



MODIS OCEAN NET PRIMARY PRODUCTION

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MODIS Science Team Meeting

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<http://modis-ocean.gsfc.nasa.gov>

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MODIS Ocean Team

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SDST, MODAPS (R. Woodward, et al)

MCST

GES-DAAC

ESDIS

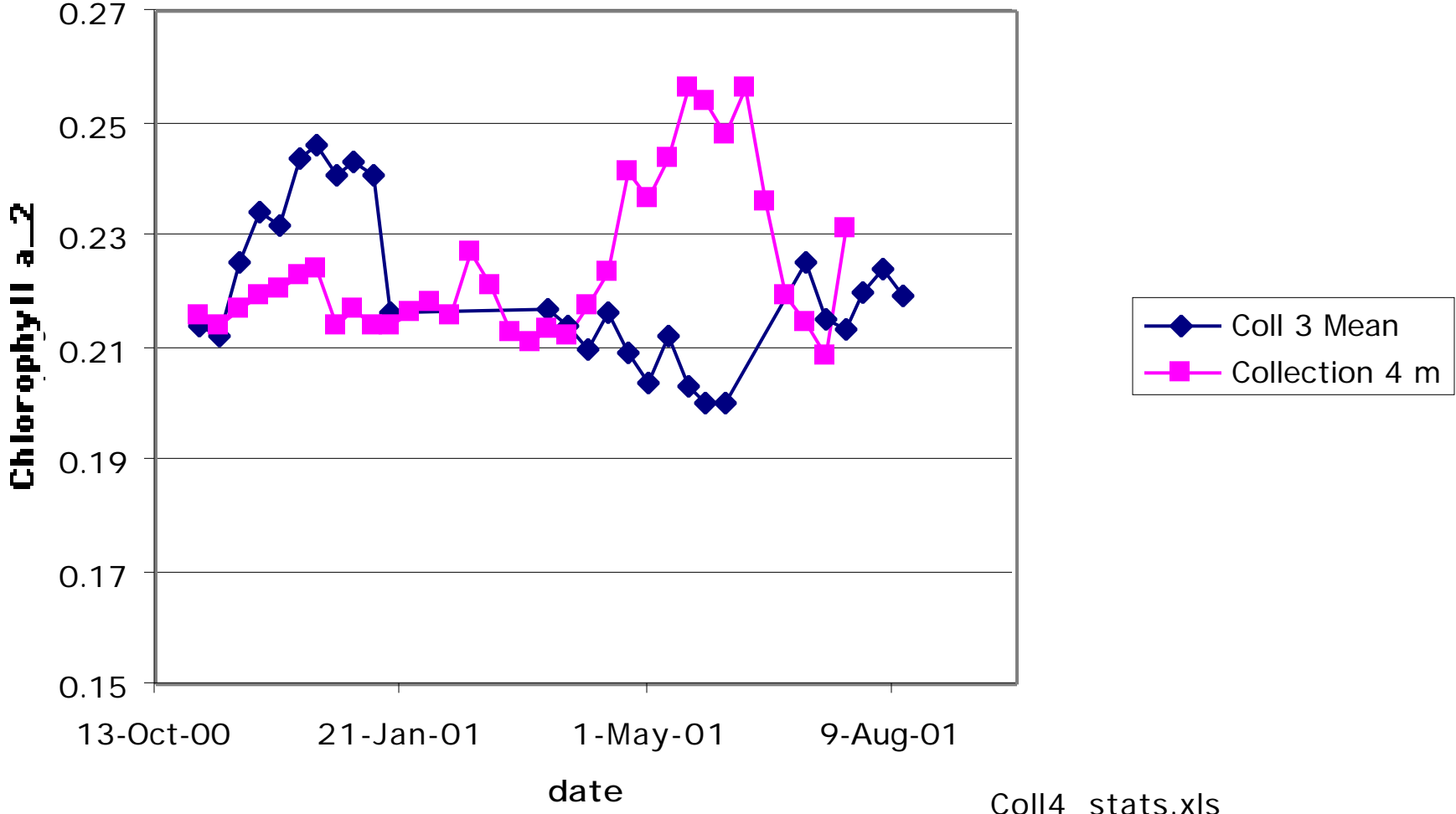
Terra & EOS Project

SIMBIOS Project

Code Changes for Collection 4

- Collection 4 Chlor_a_3, SST day 11-12
- New ONPP Quality Flag Definitions
- Depth integrations use shallow water flag
- Mapping Changes
 - Nearest neighbor filling
 - Maps use quality flags as per L-3
- Factors for DAO version changes (PAR)

Global Chlor_a_2 {0}

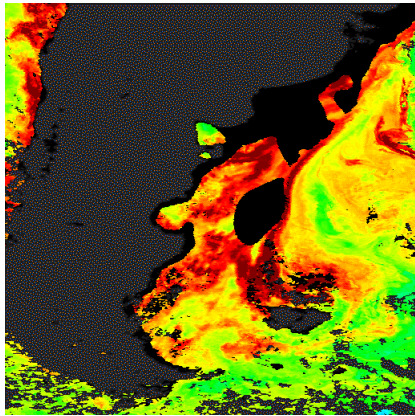


Coll4_stats.xls

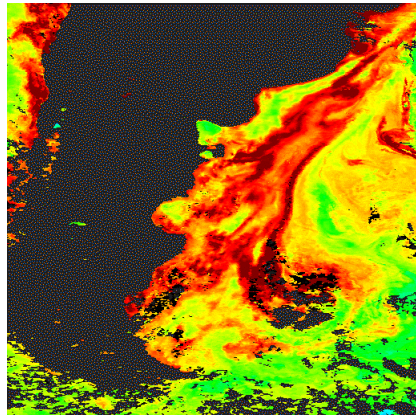
Quality Flag Definitions

Flag Value	Definition	Criteria		
0	Best	Chl QL=0, SST QL=0,1		
1	Good	Chl QL=1, SST QL=0,1, shallow water=1		
2	Fair	Chl QL=1, SST QL=0,1, shallow water=0		
3	Poor	Chl QL=2, SST QL=0,1, shallow water=0,1		
If PAR and MLD weekly values exist, Quality Level is 0				

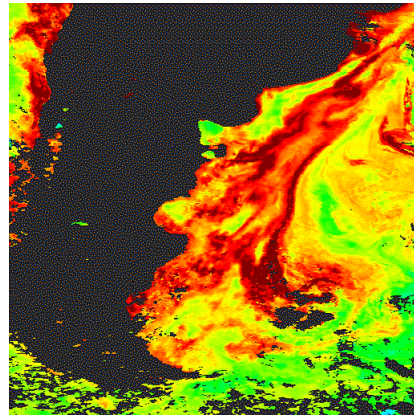
QL={0} Best



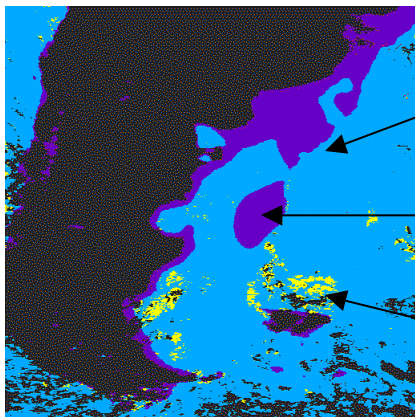
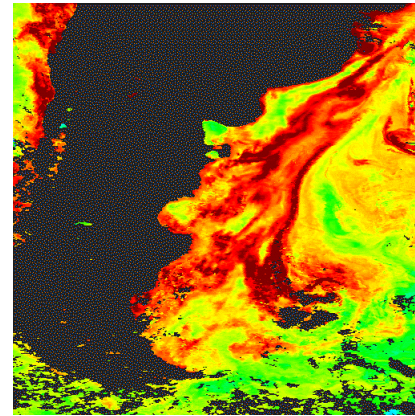
QL={0,1}



