

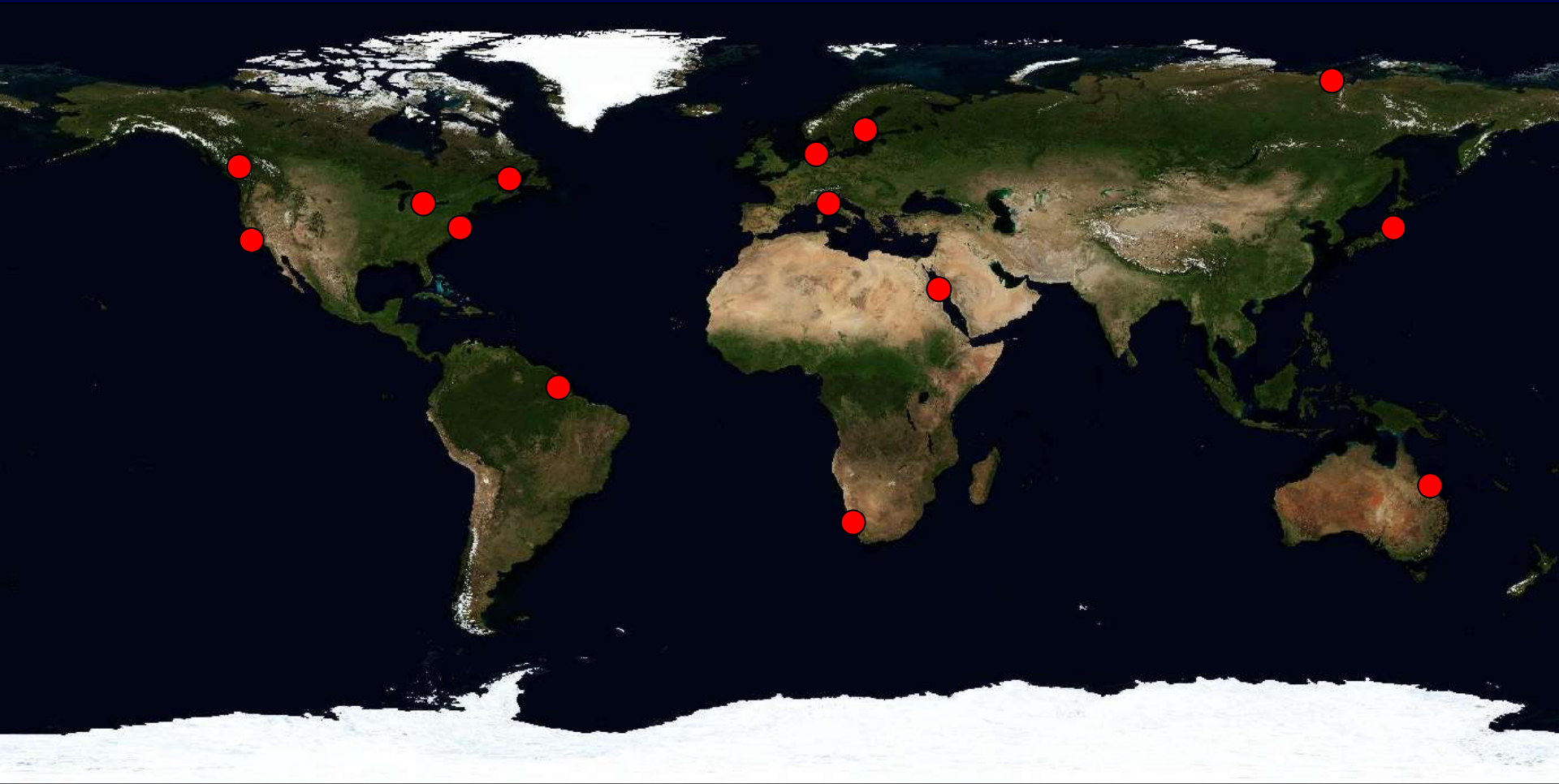
# **A Journey to Coastcolour Sites**

## **The MERIS FR Show**

Prepared by Roland Doerffer  
Helmholtz Center Geesthacht

Coastcolour User Consultation Meeting  
ESRIN 2010-11-17

# Inspected Sites



# Products

- Processed with BEAM C2R processor, with atmospheric correction NN of 20101104
- Products:
  - RL\_toa: top of atmosphere radiance reflectance [sr-1]
  - RL\_path: path radiance reflectance [sr-1]
  - RLw: water leaving radiance reflectance [sr-1]
  - A\_total: total absorption coefficient [m-1]
  - B\_tsm: scattering coefficient of total suspended matter [m-1]
  - A\_pig: phytoplankton pigment absorption coefficient [m-1]
  - A\_gelbstoff: absorption coefficient of CDOM+bleached particles
  - Chlorophyll concentration [mg m-3]
  - Total suspended matter concentration (dry weight) [g m-3]
  - Z90\_max: maximum spectral signal depth [m]

