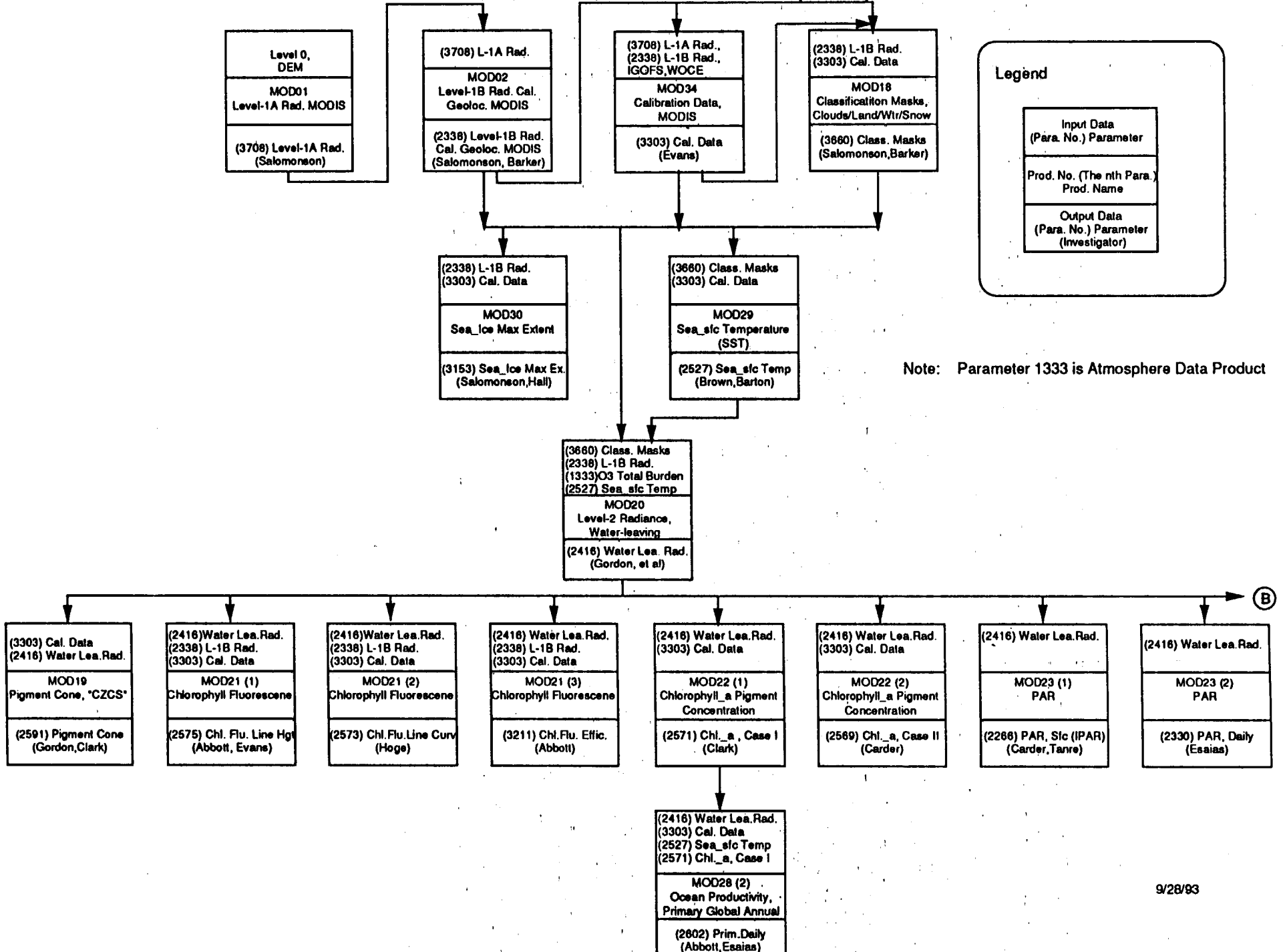


MODIS Level 2 Atmosphere and Land Data Products (II) (DRAFT)

Note: (1) Parameters 2527 and 2416 are Oceans Data Products  
 (2) Parameter 2669 is Level 3 Data Product  
 (3) Parameter 4101 is from ?



# MODIS Level 2 Ocean Data Products I (DRAFT)



**Legend**

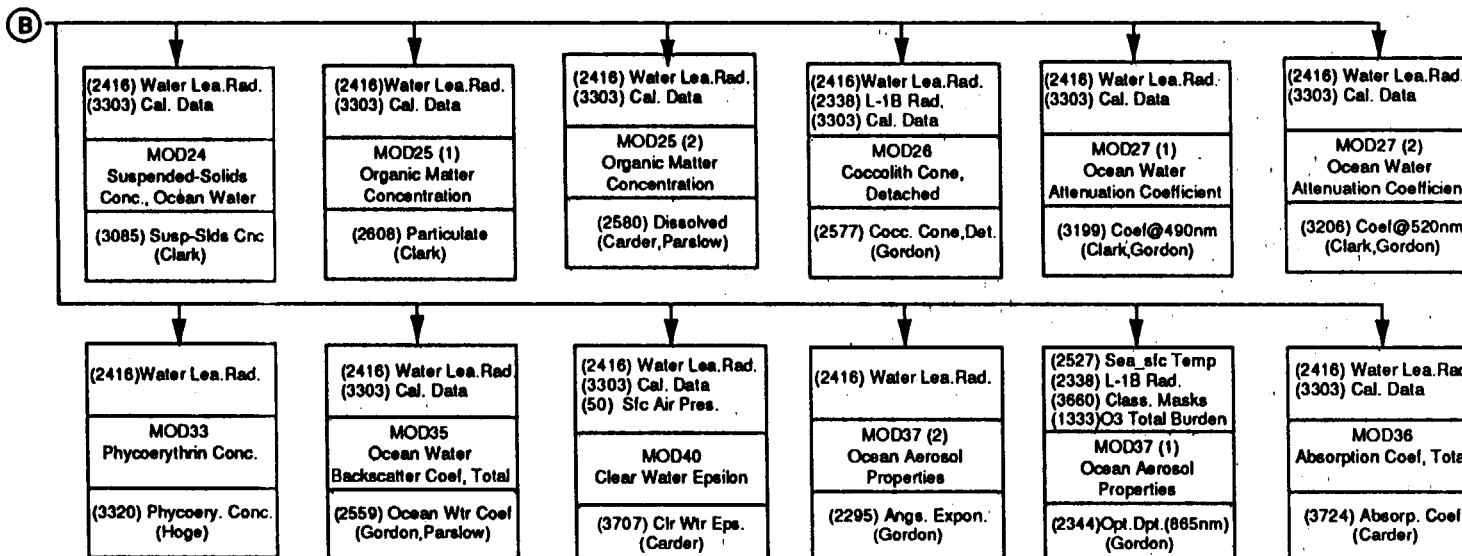
Input Data (Para. No.) Parameter
Prod. No. (The nth Para.) Prod. Name
Output Data (Para. No.) Parameter (Investigator)

Note: Parameter 1333 is Atmosphere Data Product

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## MODIS Level 2 Ocean Data Products II (DRAFT)

Note: Parameter 1333 is Atmosphere Data Product



# MODIS Level 3 Data Products (DRAFT)