QL={0,1,2}



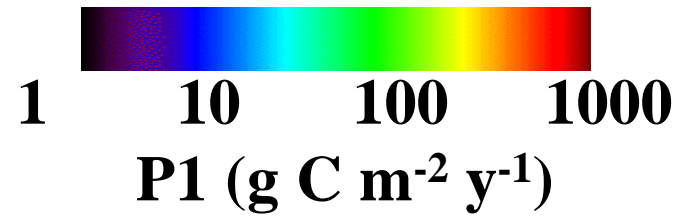
QL={0,1,2,3}



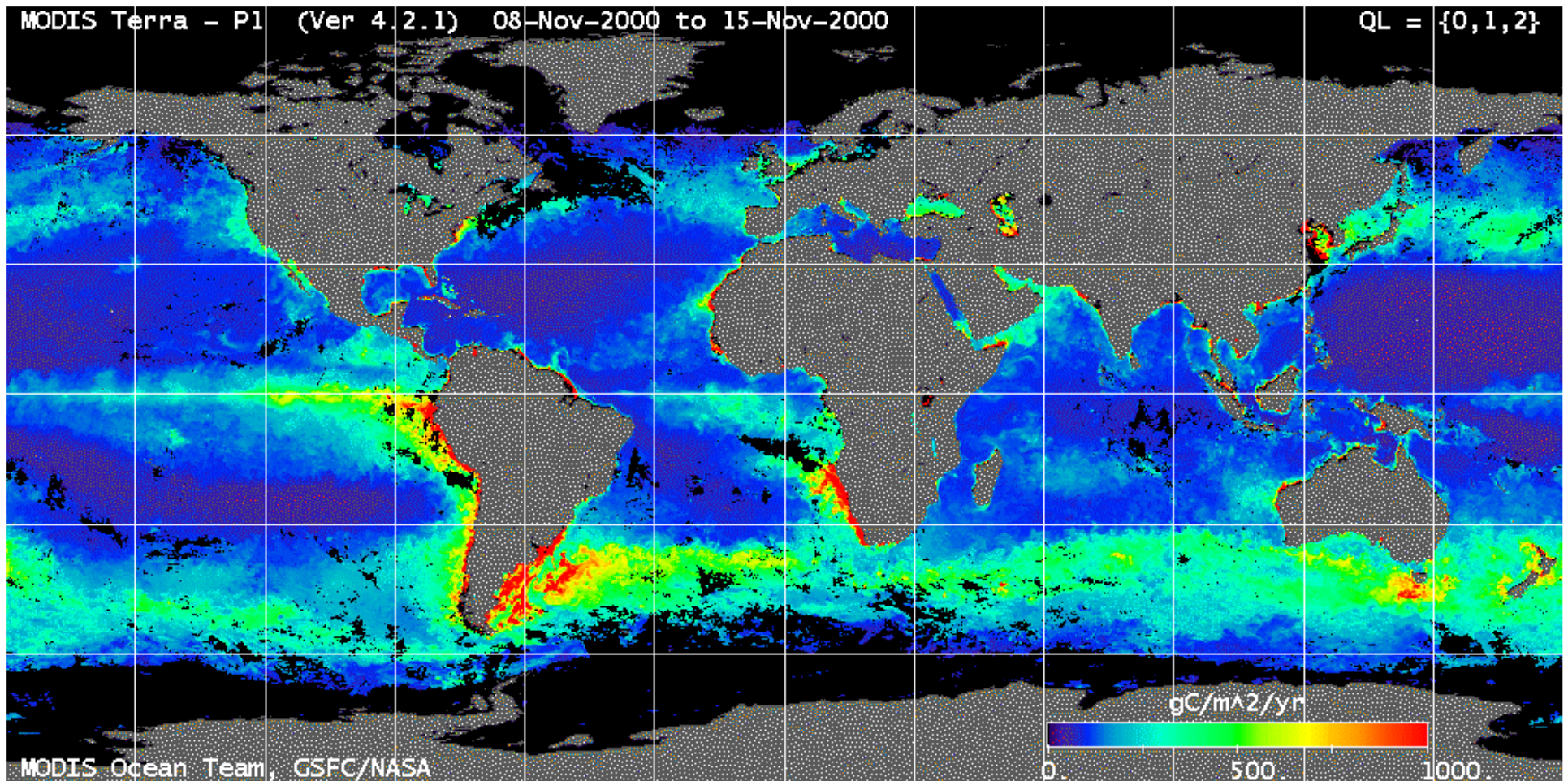
QL=0

QL=1

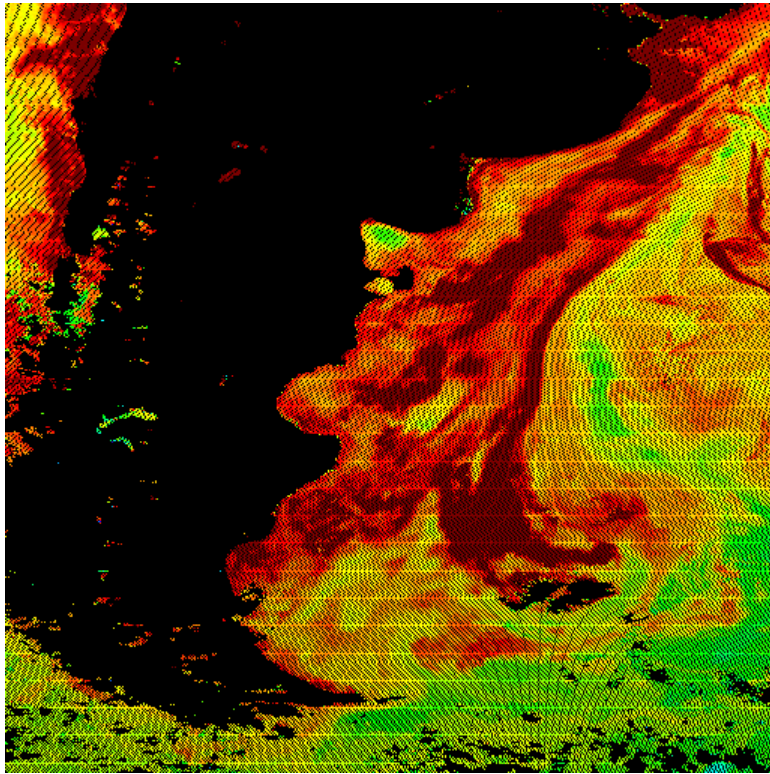
QL=2



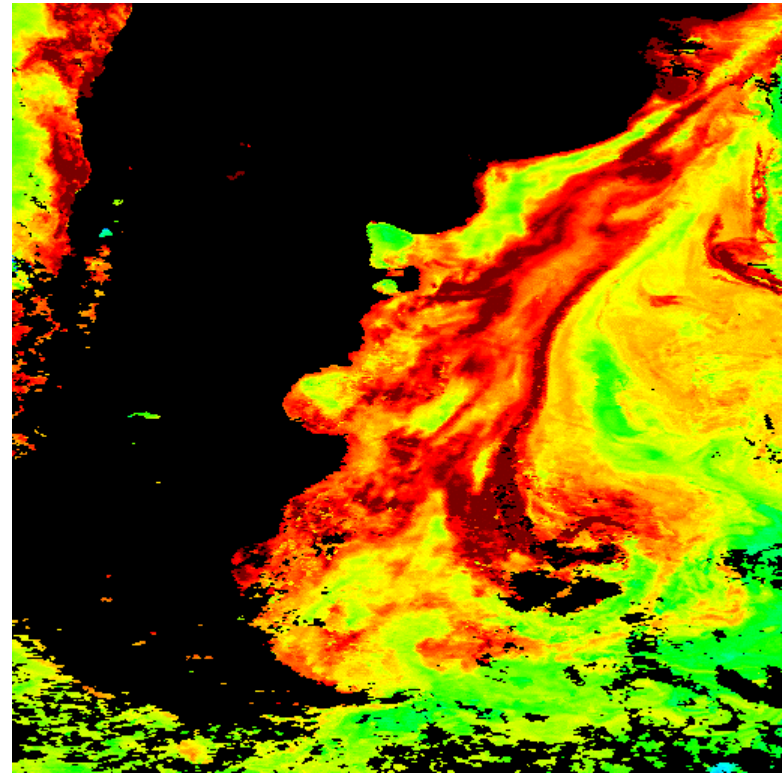
We recommend that modellers use QL 0,1,2 for ONPP
includes shallow regions
greater coverage



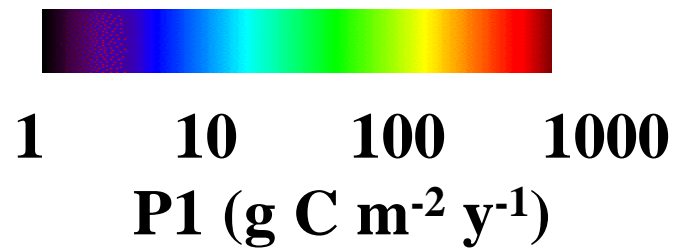
4.62 km Map file mapping artifact is eliminated