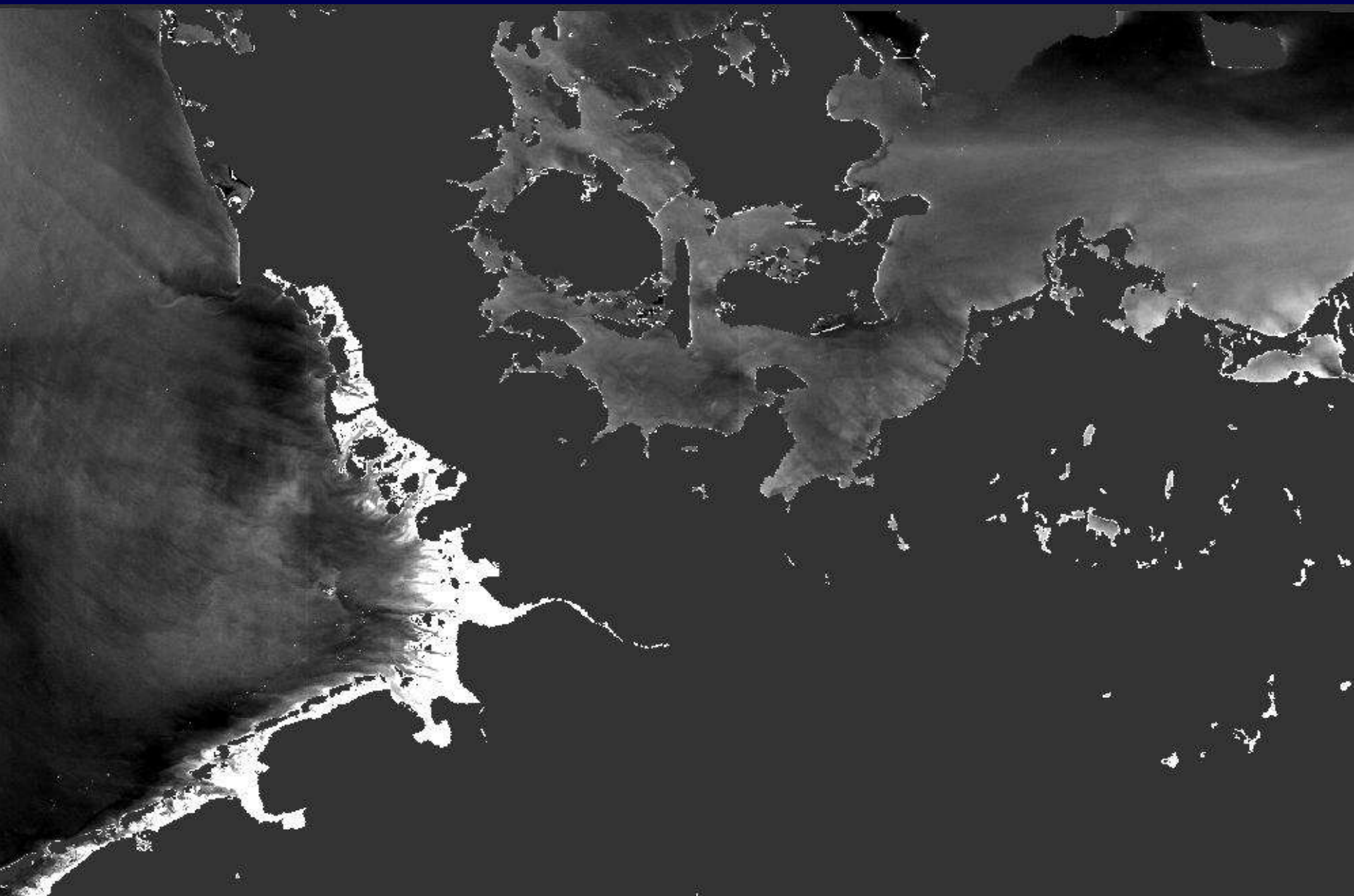
# German Bight and Baltic 20050401



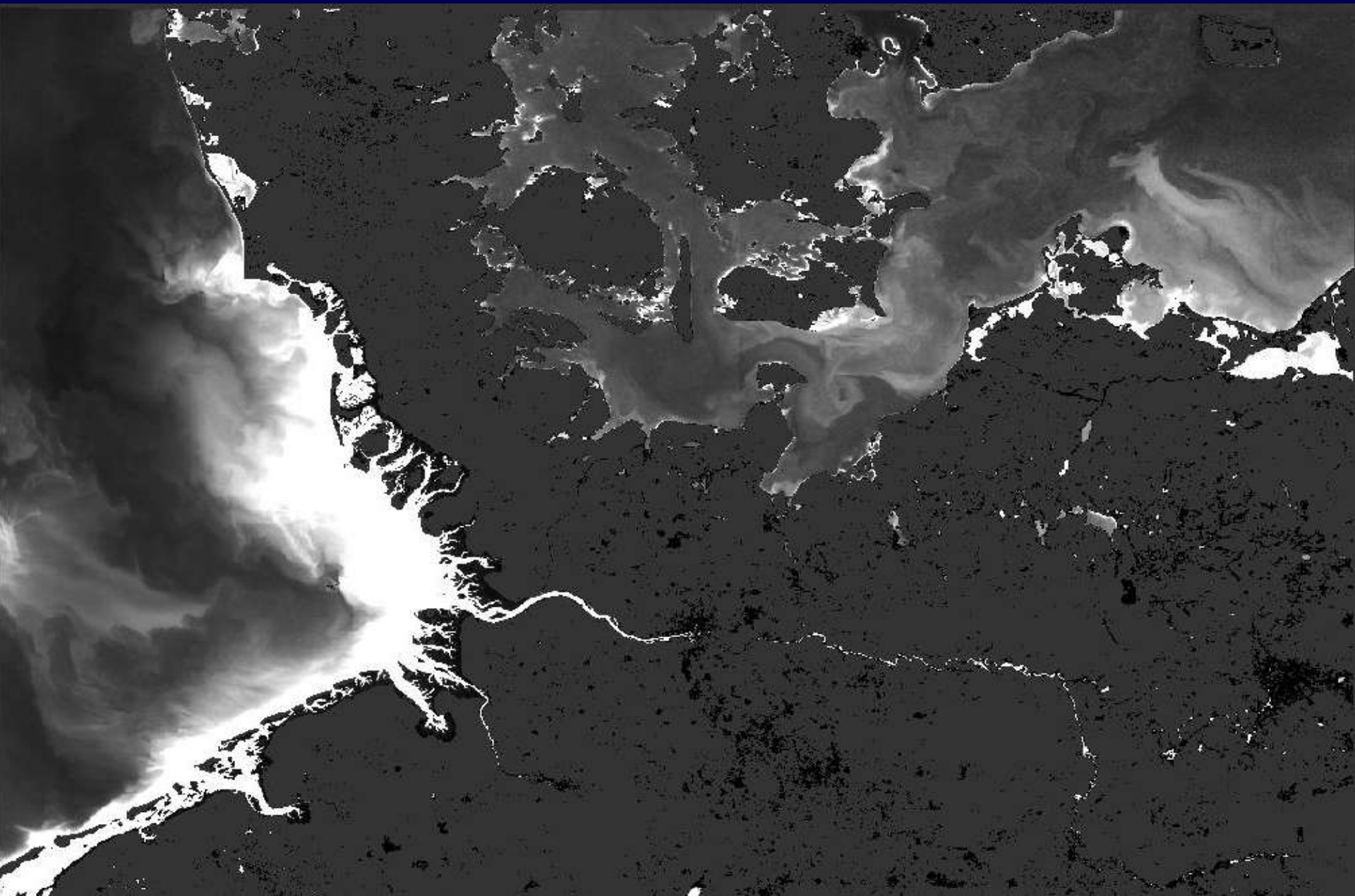
MERIS RL\_toa 20050401



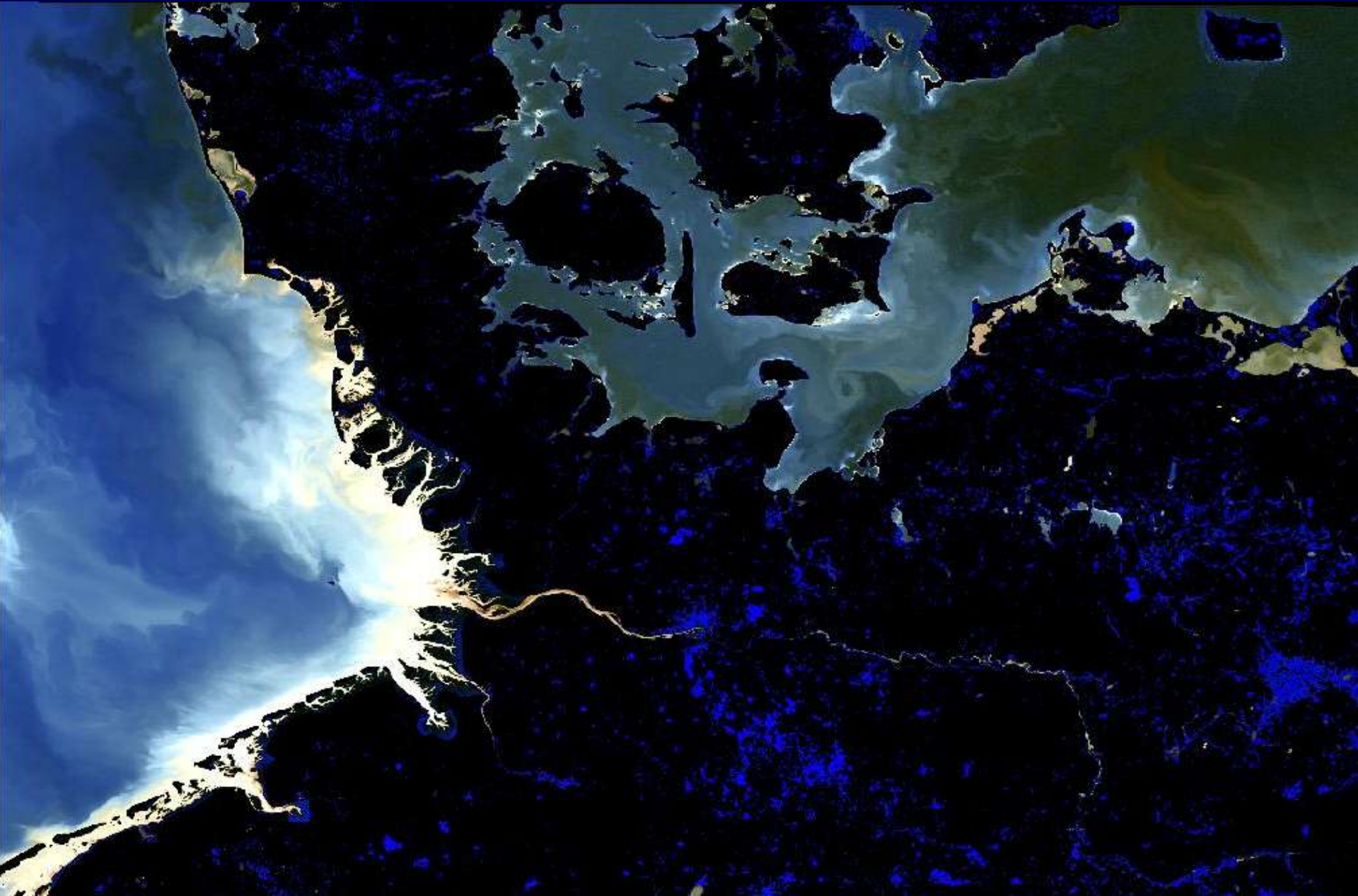
RL\_path, band 13, 865 nm



RLw, band 13

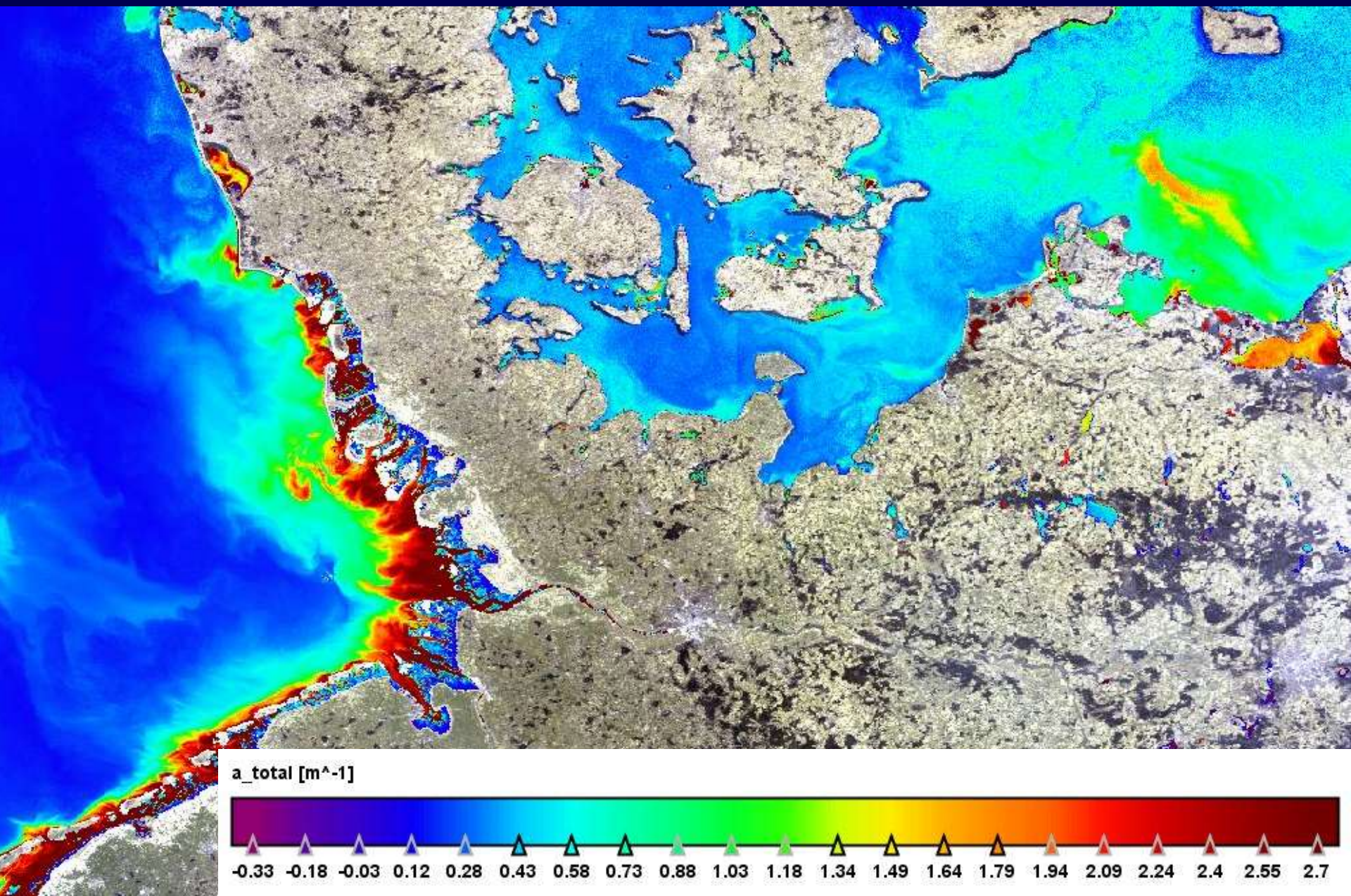


# RLw RGB composite



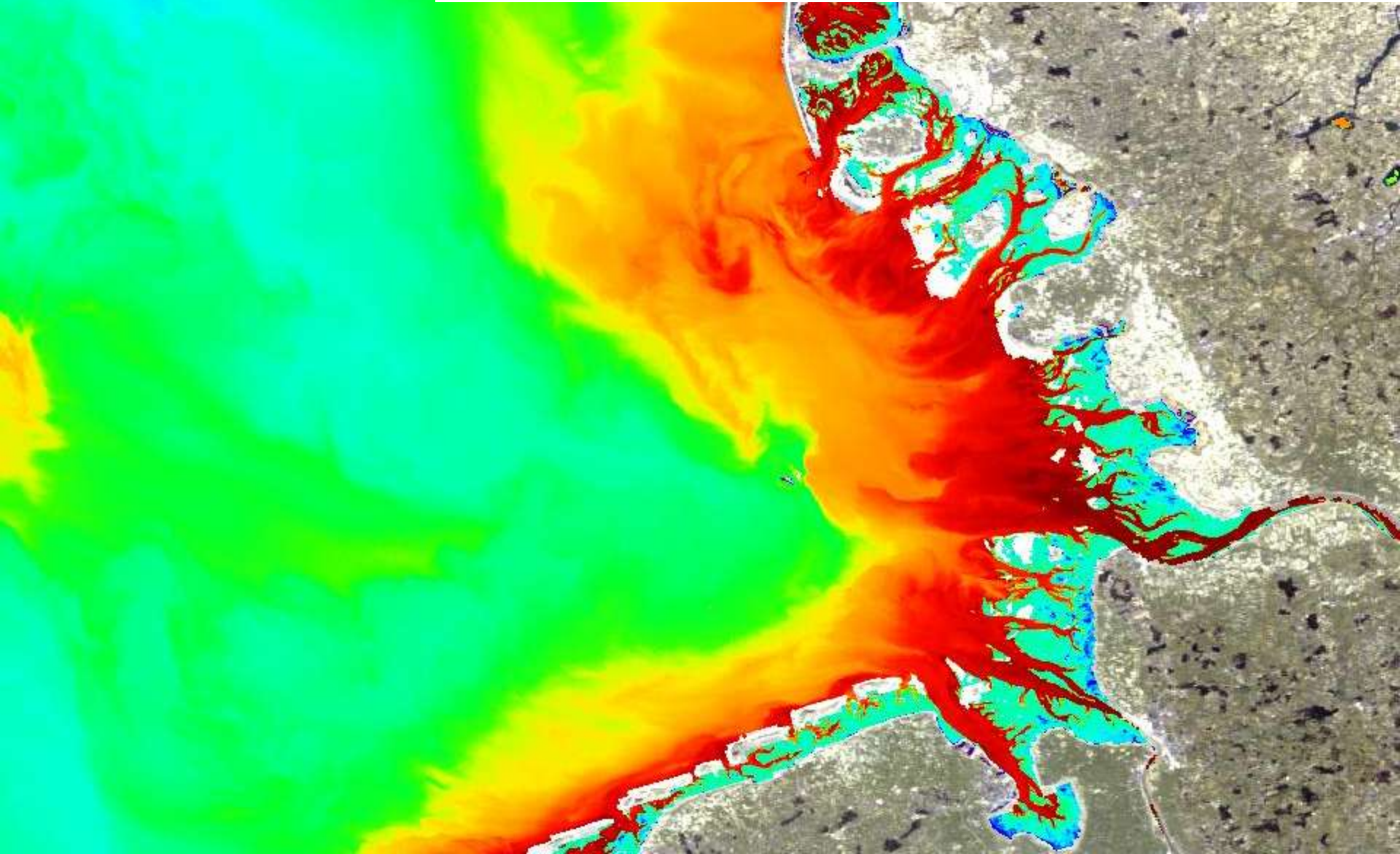
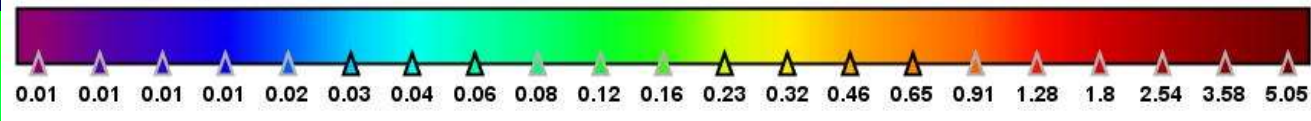


# Total absorption coefficient



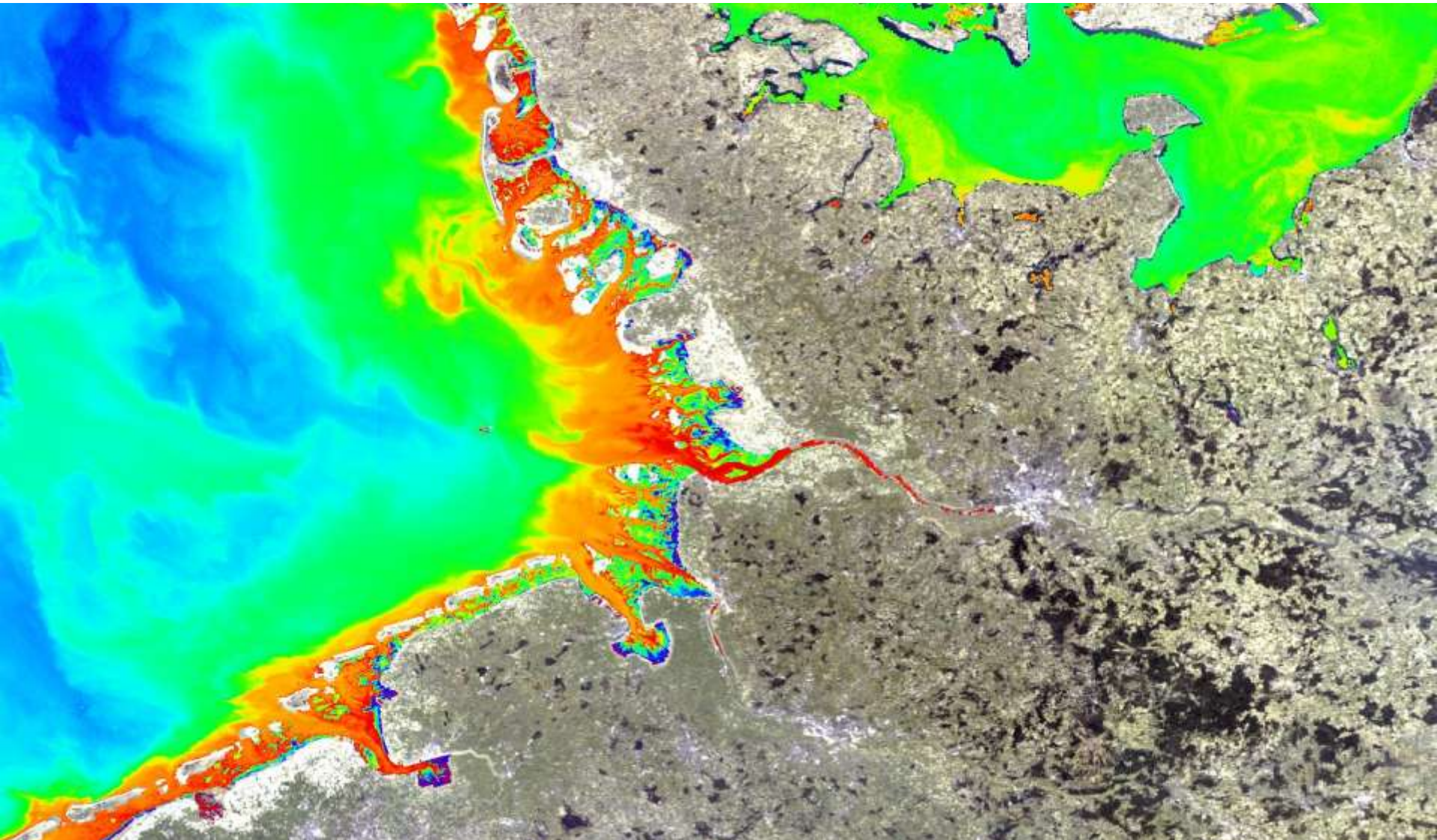
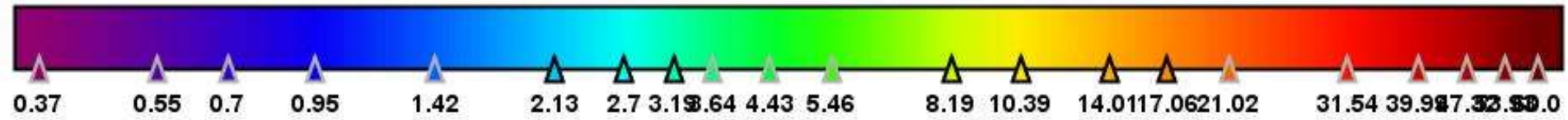
# German Bight yellow substance absorption

a\_gelbstoff [m<sup>-1</sup>]



# Chlorophyll

chl\_conc [mg m<sup>-3</sup>]