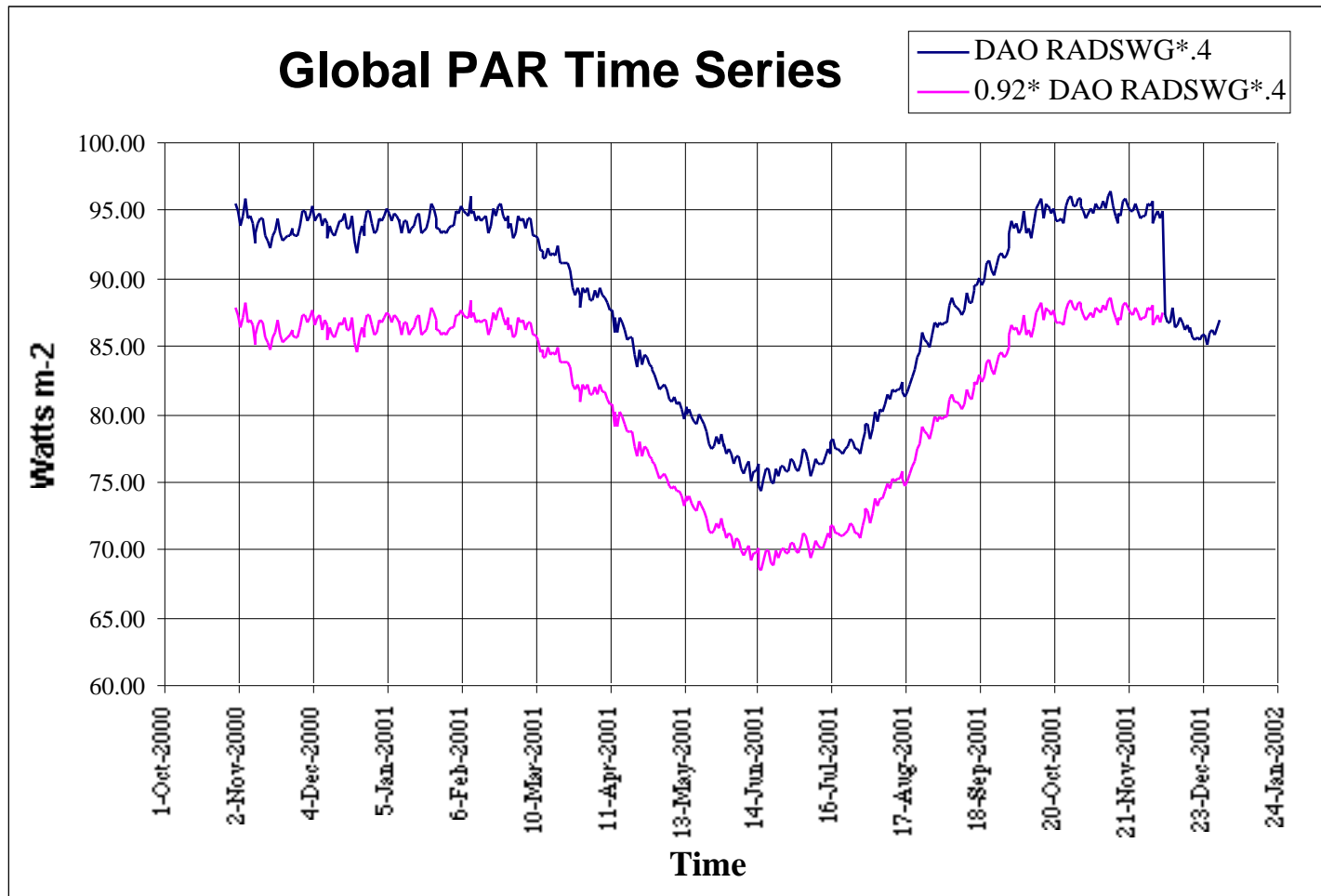


V 3



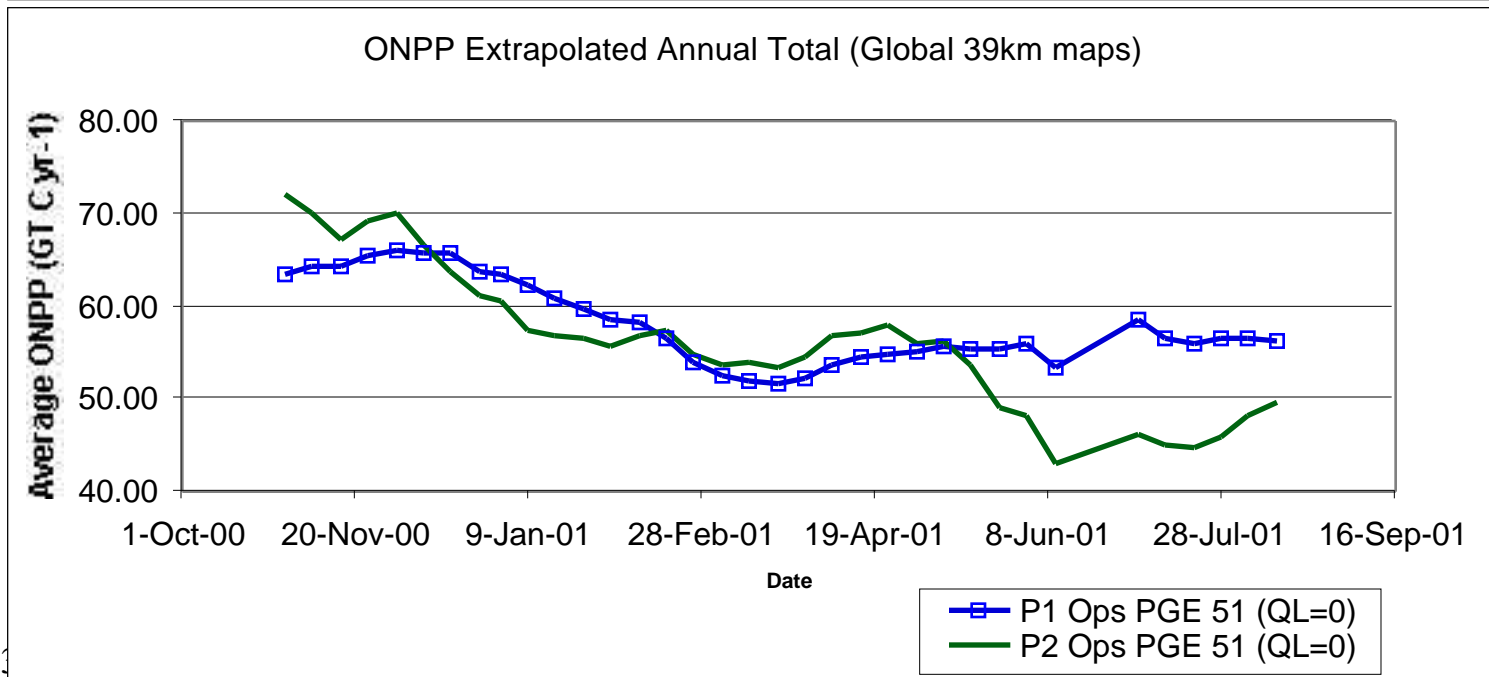
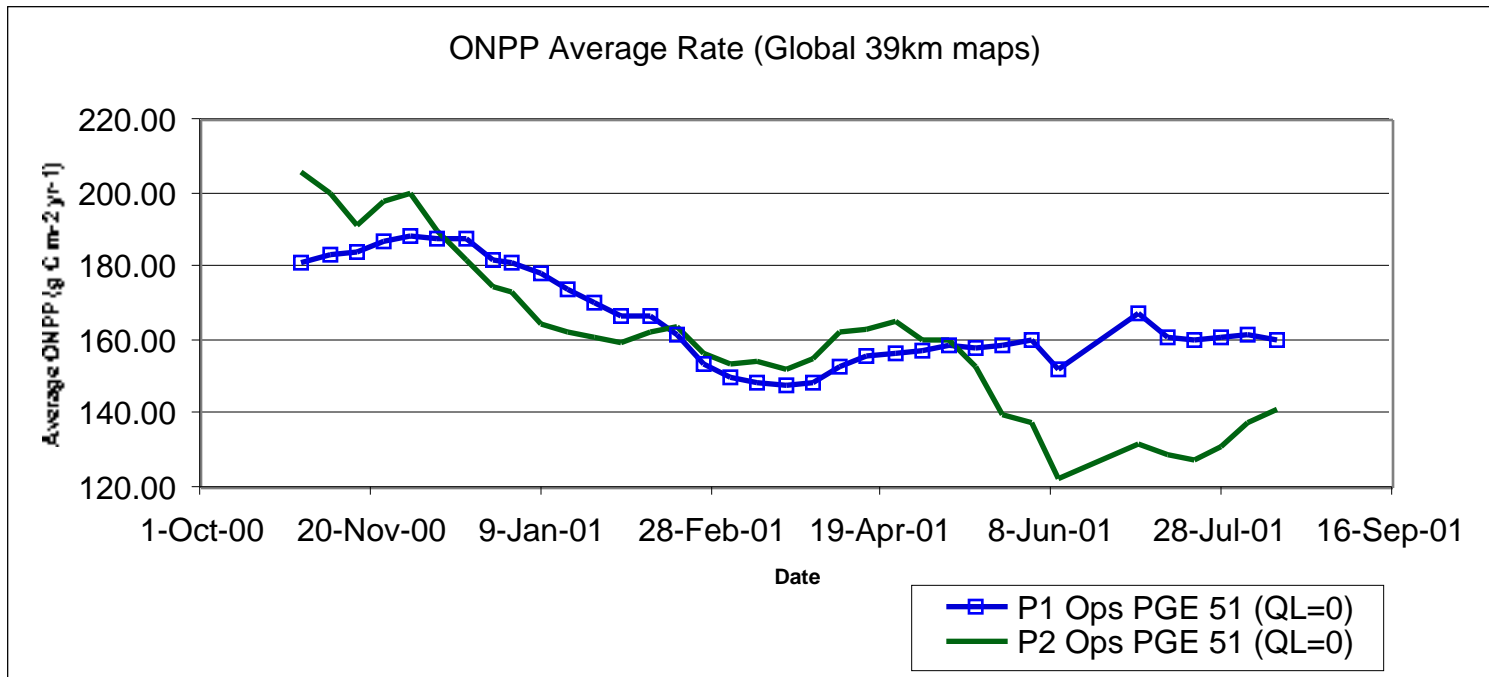
V 4