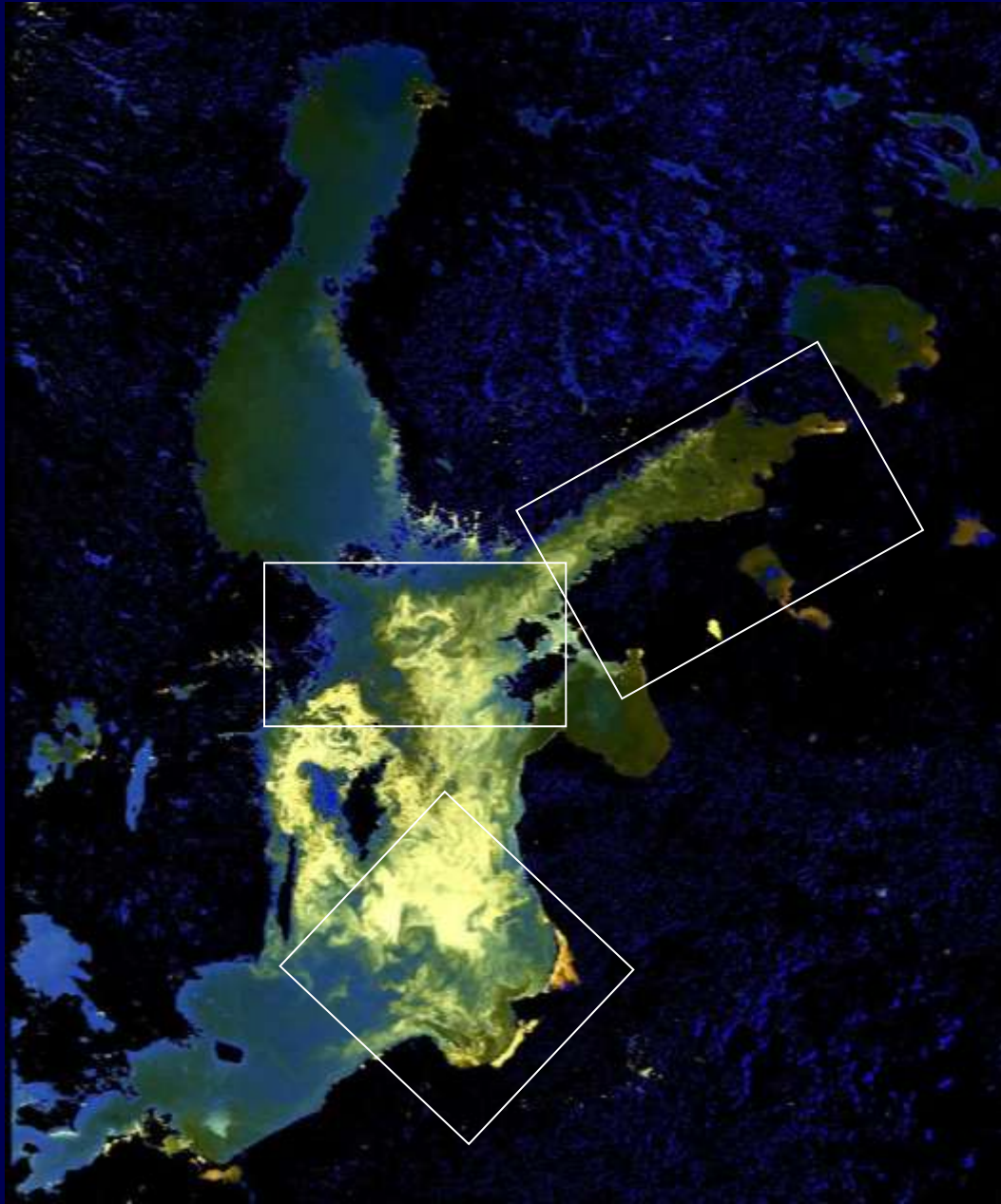
Balic Sea 20050704, RL\_toa



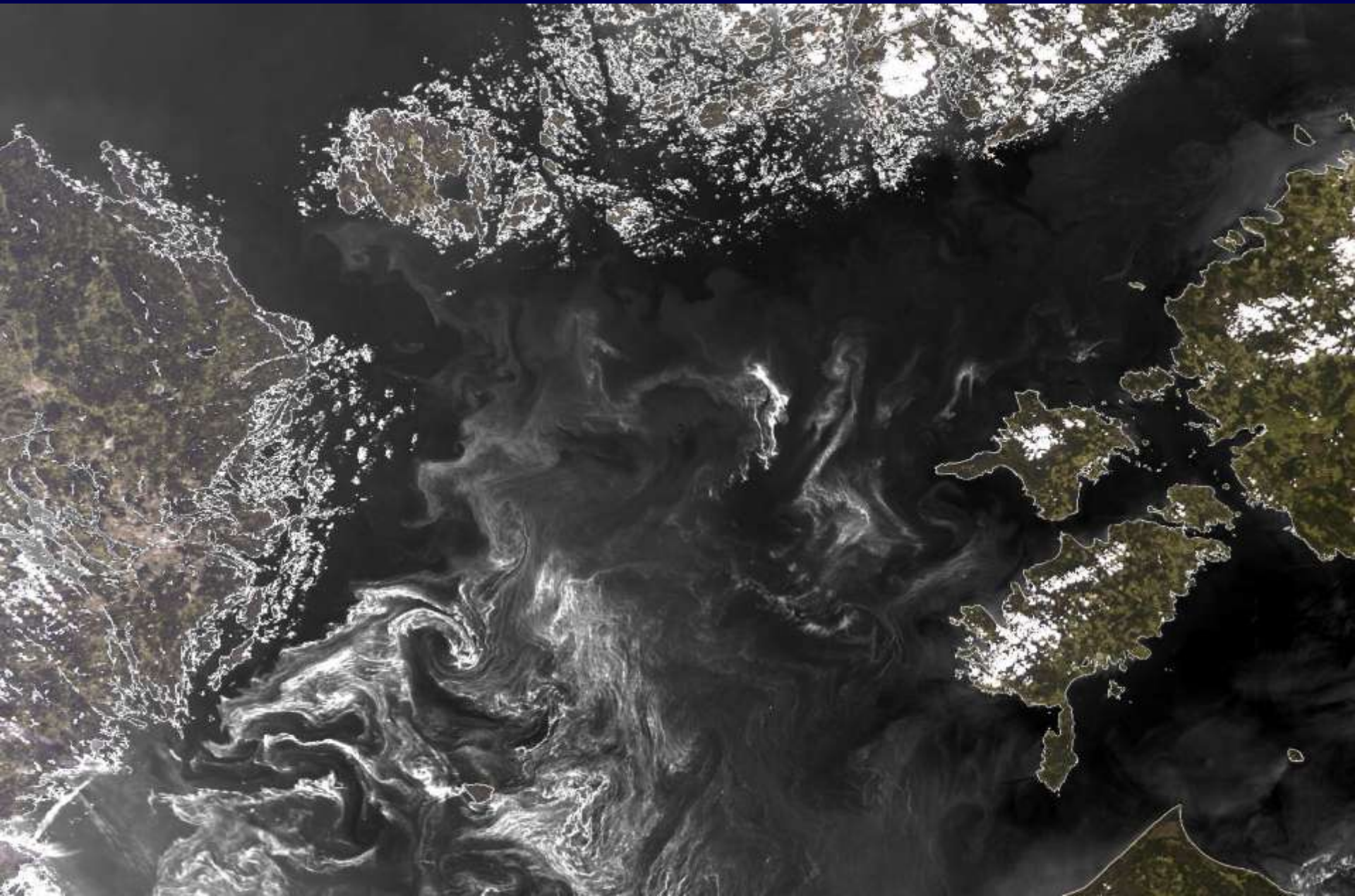
RL\_path band 5



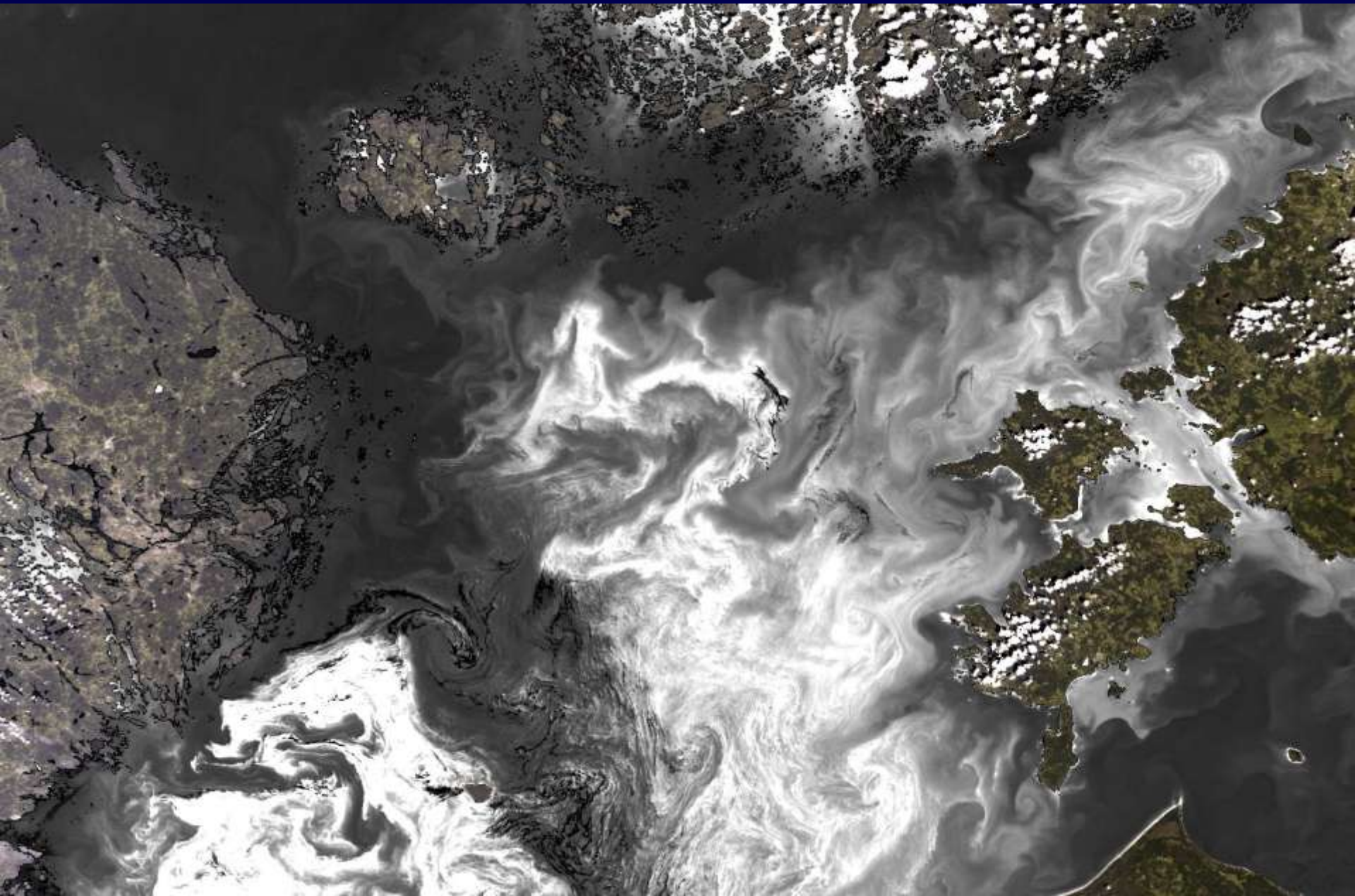
# Baltic Sea, RLw RGB



RL\_path band 5 (560 nm)



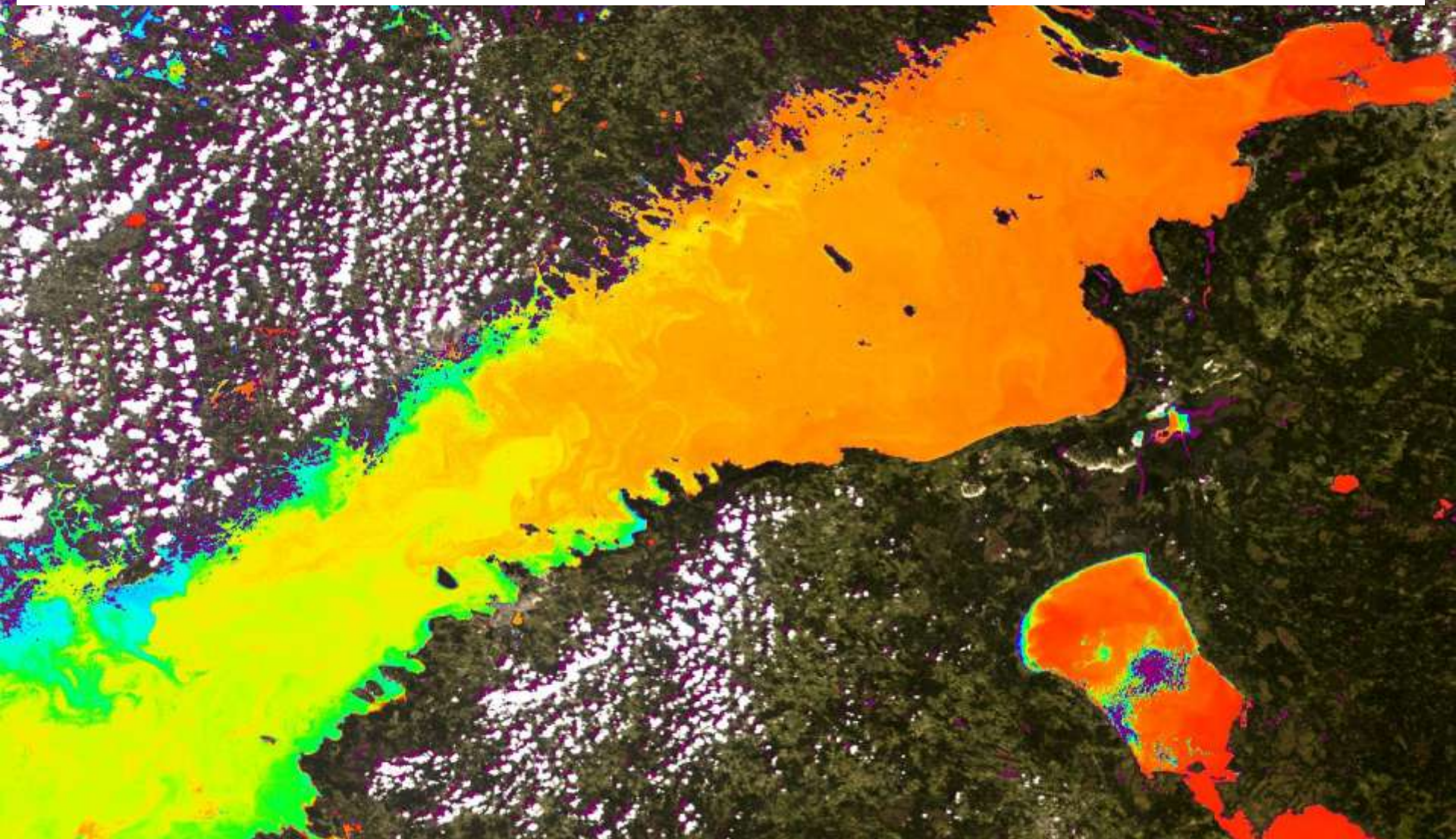
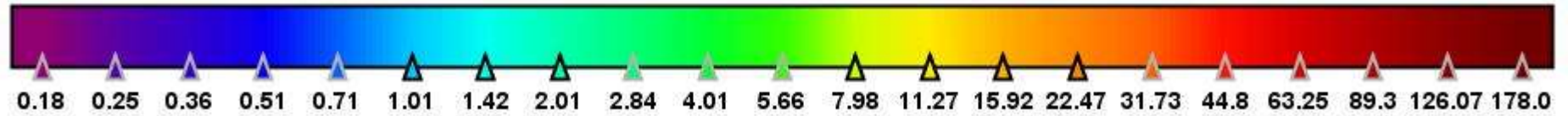
RLw band 5 (560 nm)