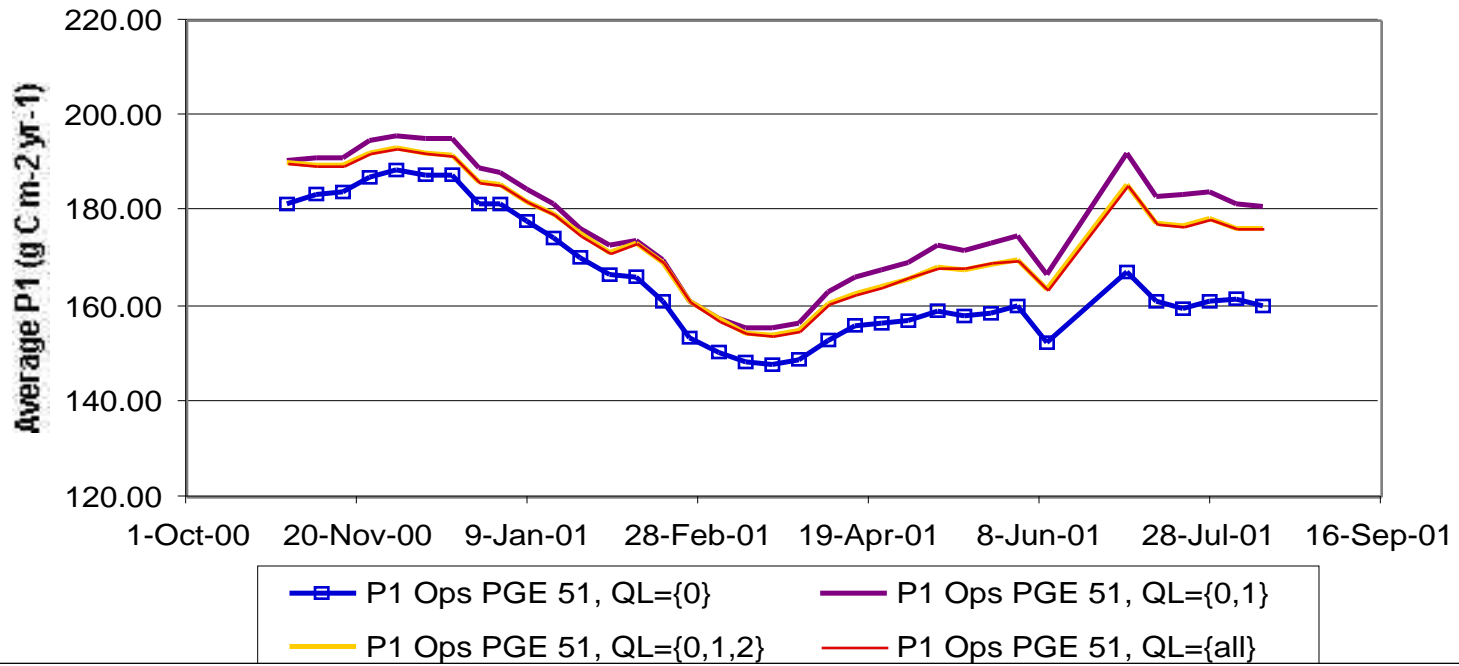


Behrenfeld-Falkowski PP Index
Chlor_a_3, MODIS SST, DAO PAR

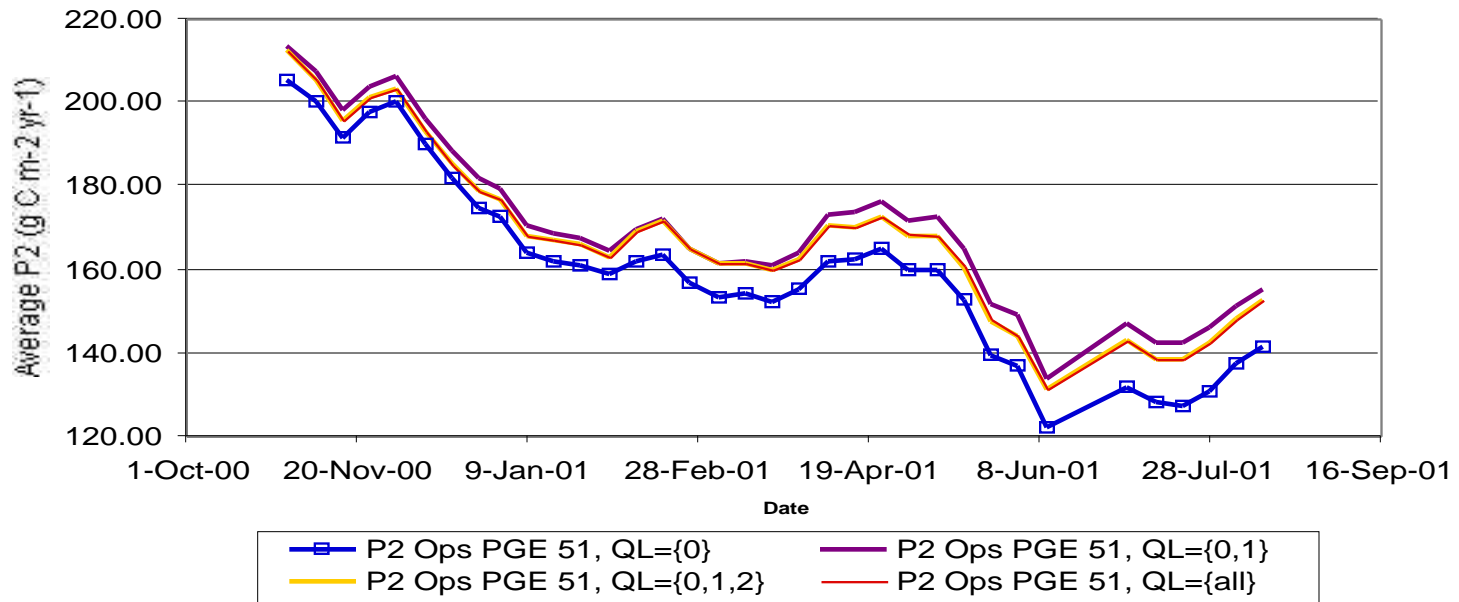
Howard-Yoder-Ryan PP Index
Chlor a_3, MODIS SST, DAO PAR, FNMOC Mixed Layer



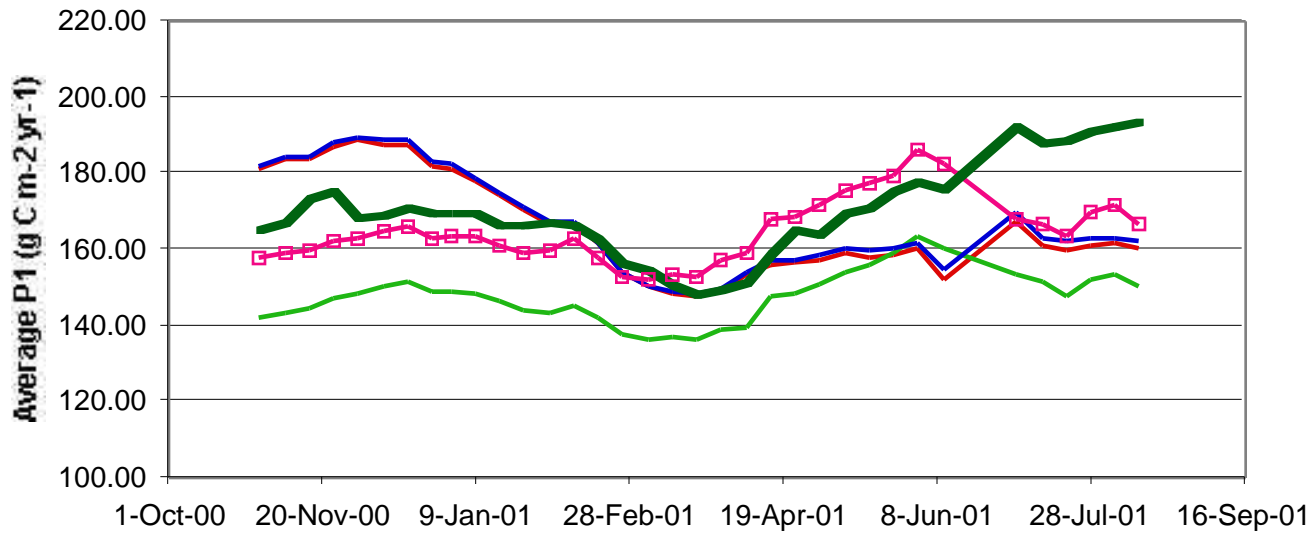
P1 Average Rate by Quality Level (Global 39km maps)



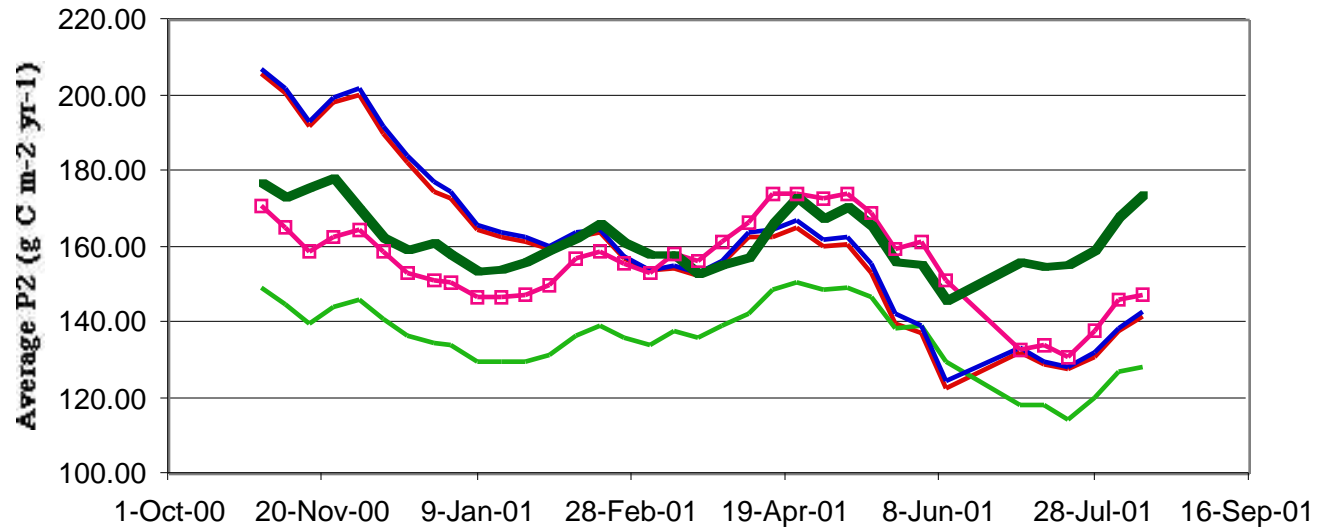
P2 Average Rate by Quality Level (Global 39km maps)



P1 Average Rate by Chlorophyll Product (Global 39km maps)