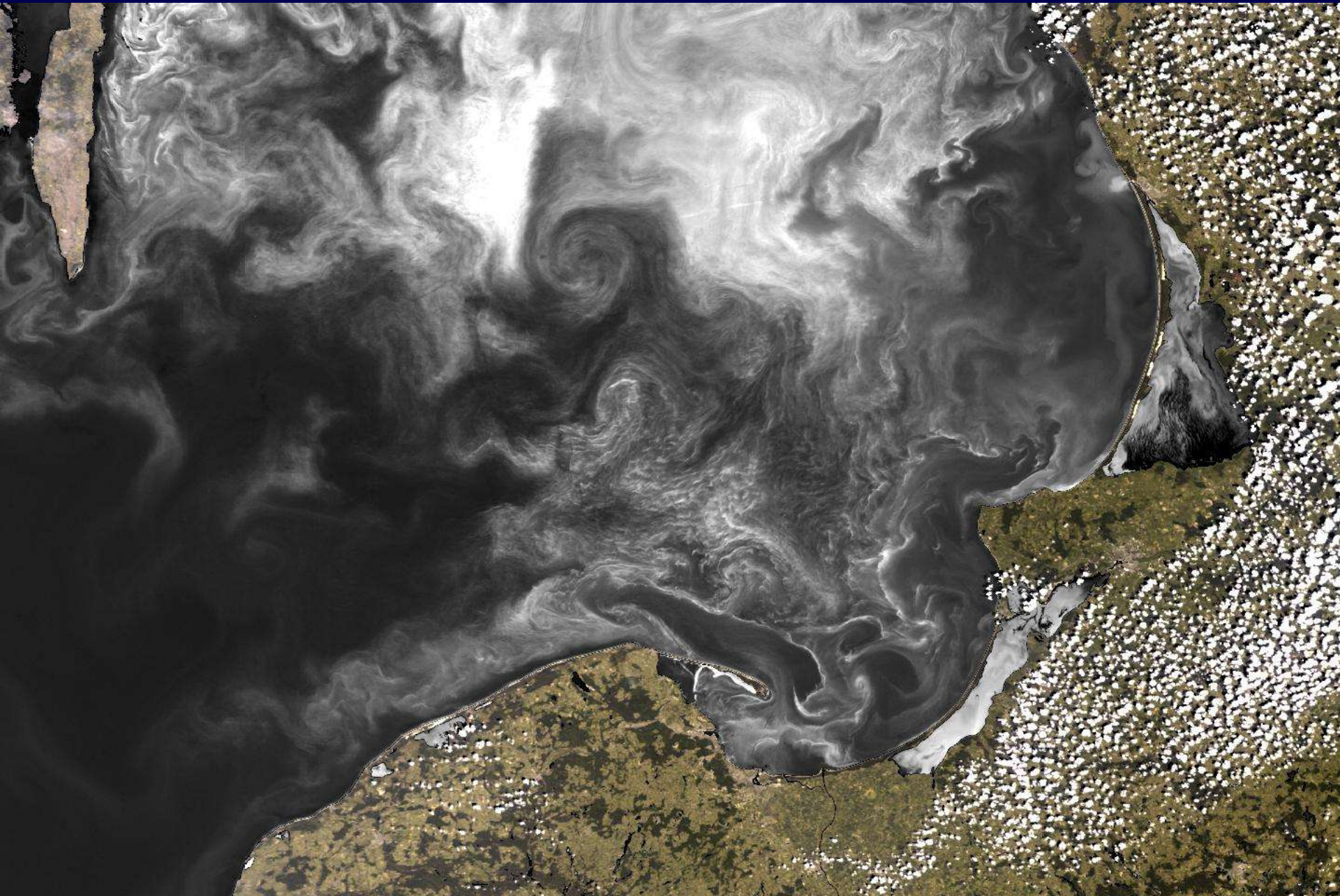


# Gulf of Finland chlorophyll

chl\_conc [mg m<sup>-3</sup>]

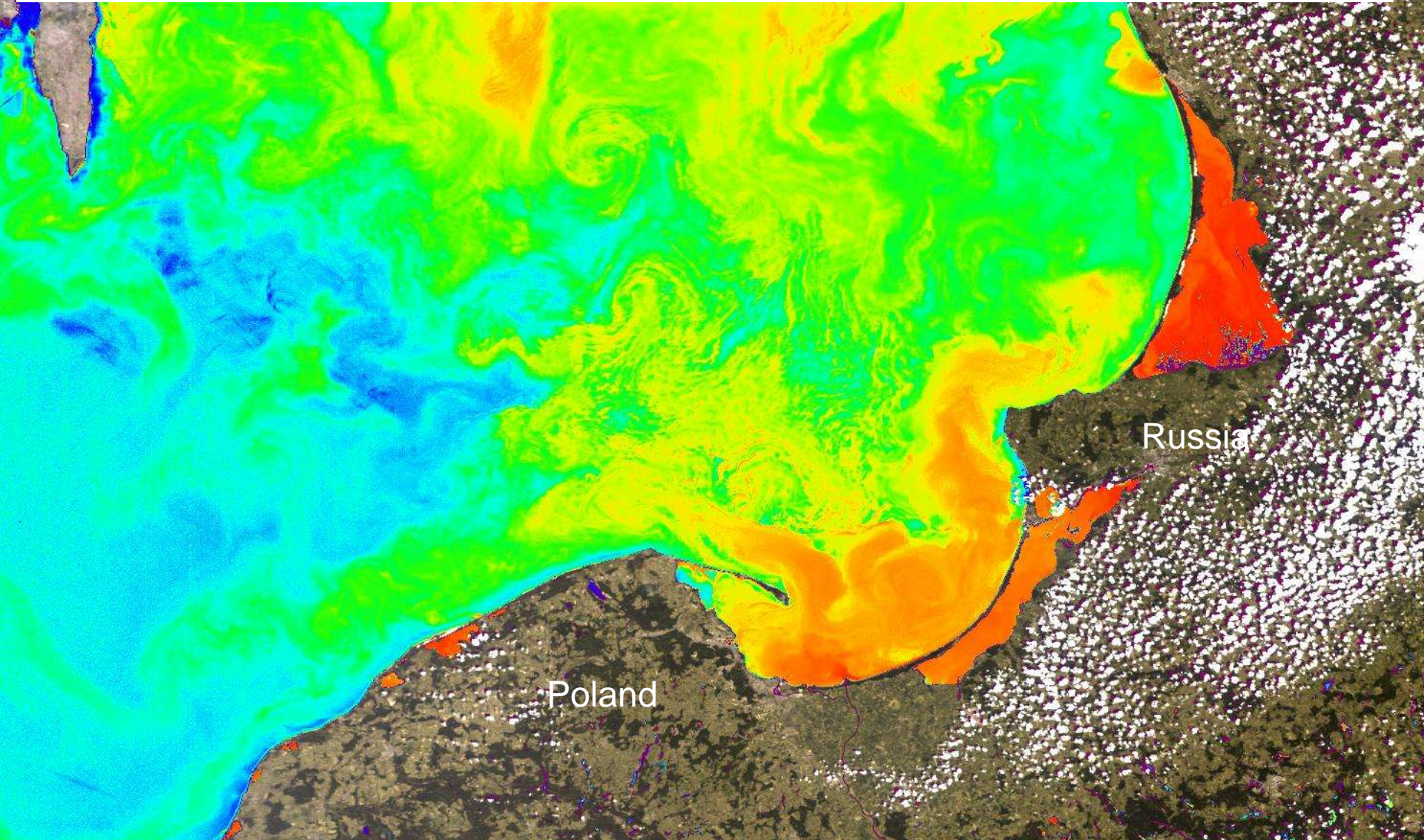
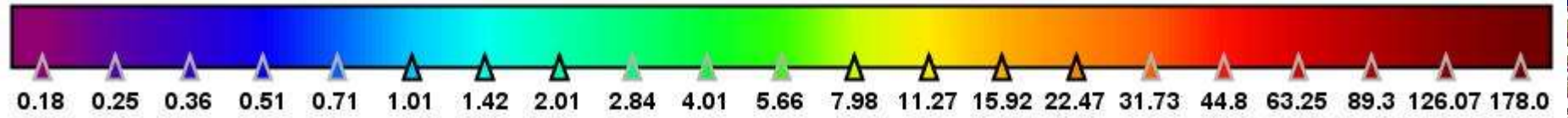


Baltic Sea RLw band 5, 560 nm



# Chlorophyll

chl\_conc [mg m<sup>-3</sup>]



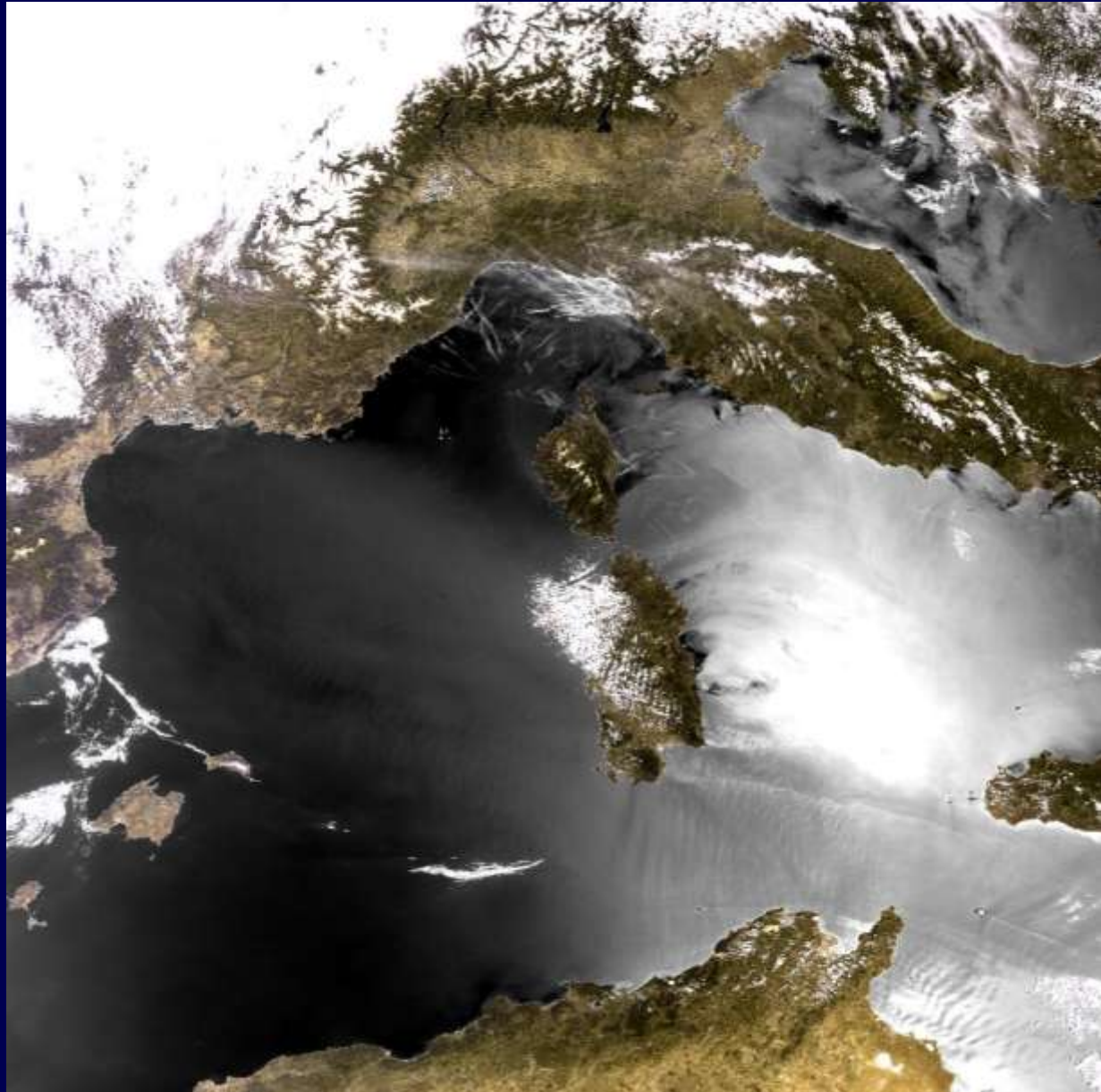
# MedSea 20050507



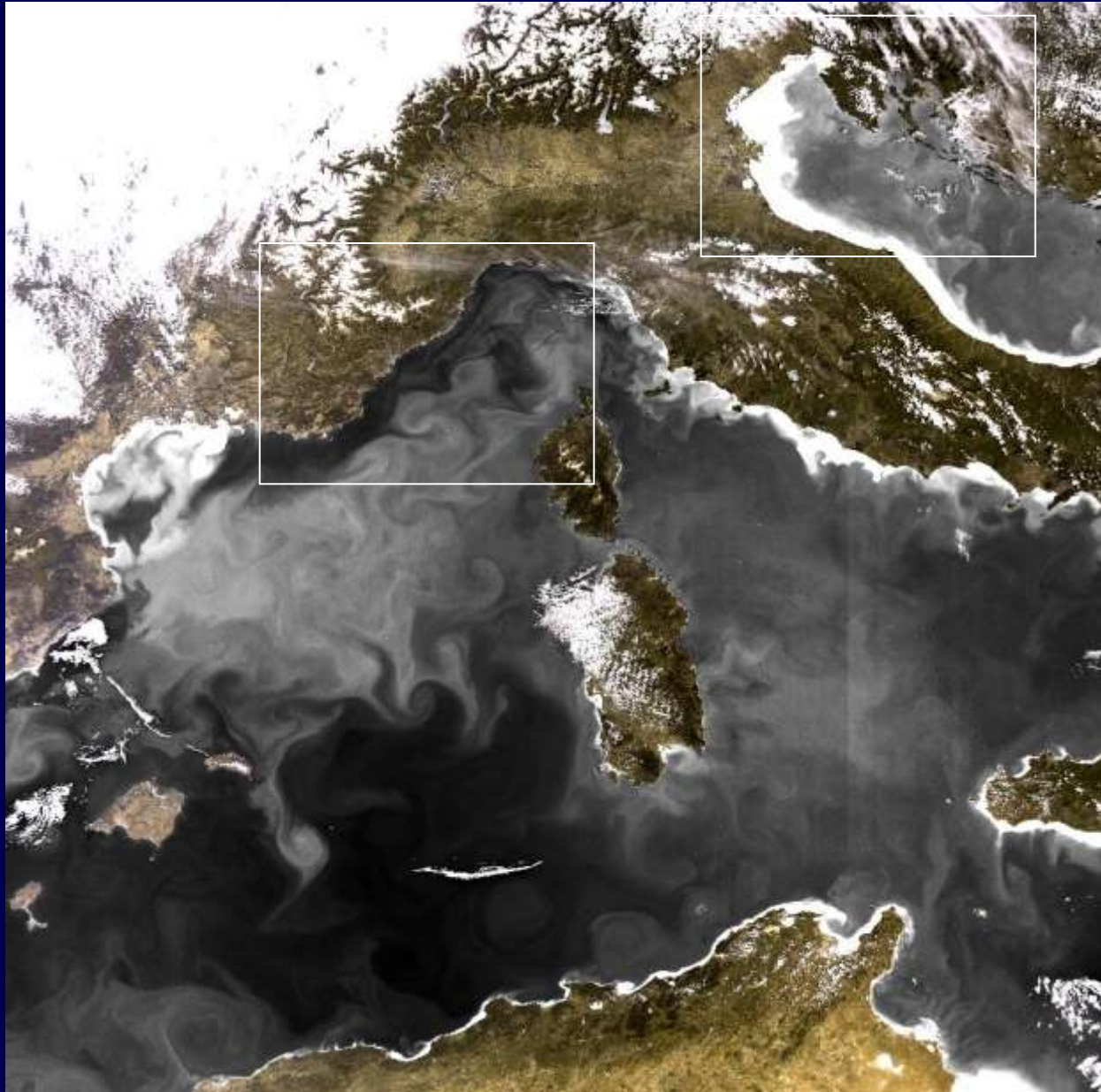
# MedSea RL\_toa



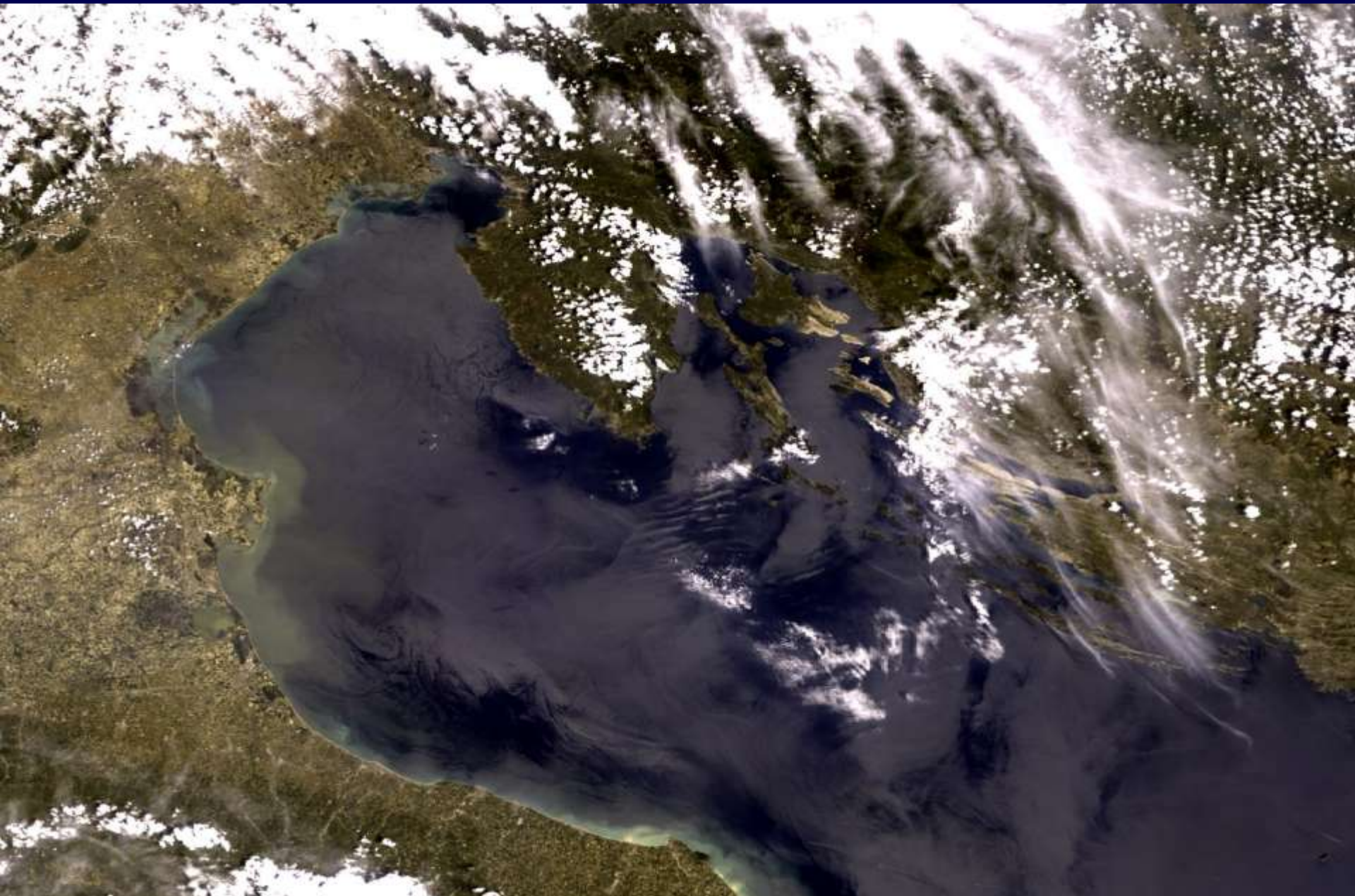
RL\_path band 5 (560 nm)



RLw, band 5 (560 nm)

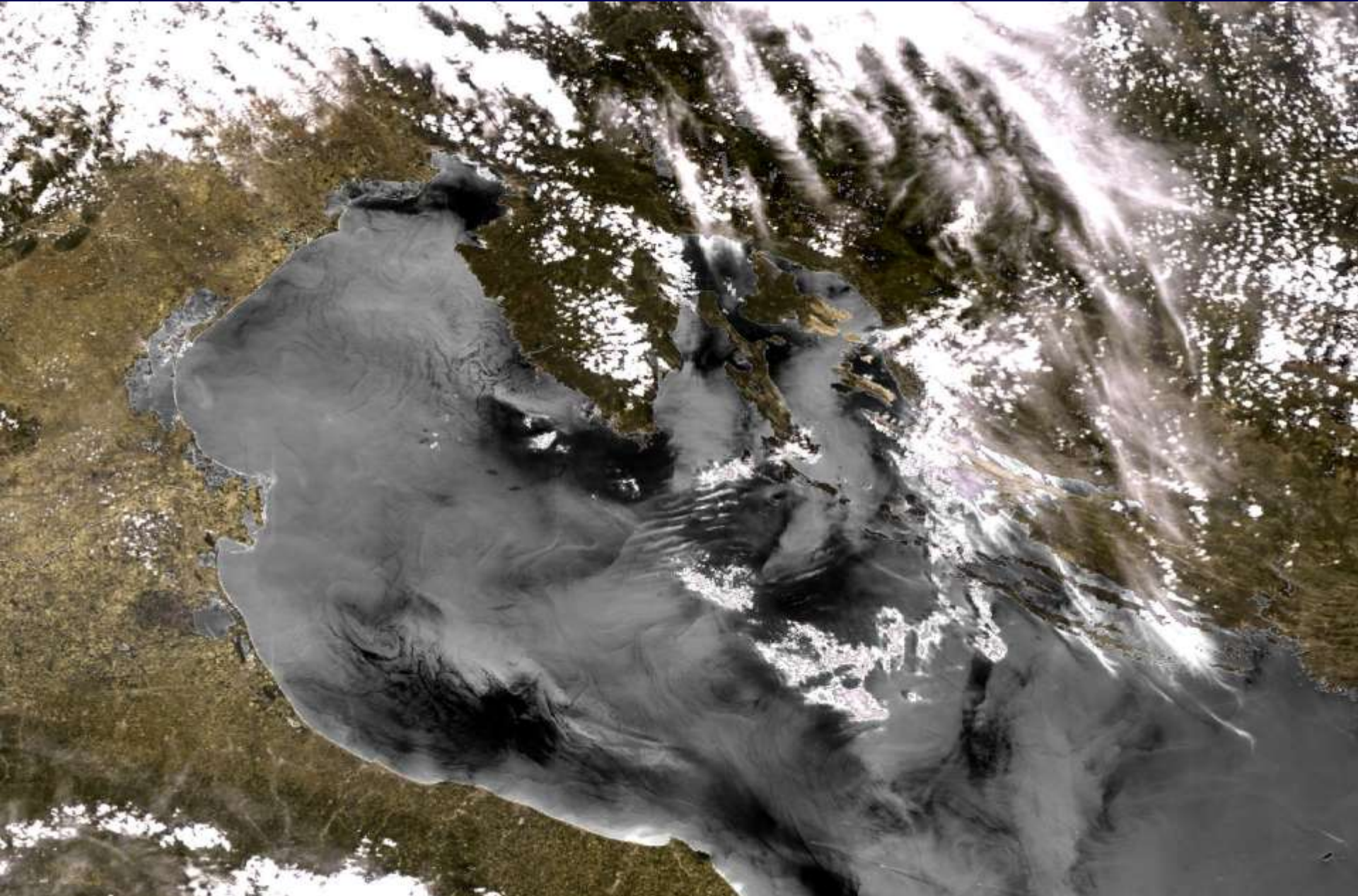


# Adriatic Sea, RL\_toa RGB

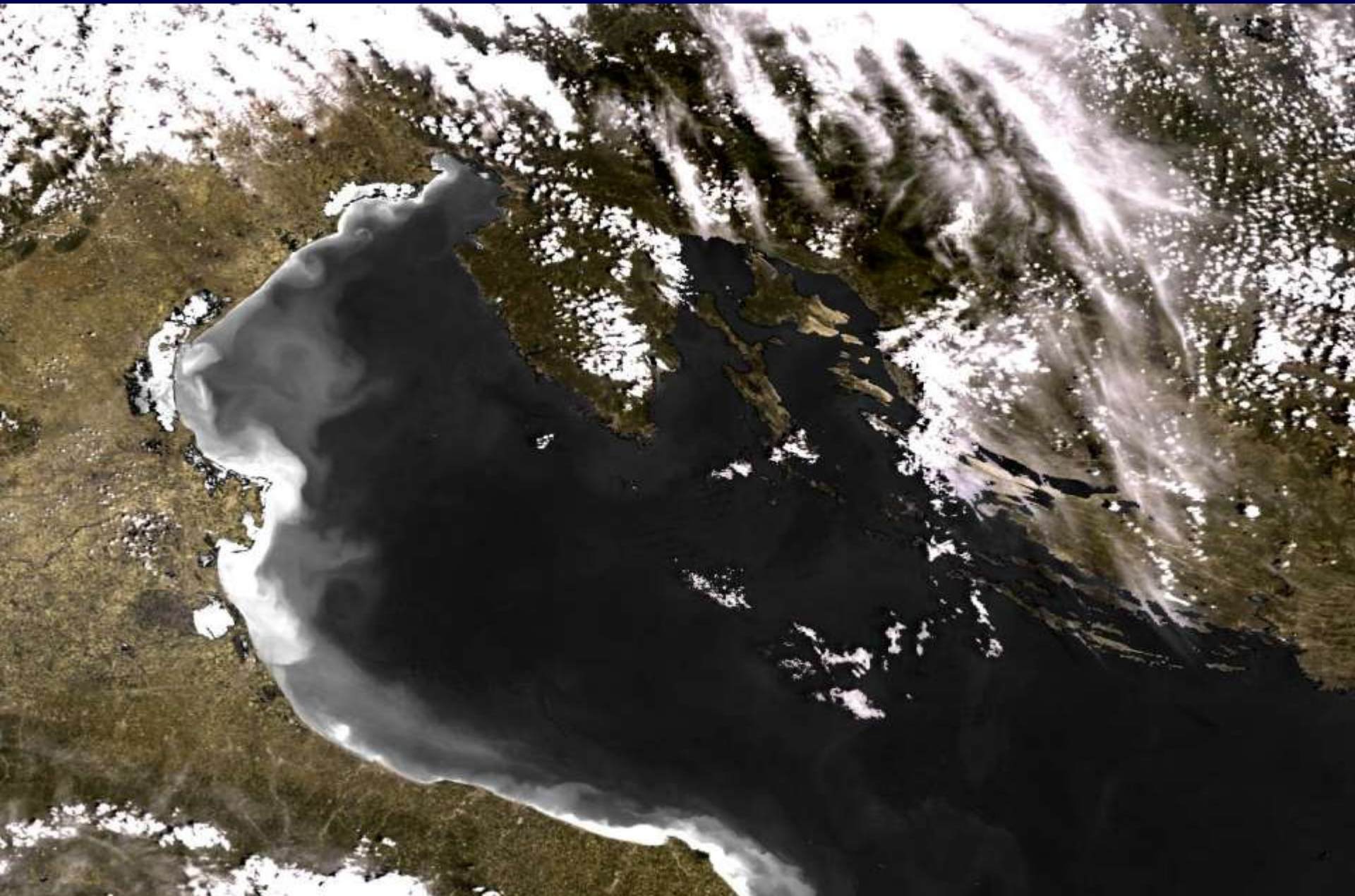




# Adriatic RIL\_path band 5

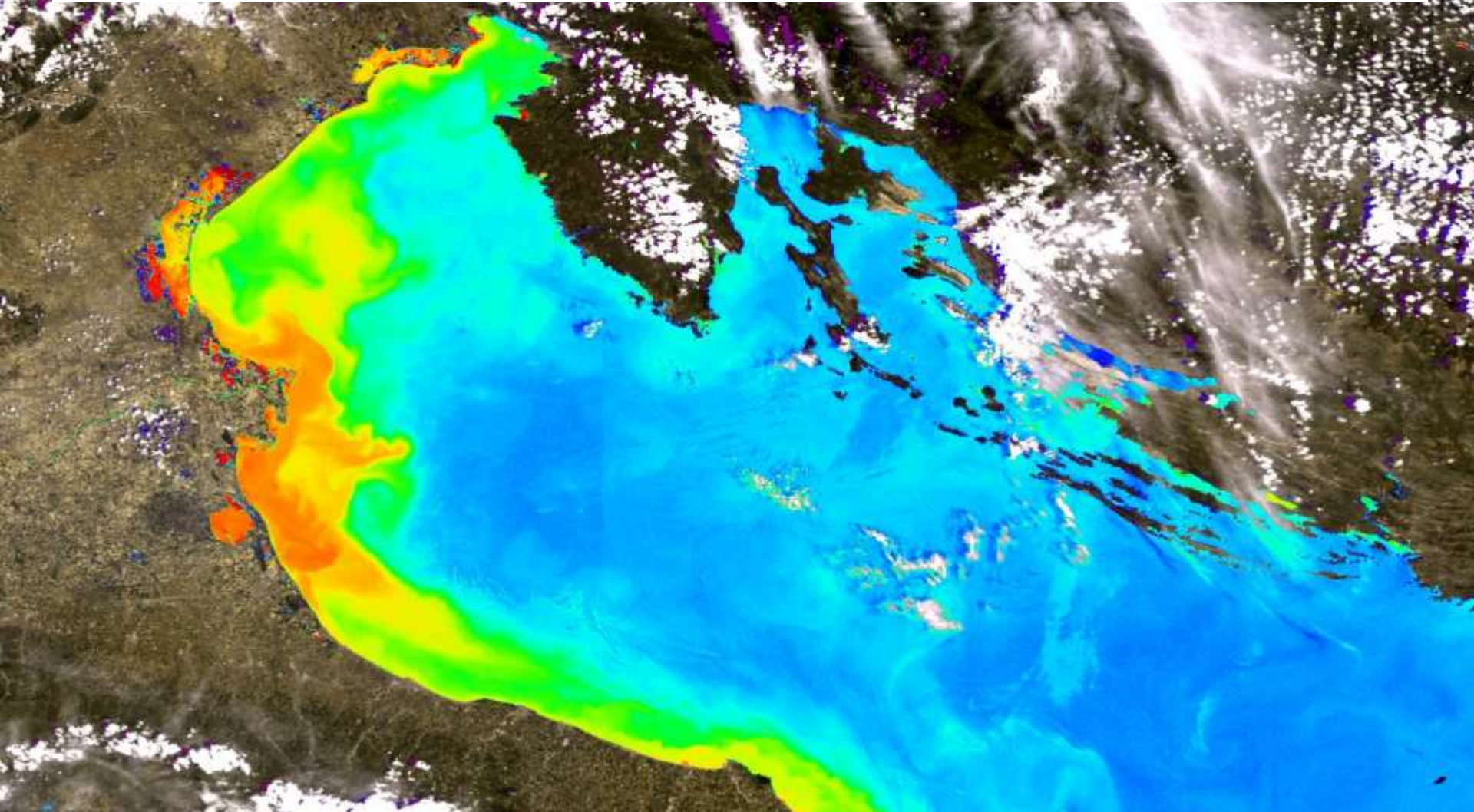
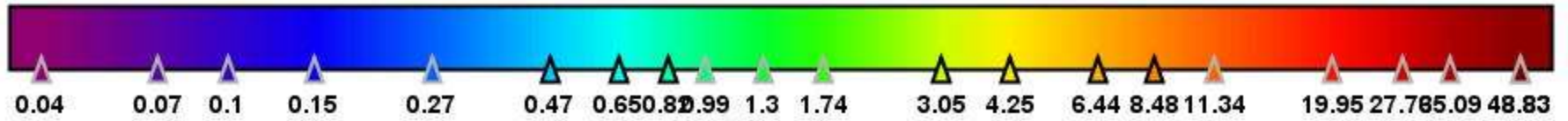