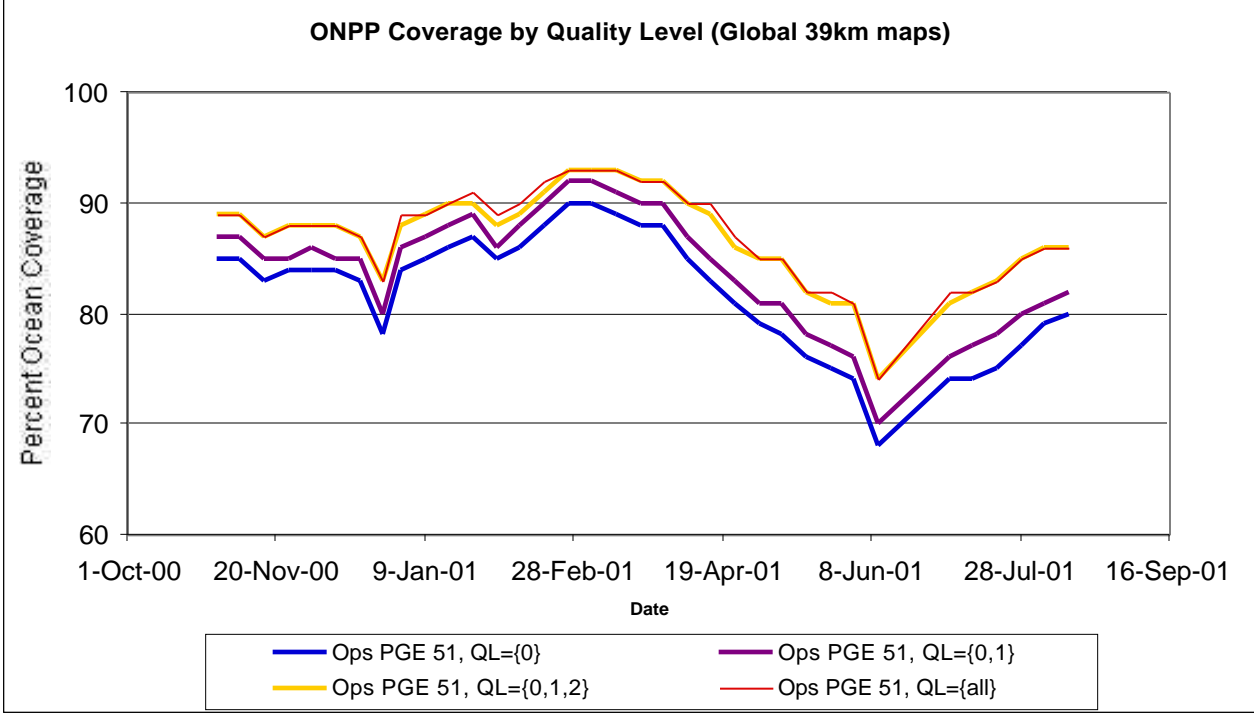
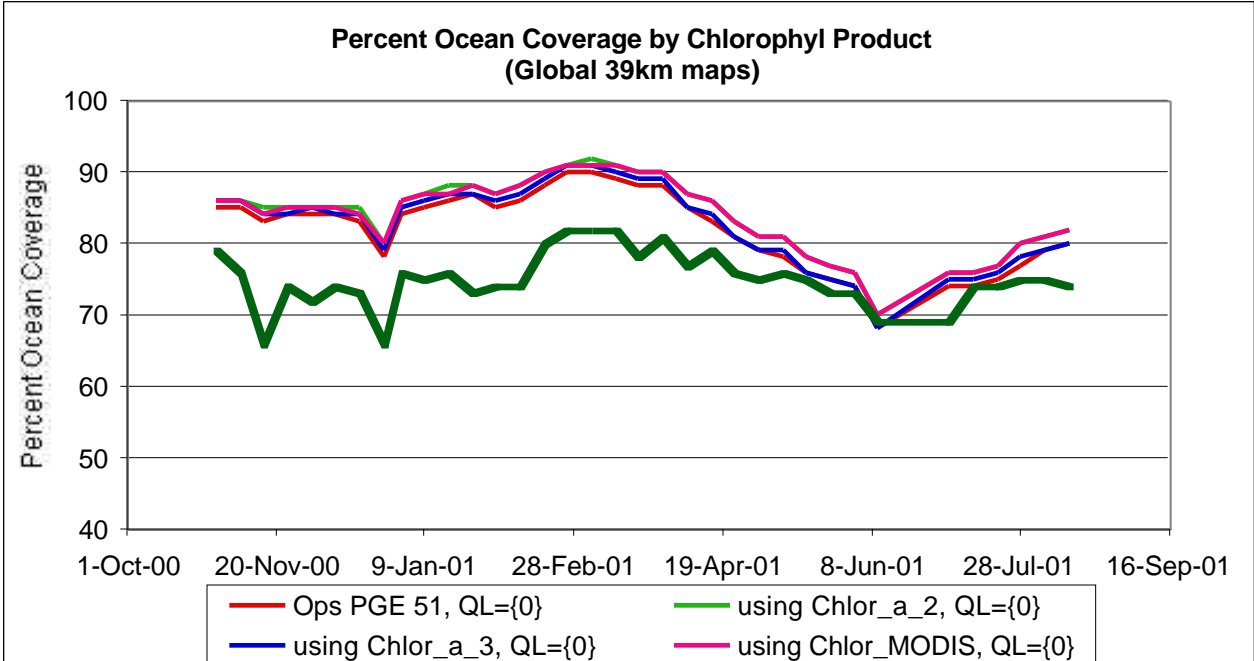


P2 Average Rate by Chlorophyll Product (Global 39km maps)



- | | |
|-----------------------------|-------------------------------|
| — P2 Ops PGE 51, QL={0} | — P2 from Chlor_a_2, QL={0} |
| — P2 from Chlor_a_3, QL={0} | — P2 from Chlor_MODIS, QL={0} |
| — P2 from SeaWiFS #3 Chlor | |

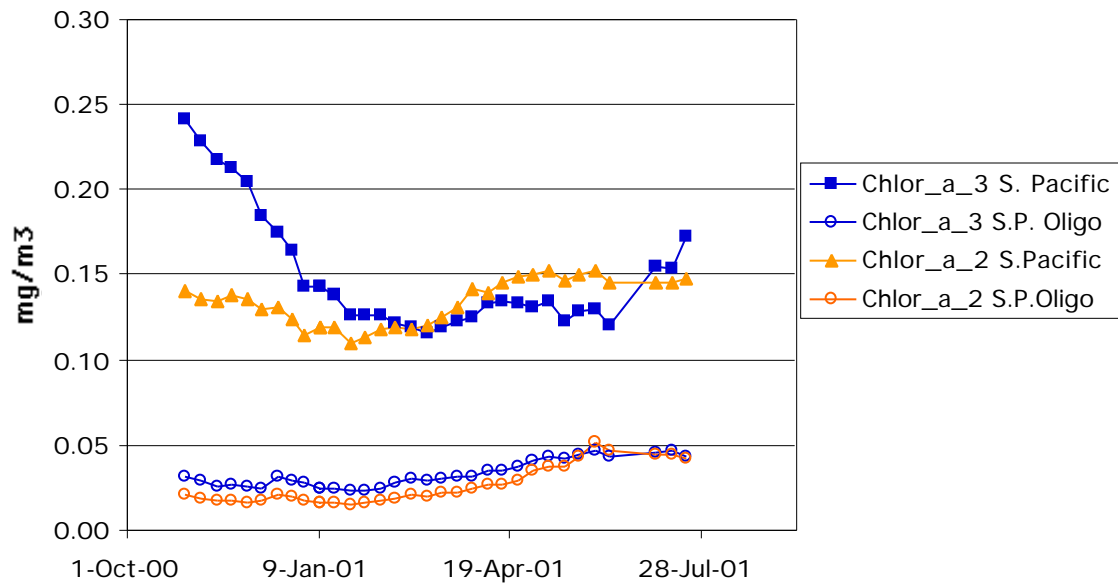
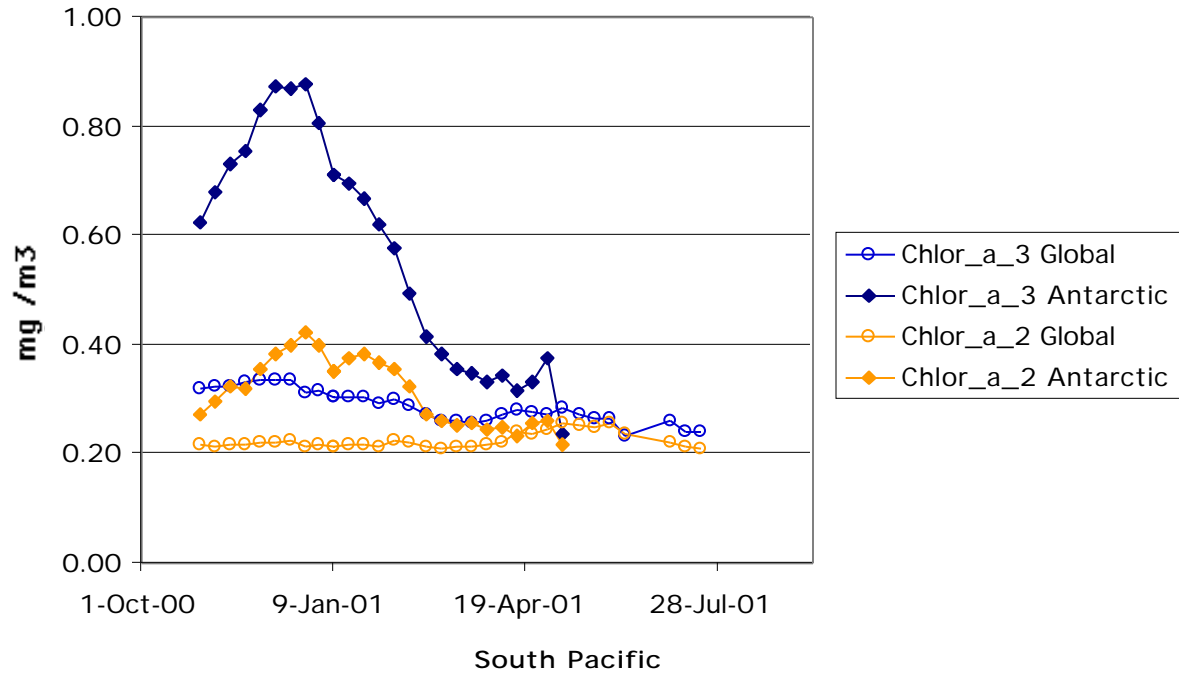
7/23/02



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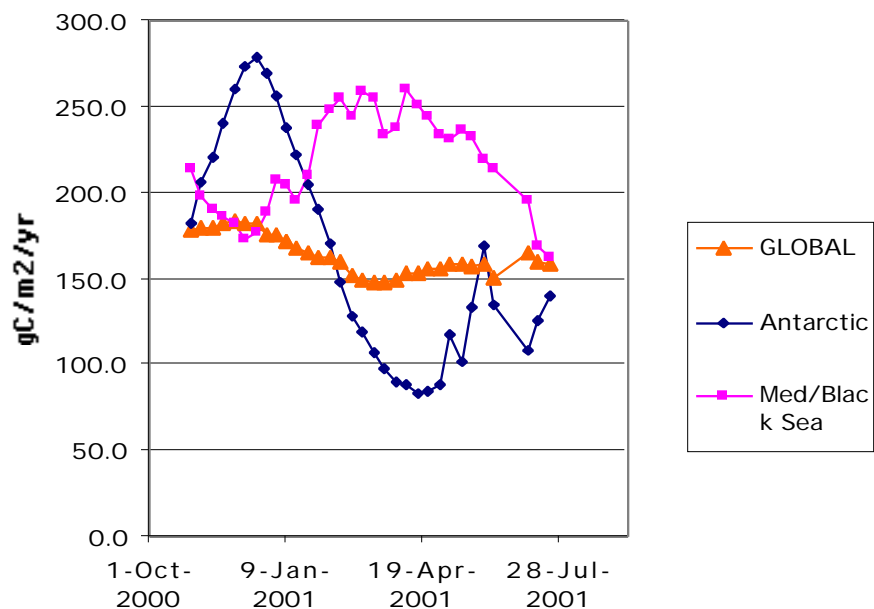


Global and Antarctic
Chlor a_2 and Chlor a_3 {0}

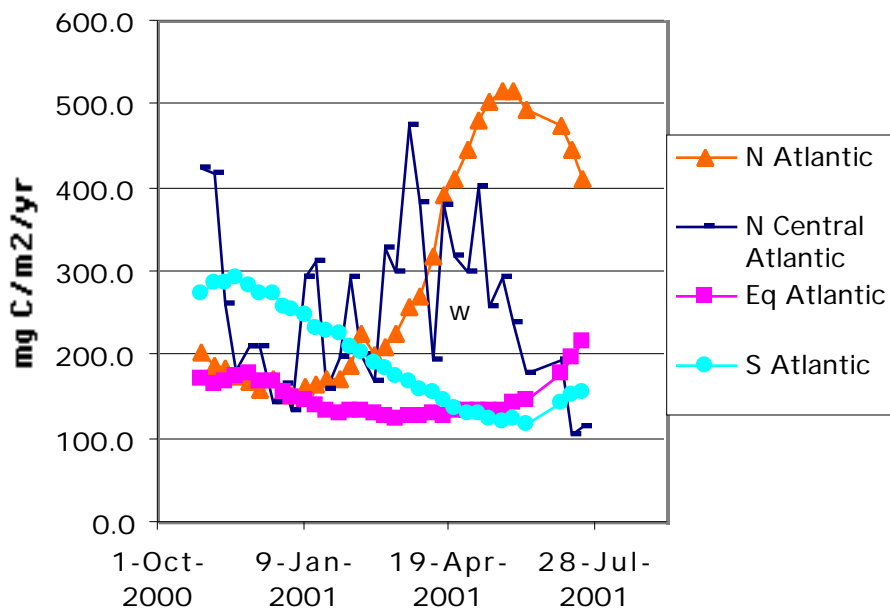


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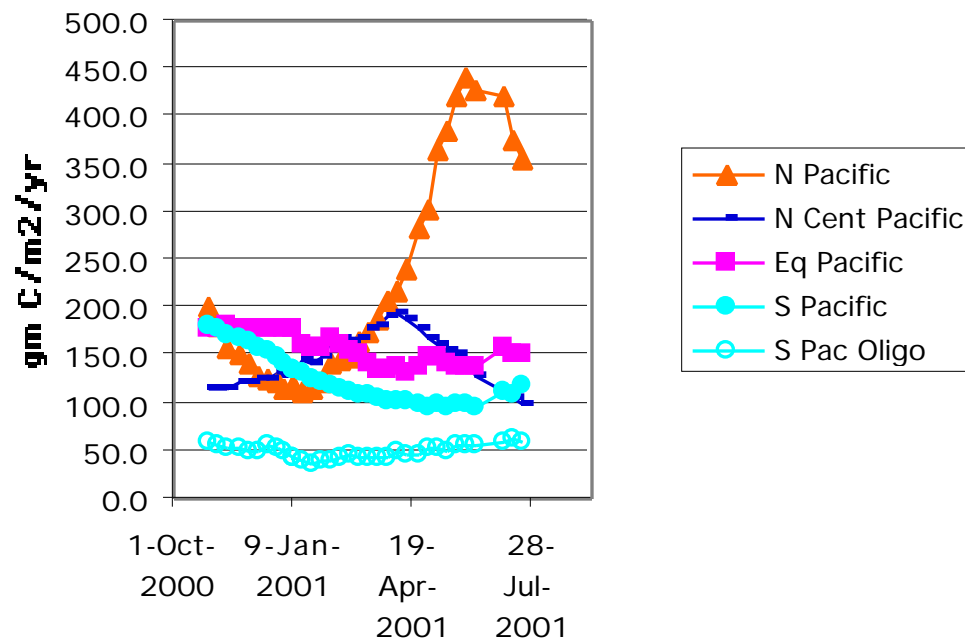
P1



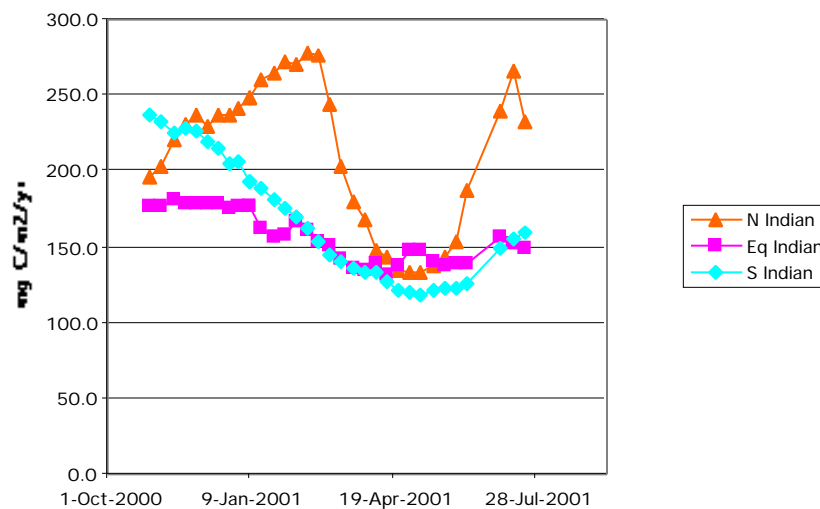
P1 Atlantic



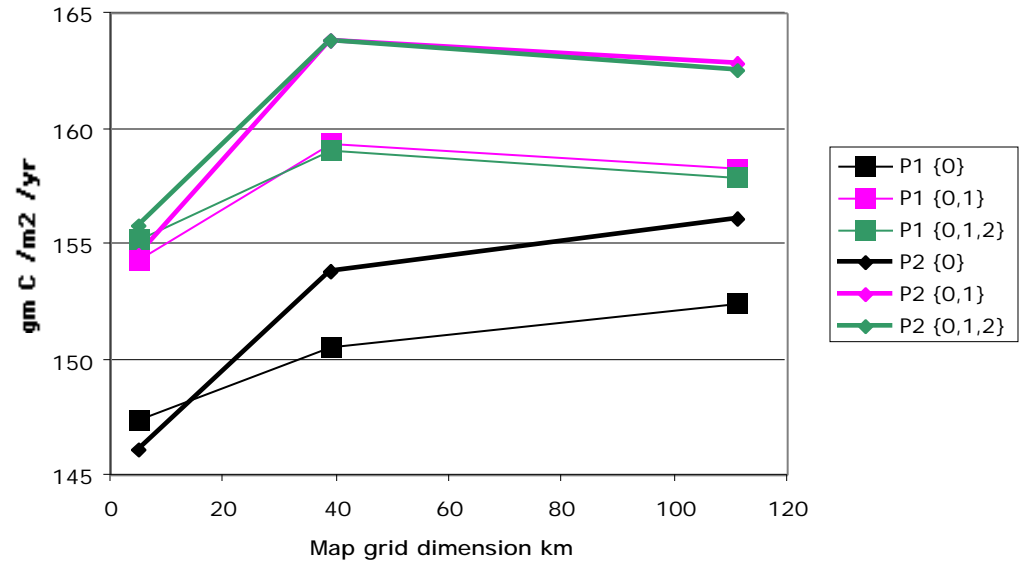
P1 Pacific



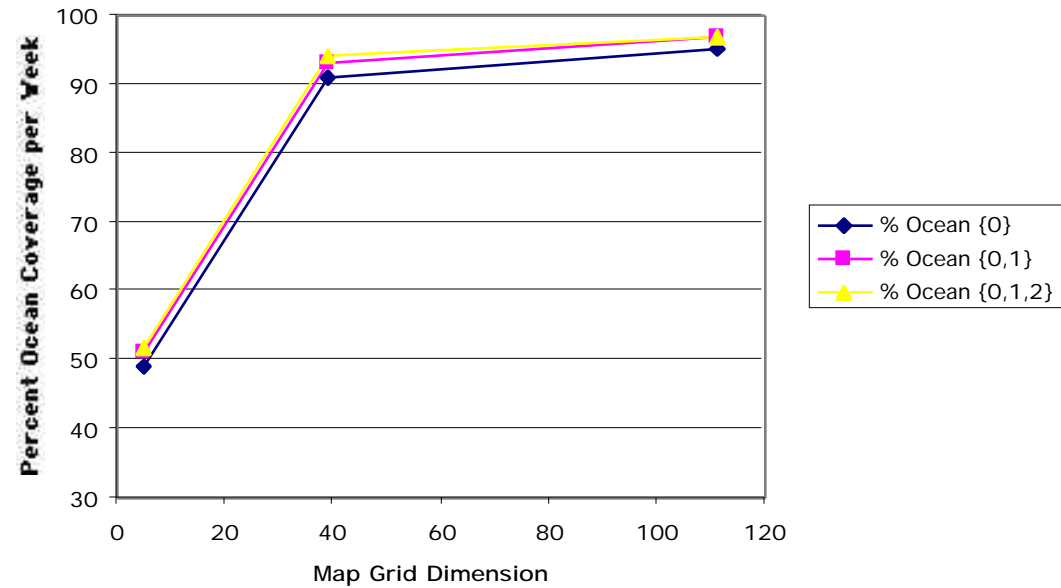
P1 Indian



Scaling Effects on OPP 2001065



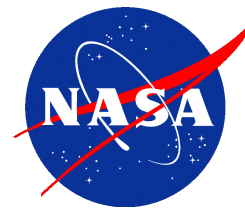
Scaling Effects on Coverage 2001065



AQUA MODIS first light images shown here were produced at Univ. Miami using data obtained from the GDAAC by subscription. They were available on the afternoon of June 26. Subscriptions and all software worked at both GDAAC and RSMAS the first time through. These images use pre-launch calibrations, but the data are very clean, low noise, and virtually free of mirror side and detector striping. RSMAS, and also SIMBIOS, have successfully composited (merged) MODIS Aqua, Terra, and SeaWiFS data.