Adriatic Sea RLw band 5 (560 nm)

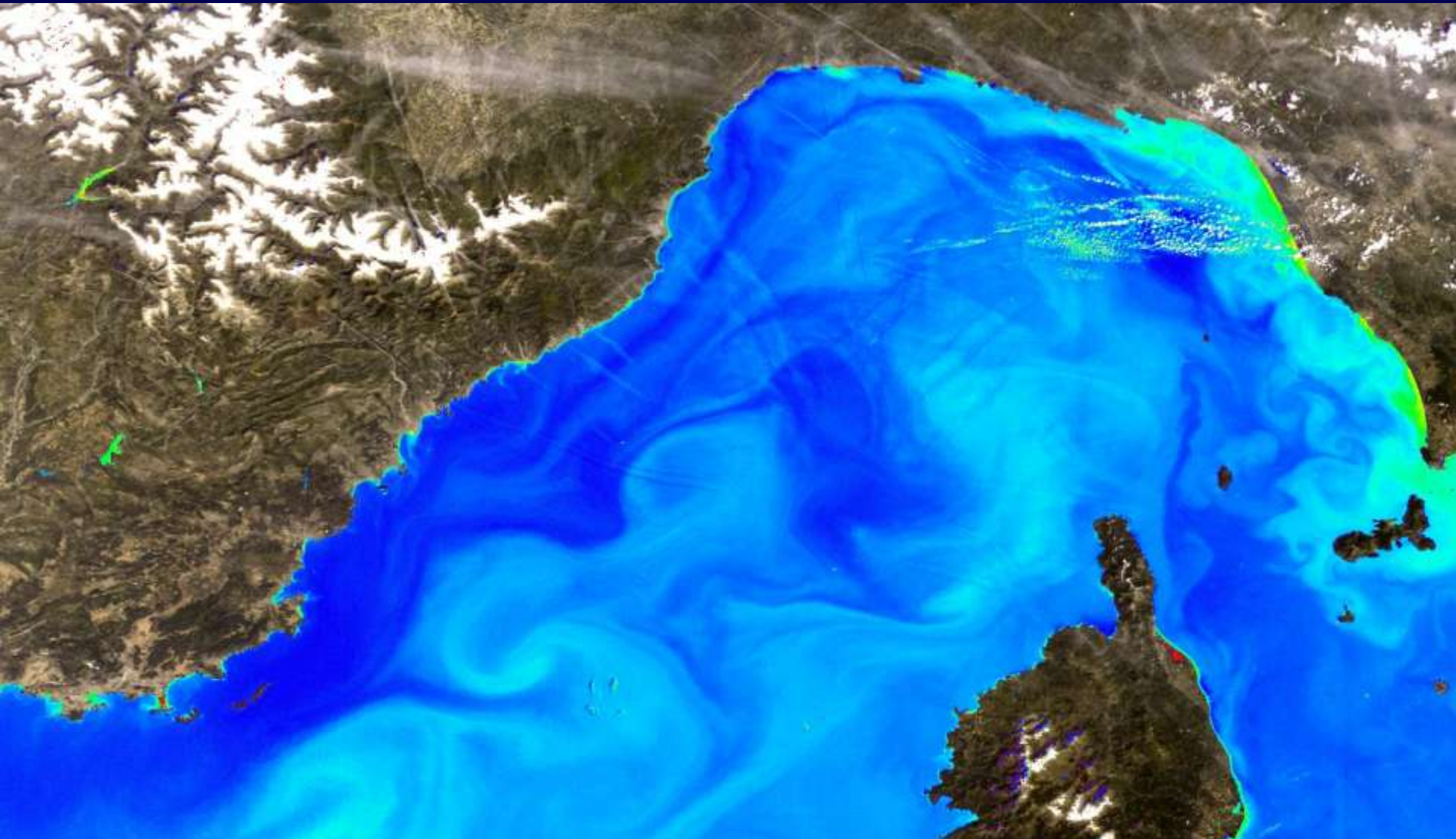


# Adriatic Sea, chlorophyll

chl\_conc [mg m<sup>-3</sup>]



# Med Sea Nice chlorophyll



chl\_conc [mg m<sup>-3</sup>]



0.04

0.07

0.1

0.15

0.27

0.47

0.65

0.89

1.3

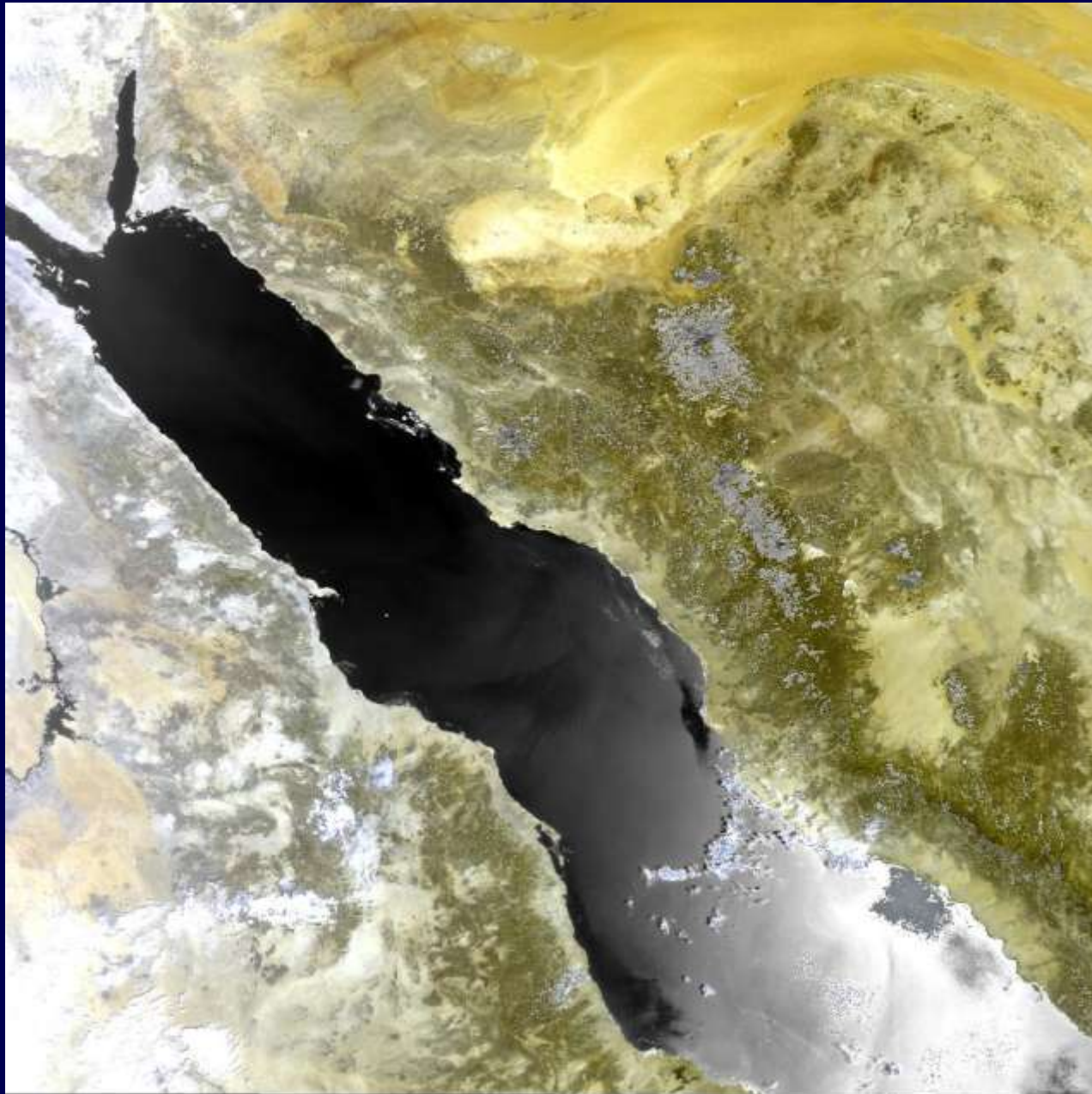
1.74

3.05

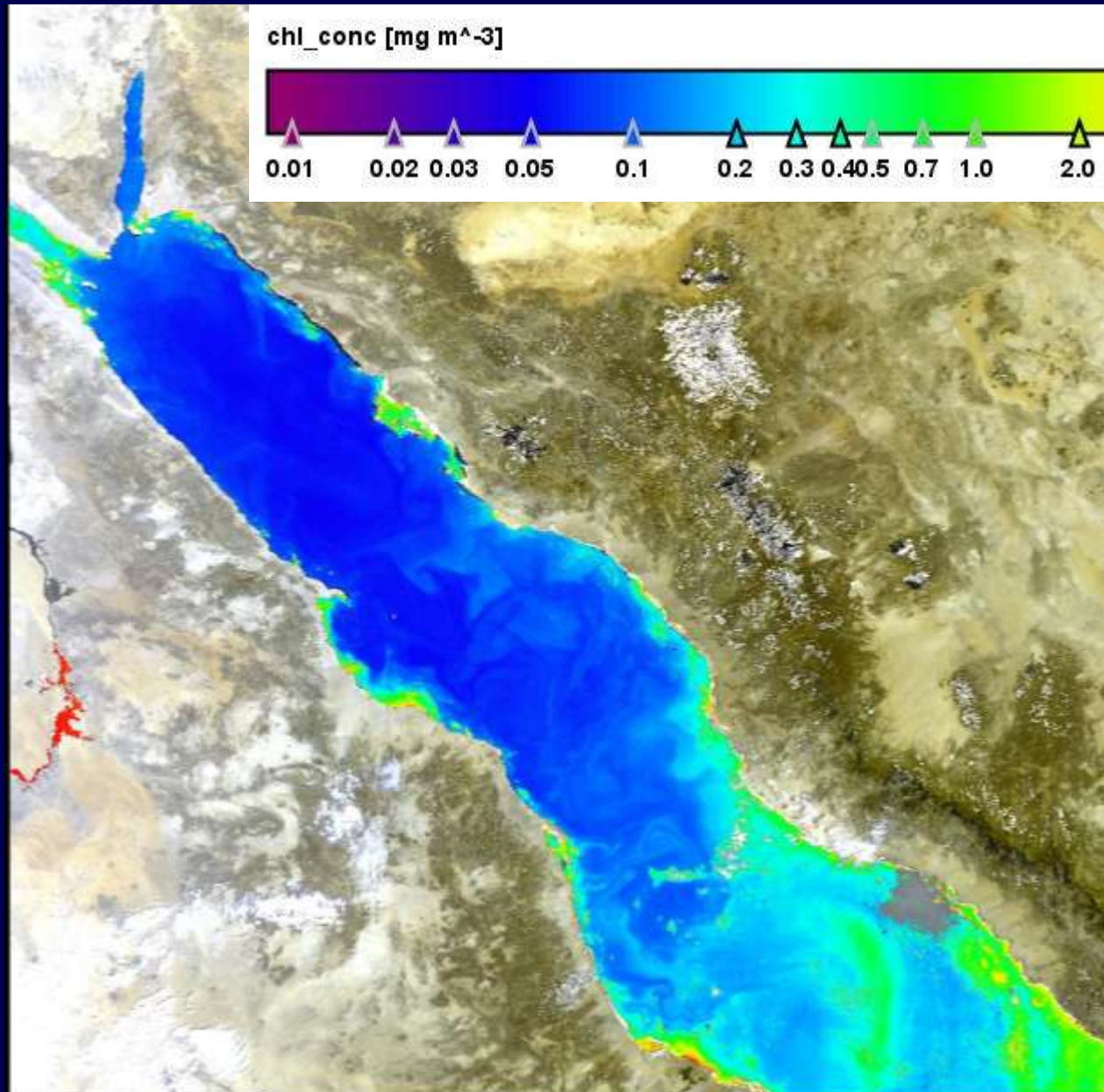
Red Sea 20050922



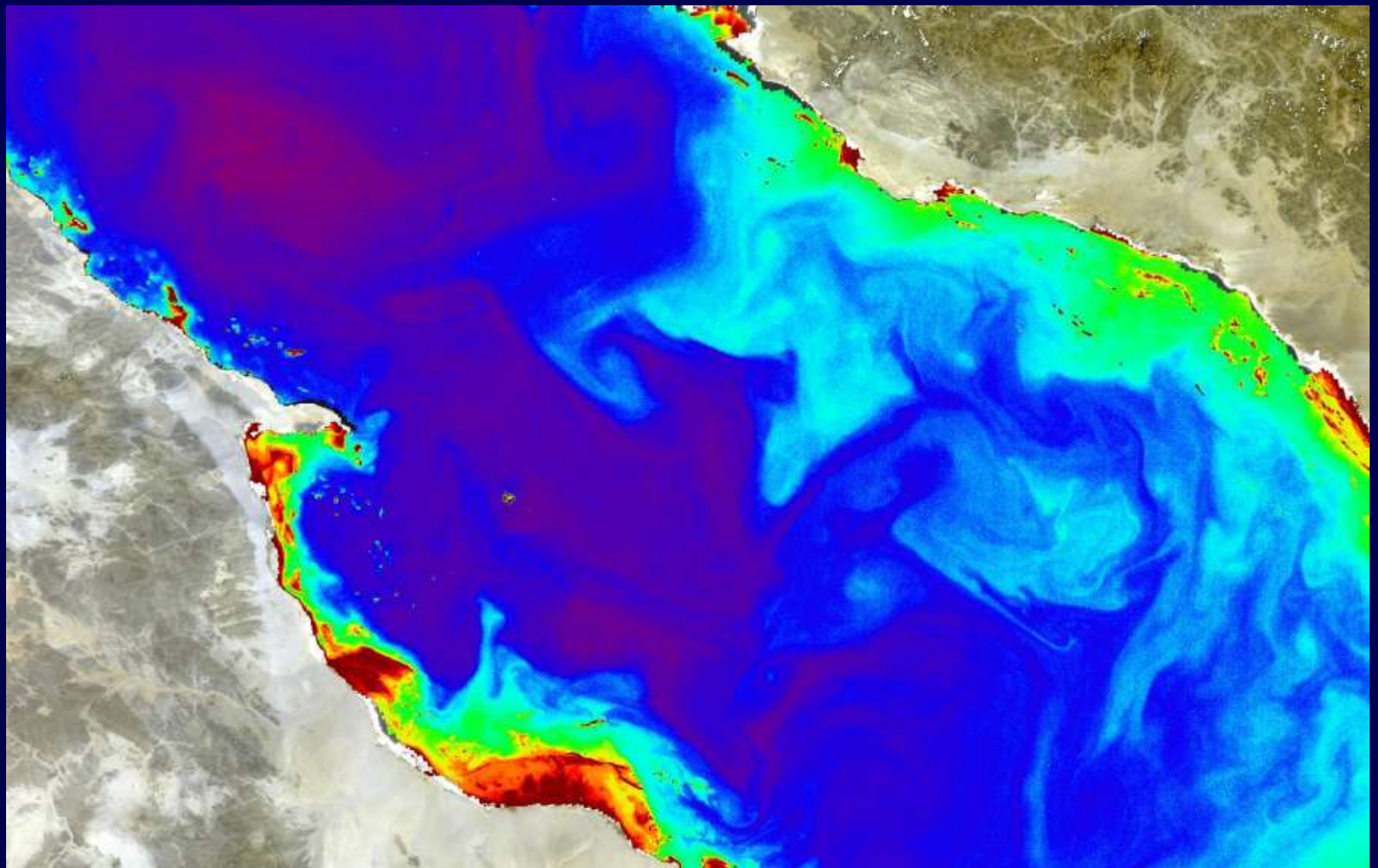
# Red Sea path radiance band 5



# Chlorophyll



# Signal depth z90 (m)

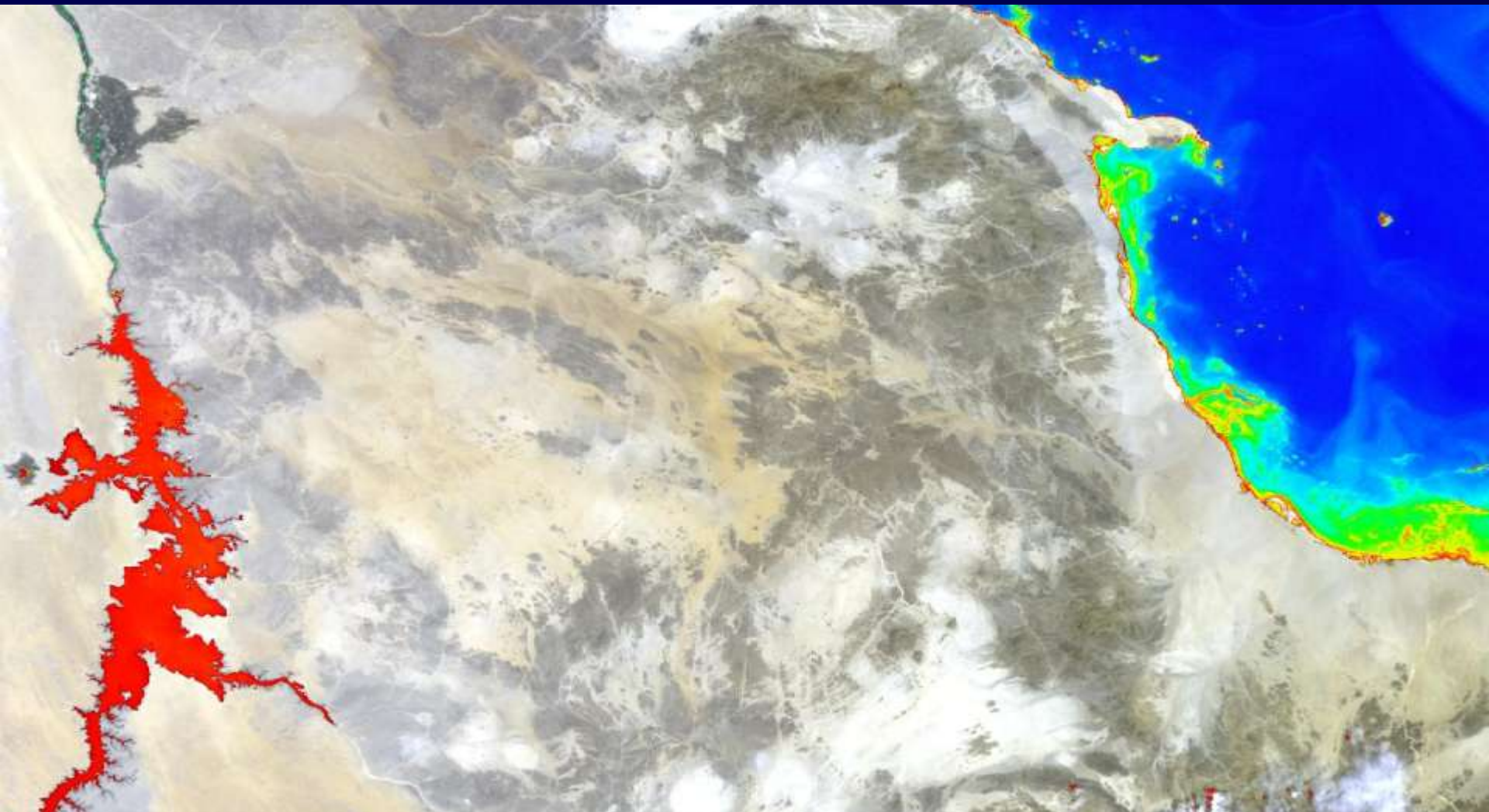


Z90\_max [m]

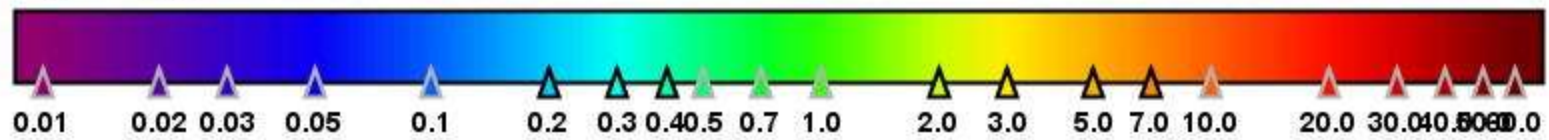




# Chlorophyll



chl\_conc [mg m<sup>-3</sup>]



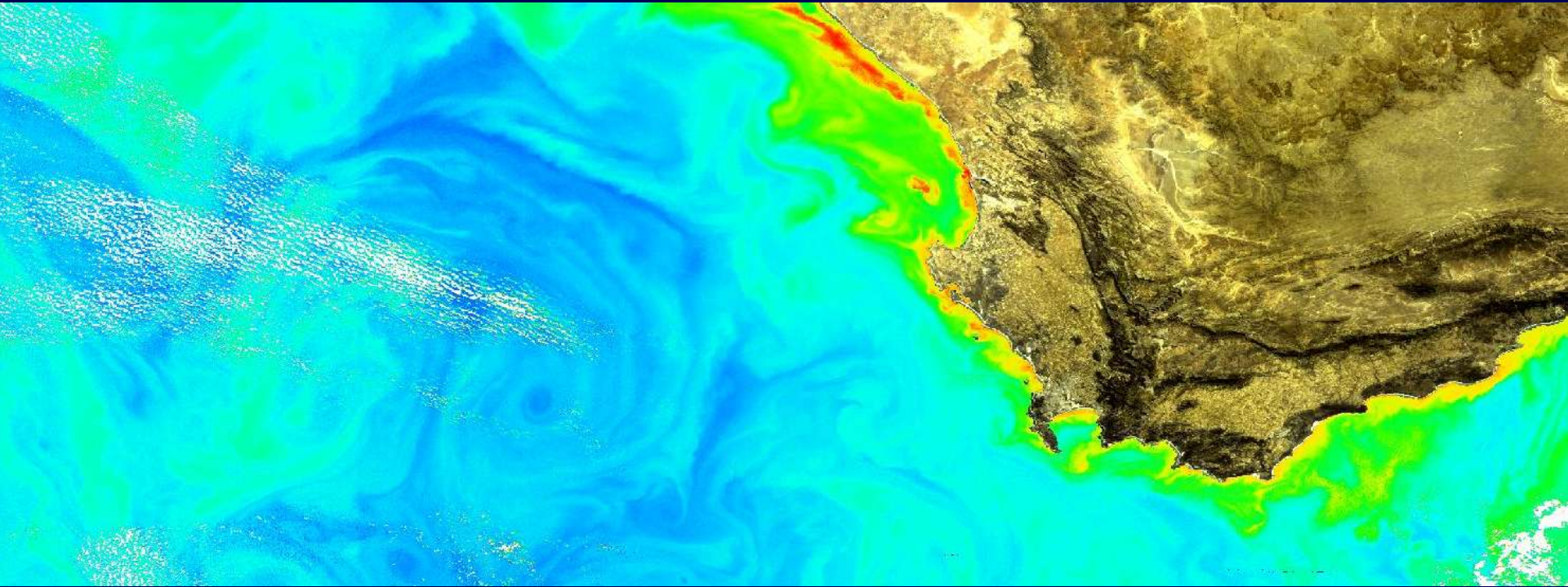
Benguela / South Africa, 20051026



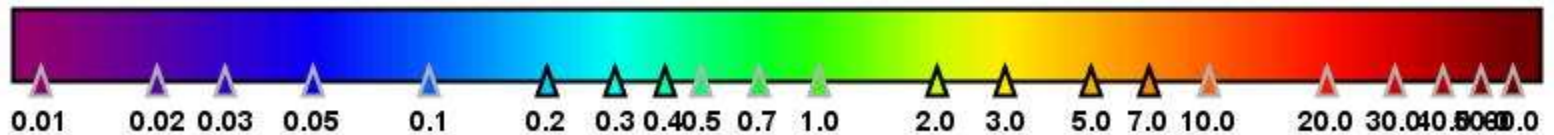
Benguela / South Africa RL\_toa RGB 20051026



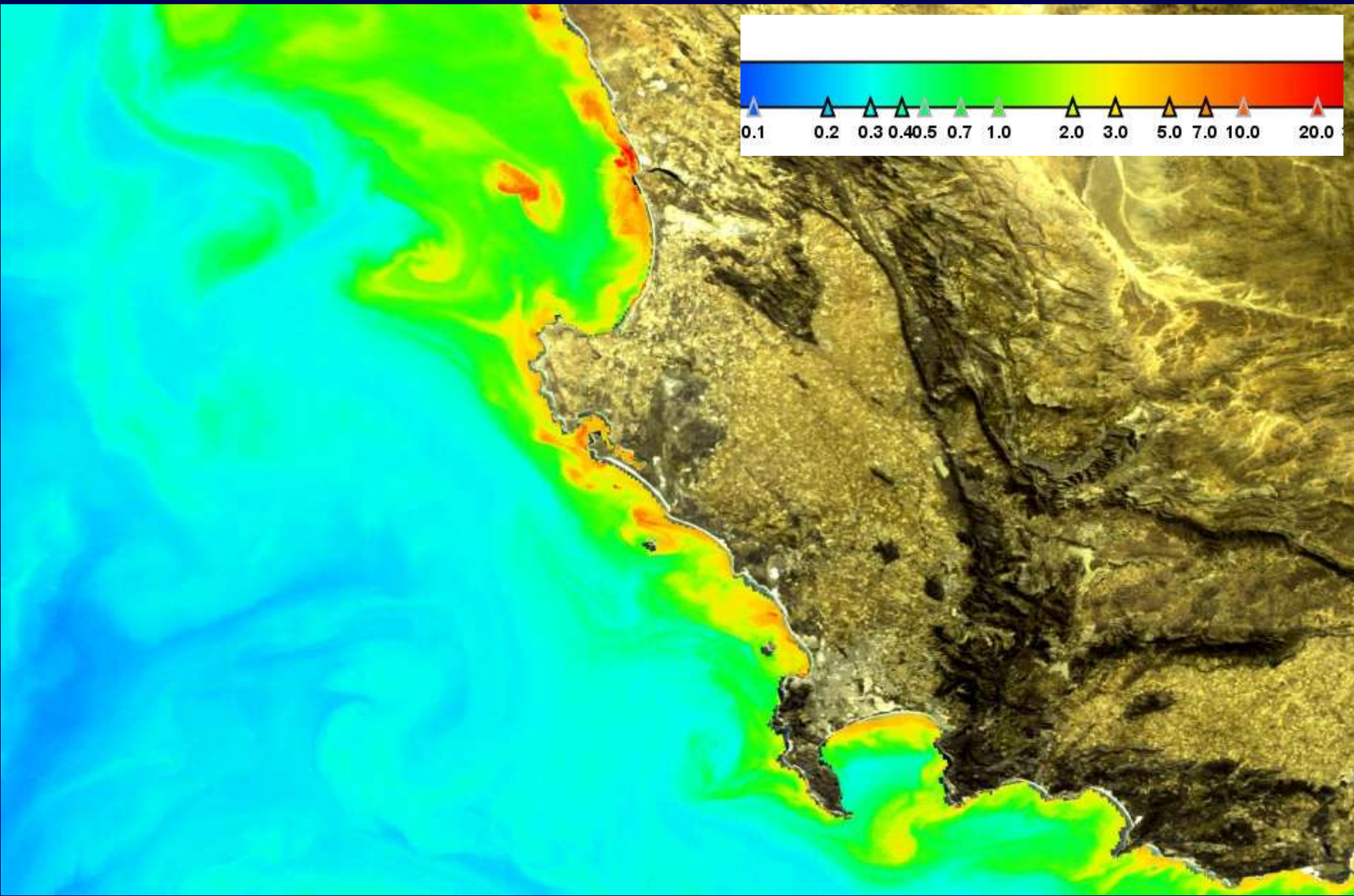
# Chlorophyll



chl\_conc [mg m<sup>-3</sup>]