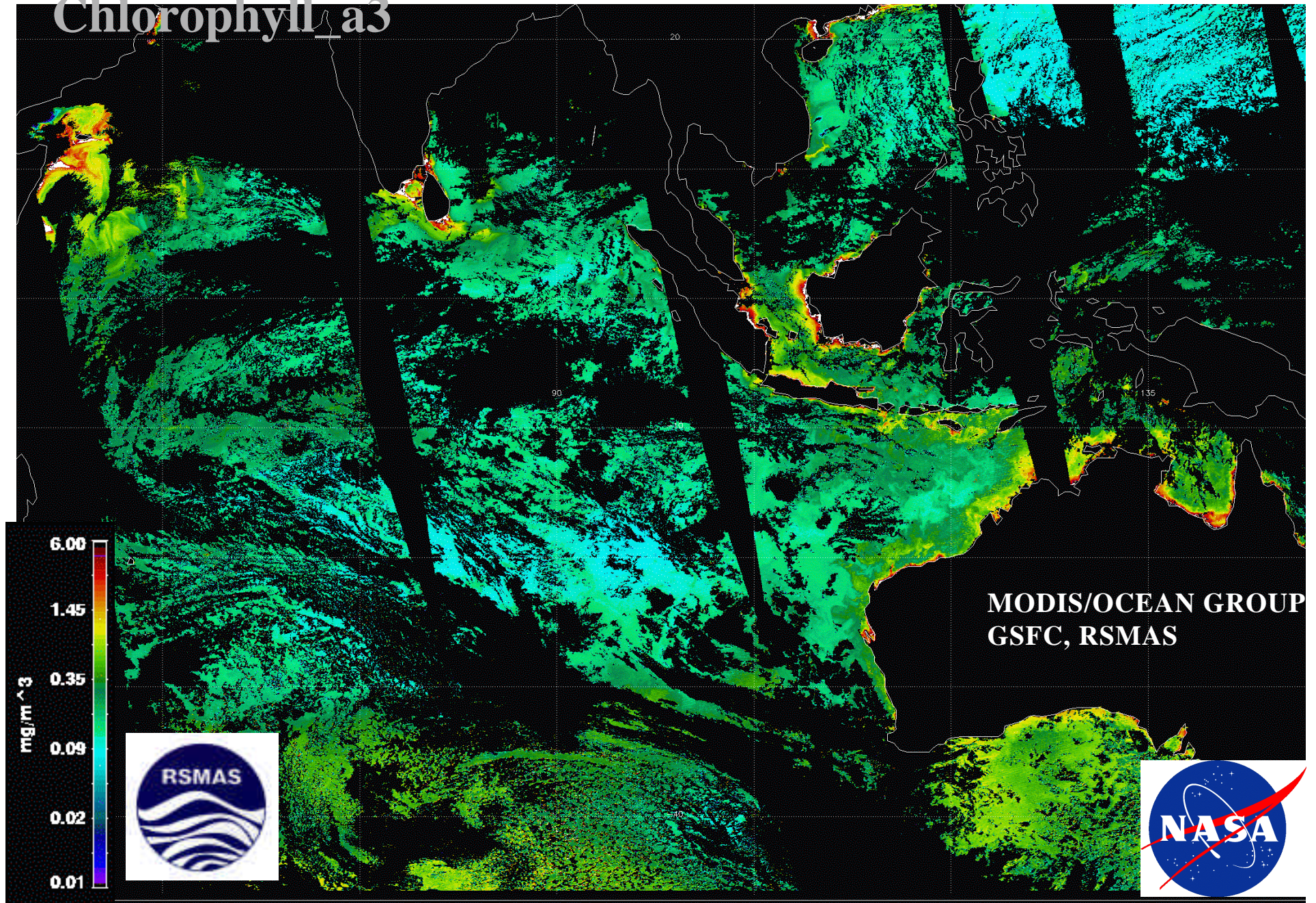


MODIS/OCEAN GROUP
GSFC, RSMAS

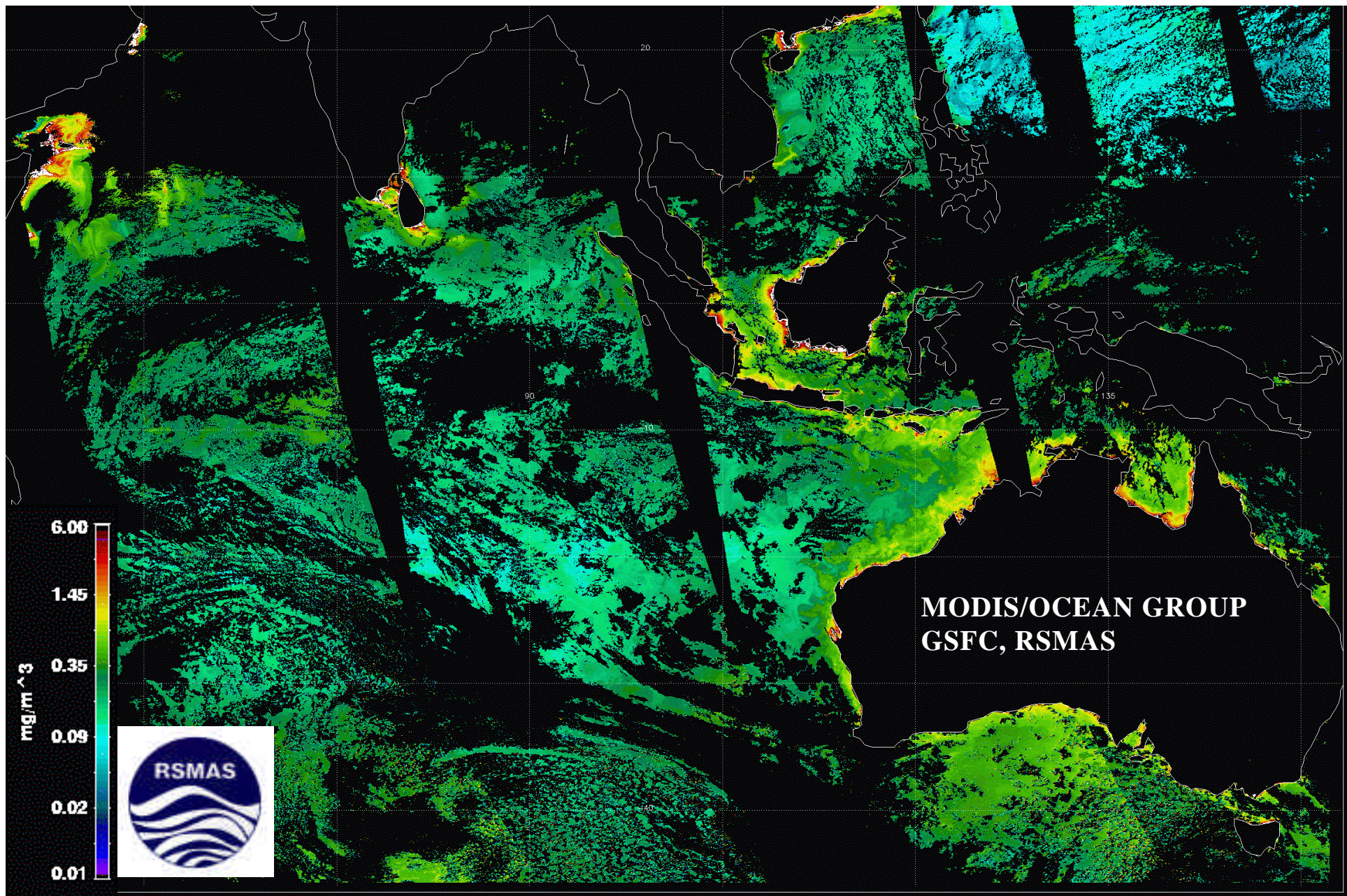


Aqua-MODIS 4km global 24 June 02

Chlorophyll_a3



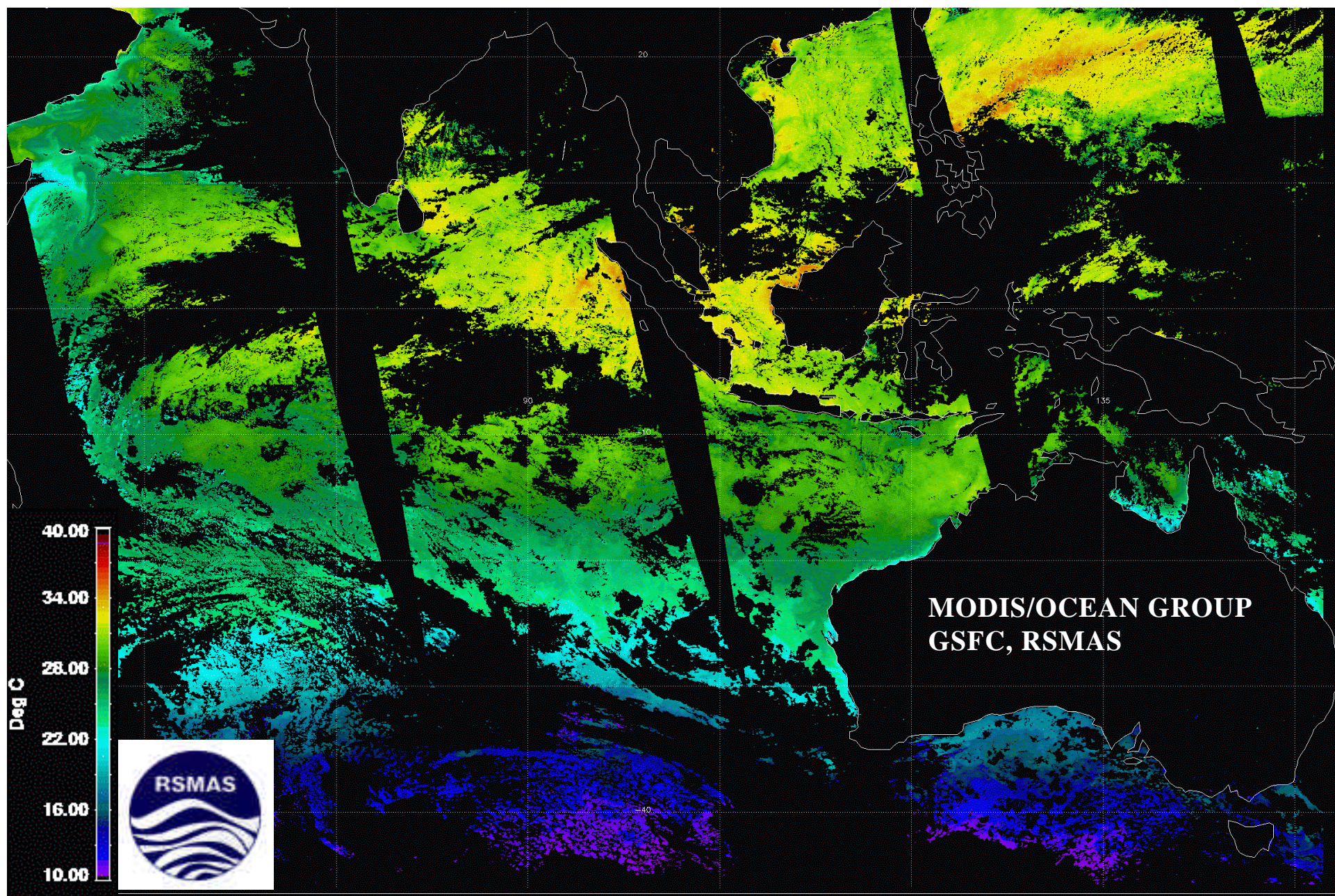
Aqua-MODIS 4km global 24 June 02 Chl_MODIS



Aqua-MODIS 4km global 24 June 02 Suspended Solids

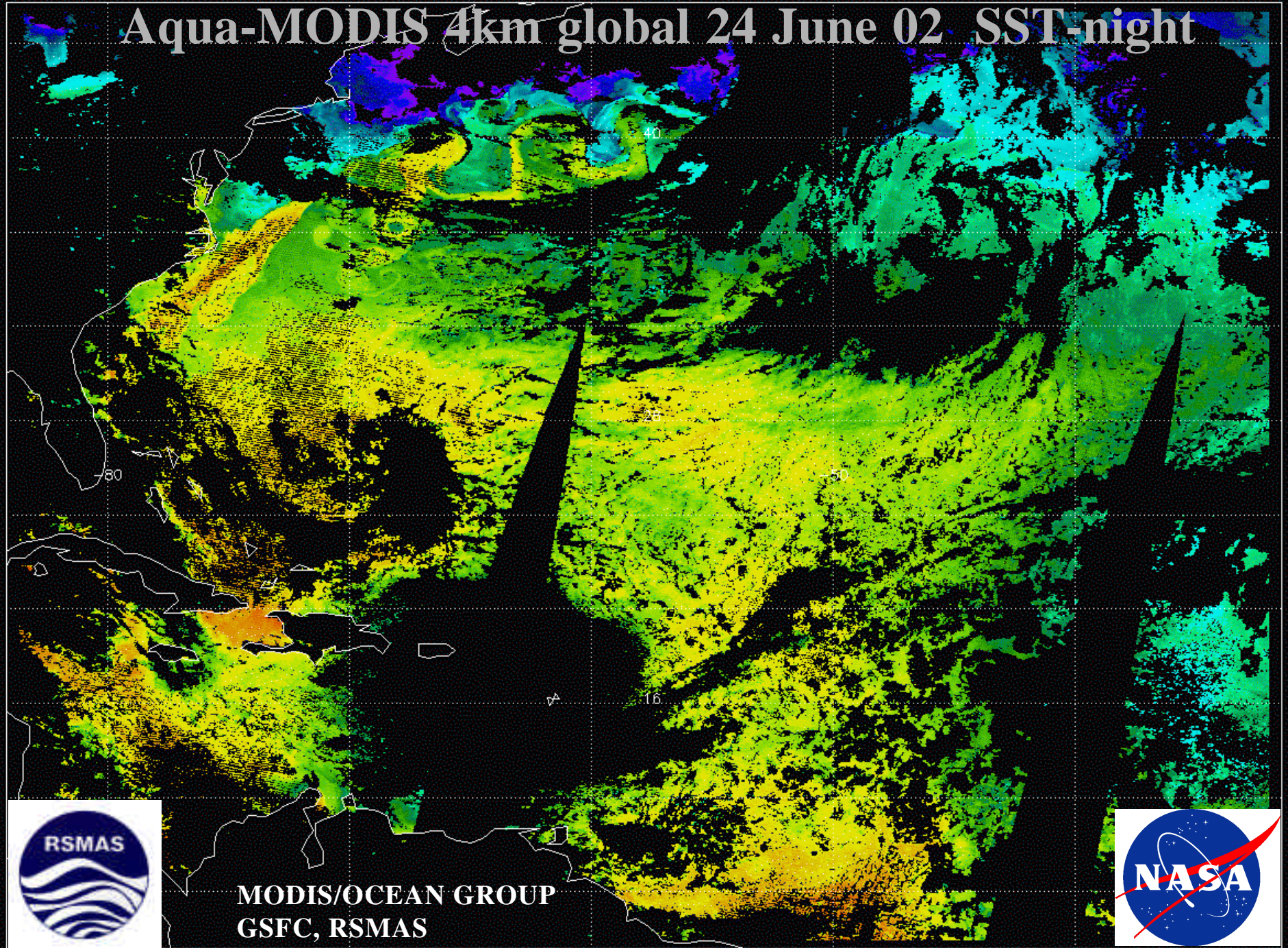


Aqua-MODIS 4km global 24 June 02 SST-day

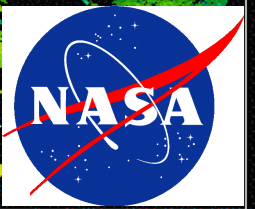


sst_night

Aqua-MODIS 4km global 24 June 02 SST-night

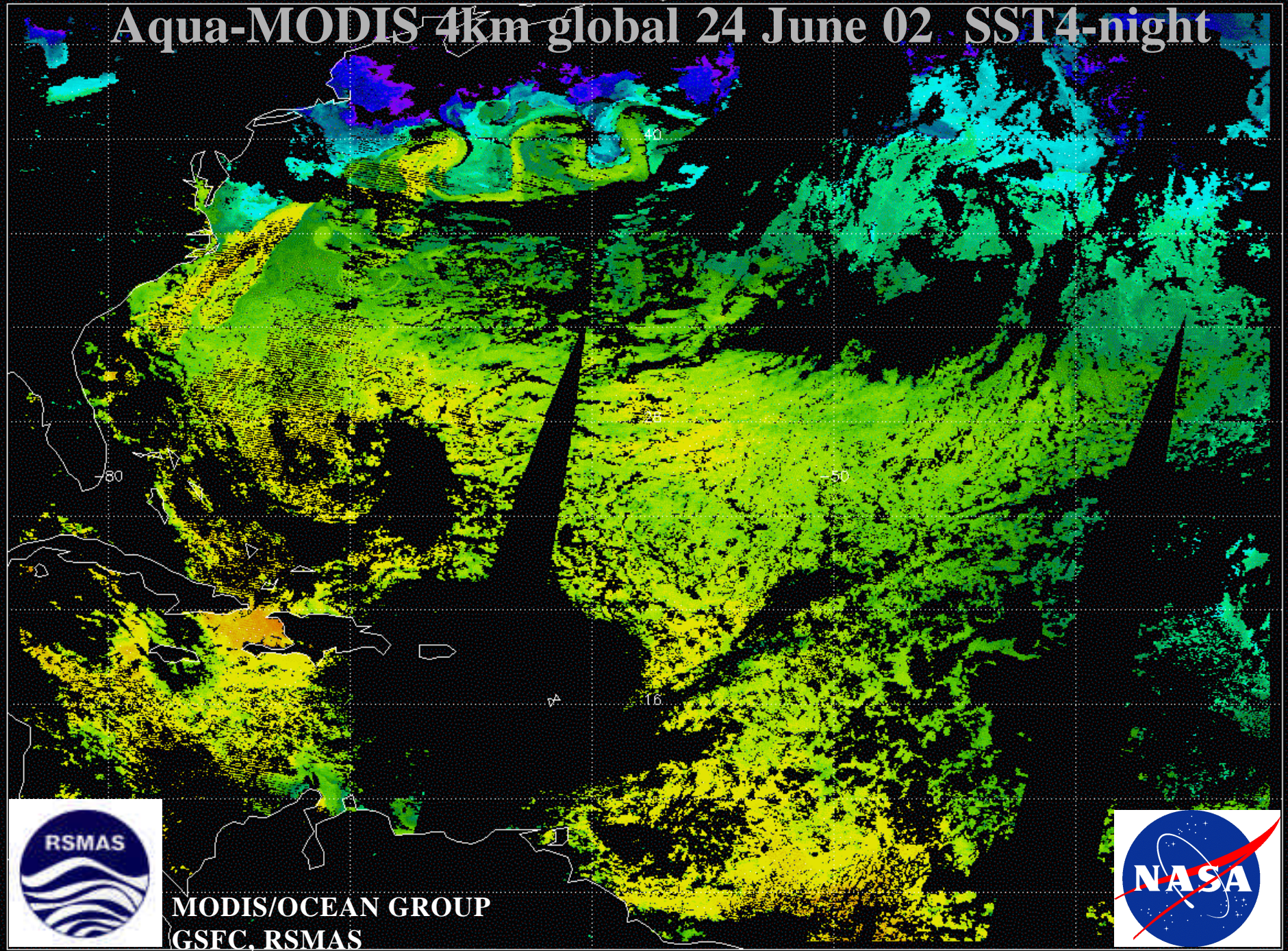


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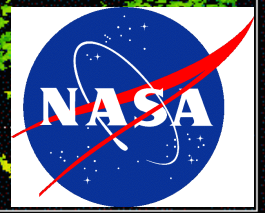


sst4_night

Aqua-MODIS 4km global 24 June 02 SST4-night



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Merged Terra and Aqua MODIS Chlorophyll for June 25, 2002. Still slight bias caused by use of pre-launch calibrations for Aqua. Combined coverage eliminates glint region, and between swath gaps, resulting in much improved global daily coverage.

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