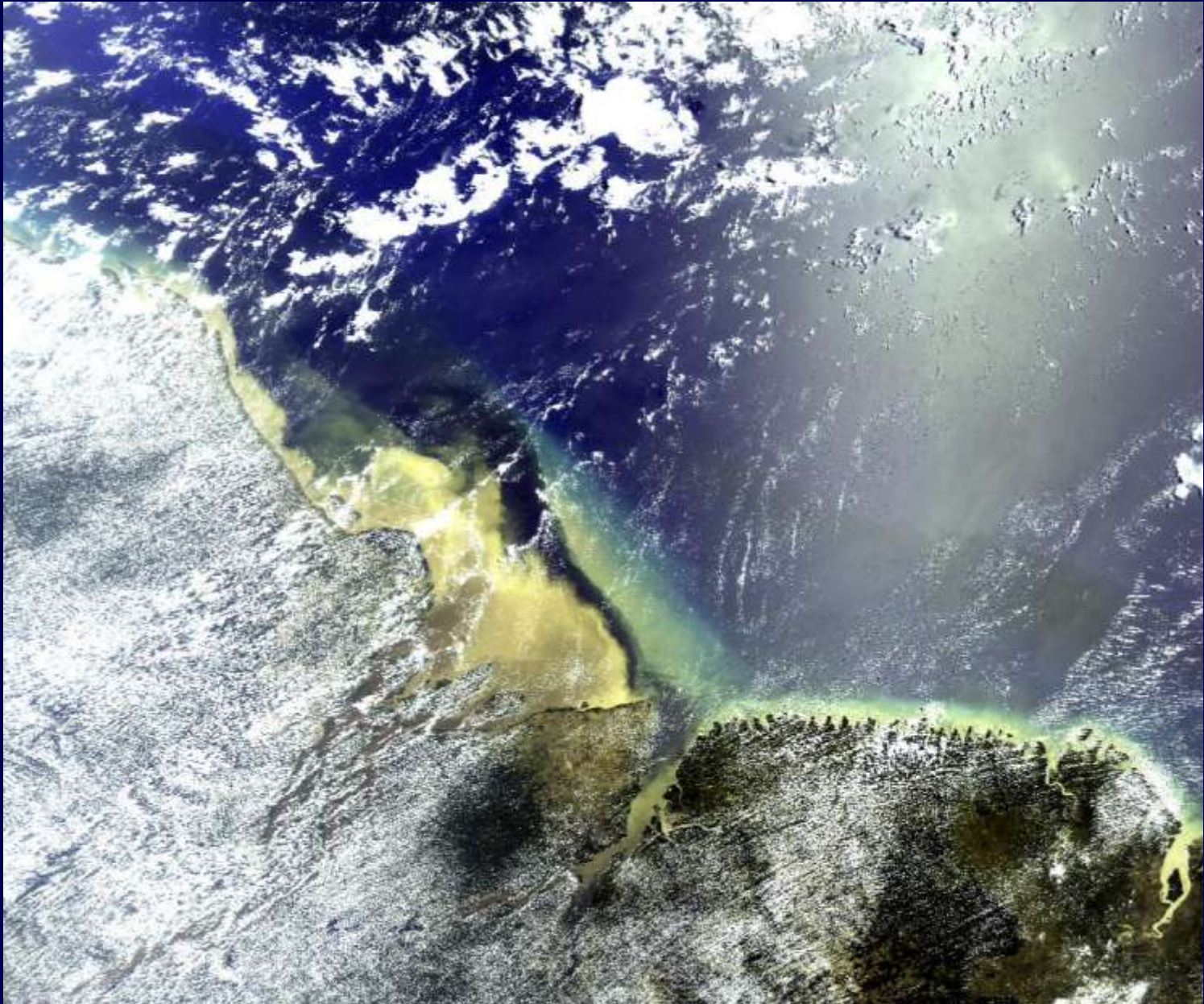
# Chlorophyll Cape Town area



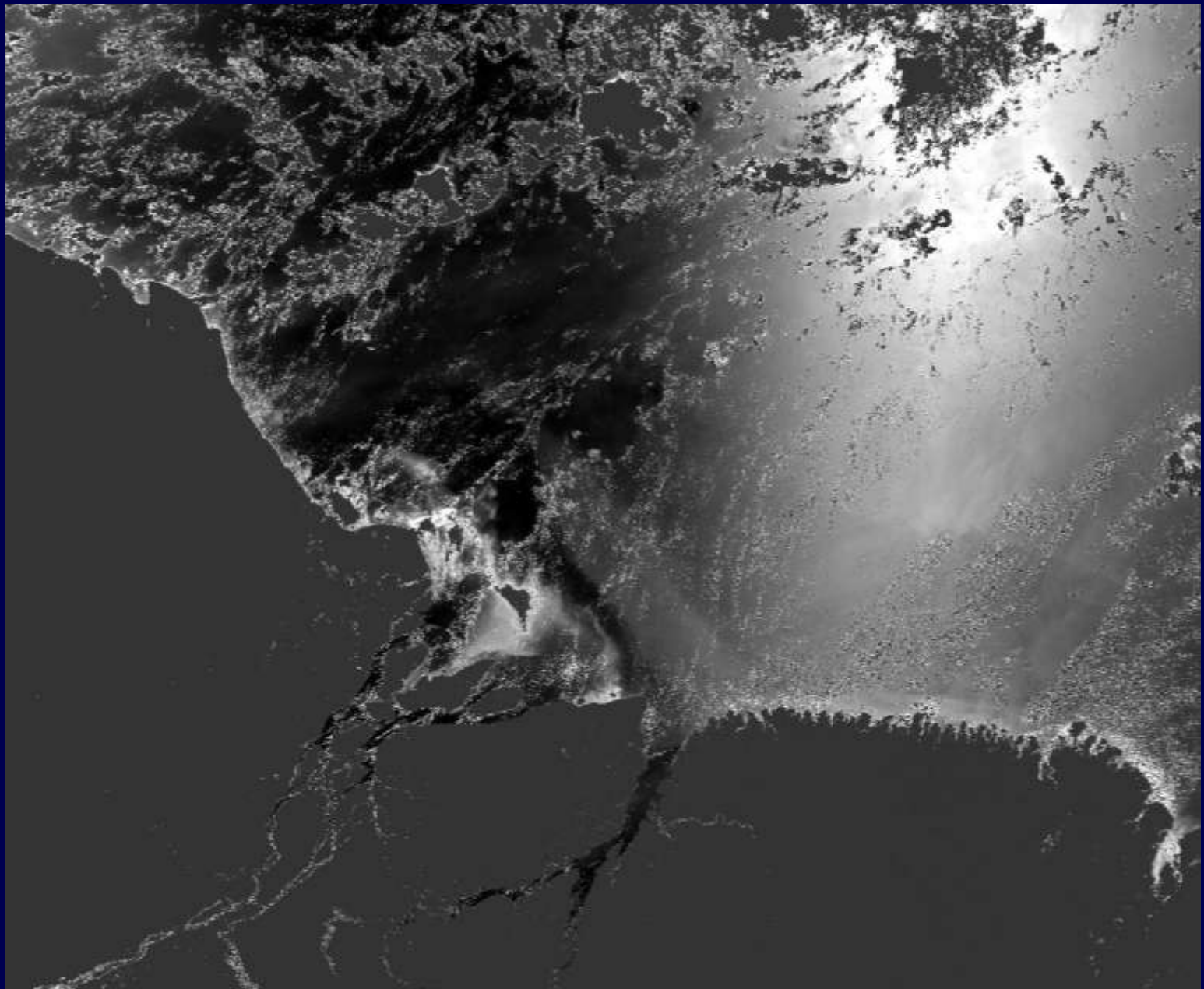
Amazonas 20050830



# Amazon Delta 20050830

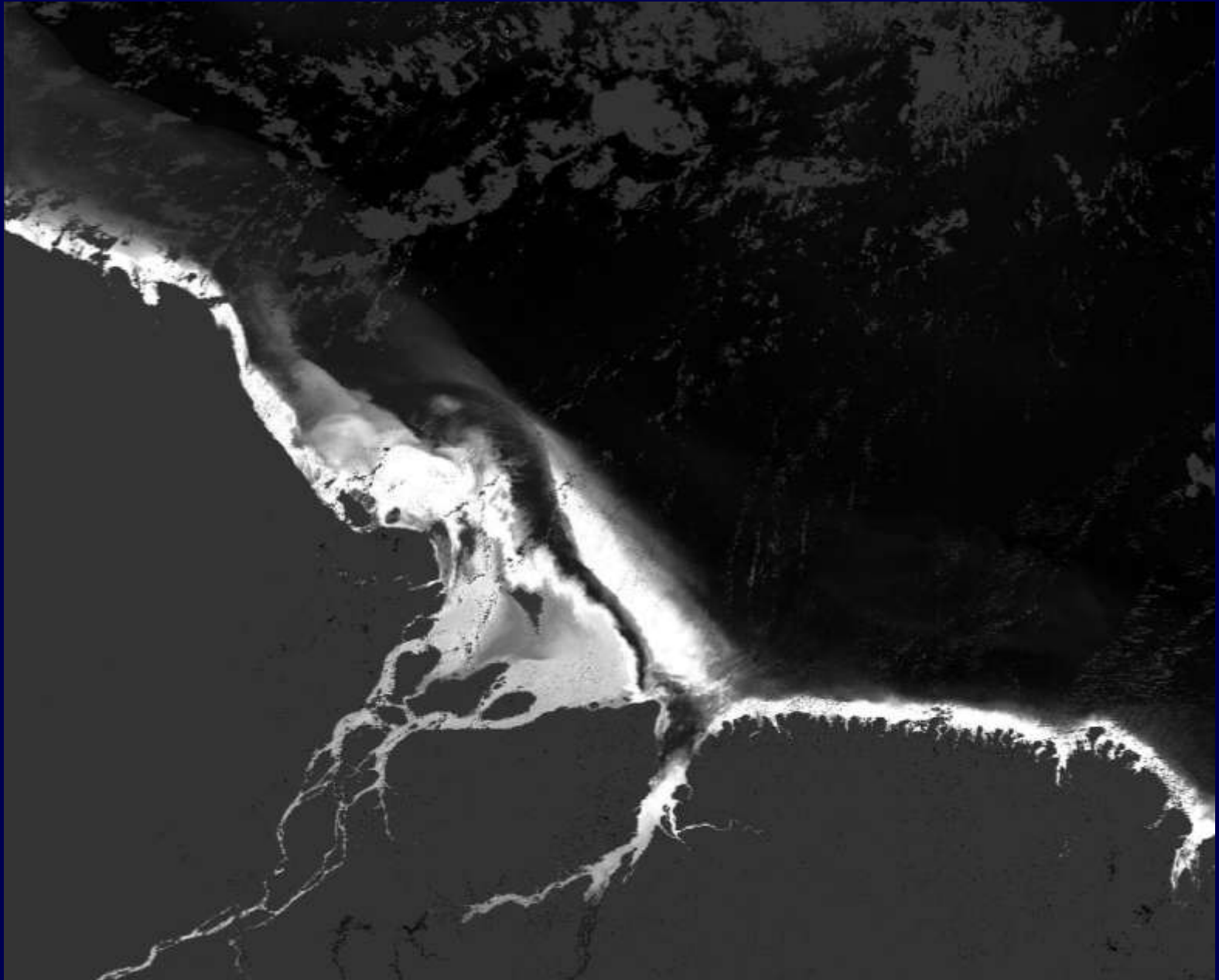


## Path radiance reflectance band 5

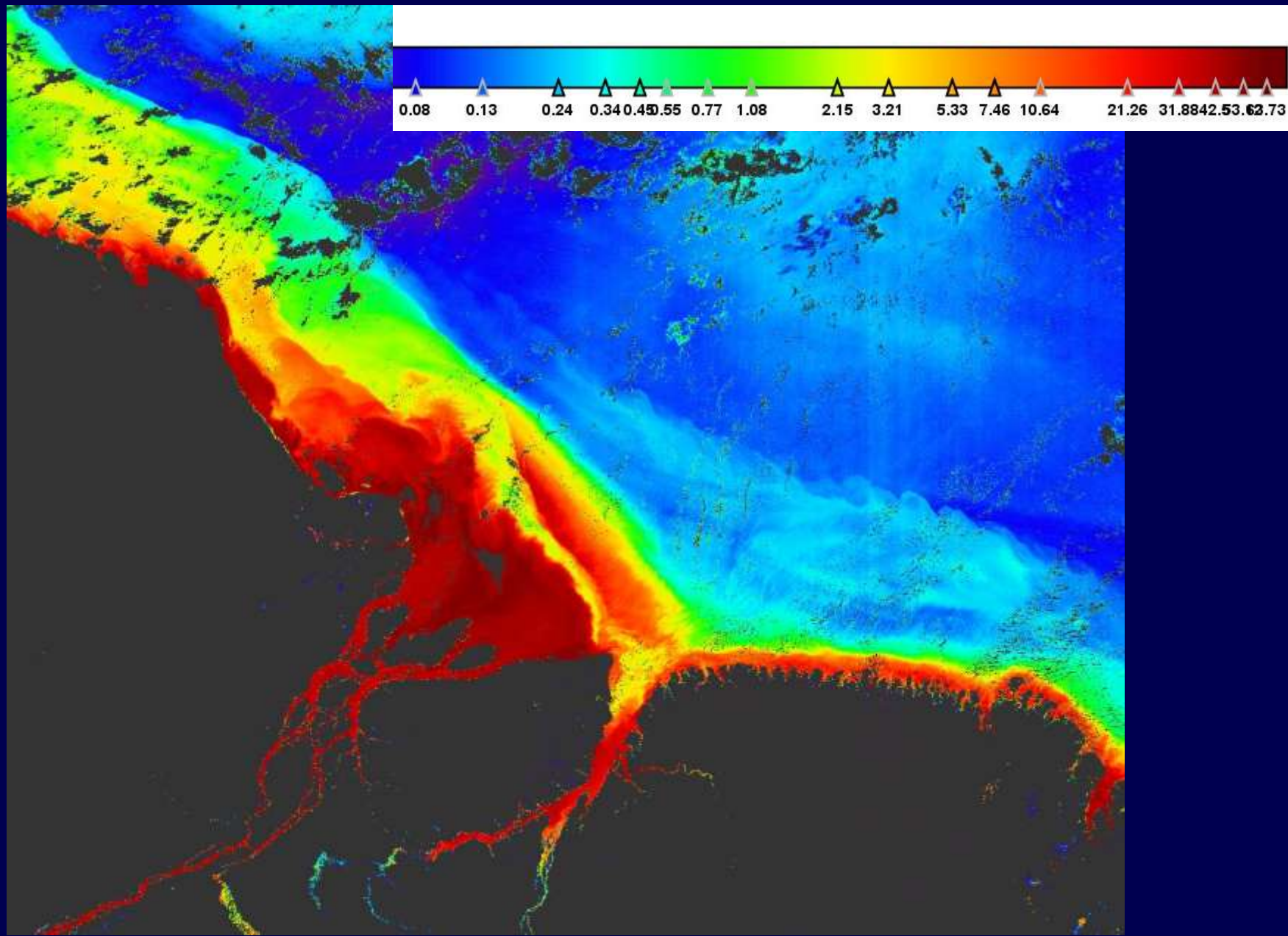




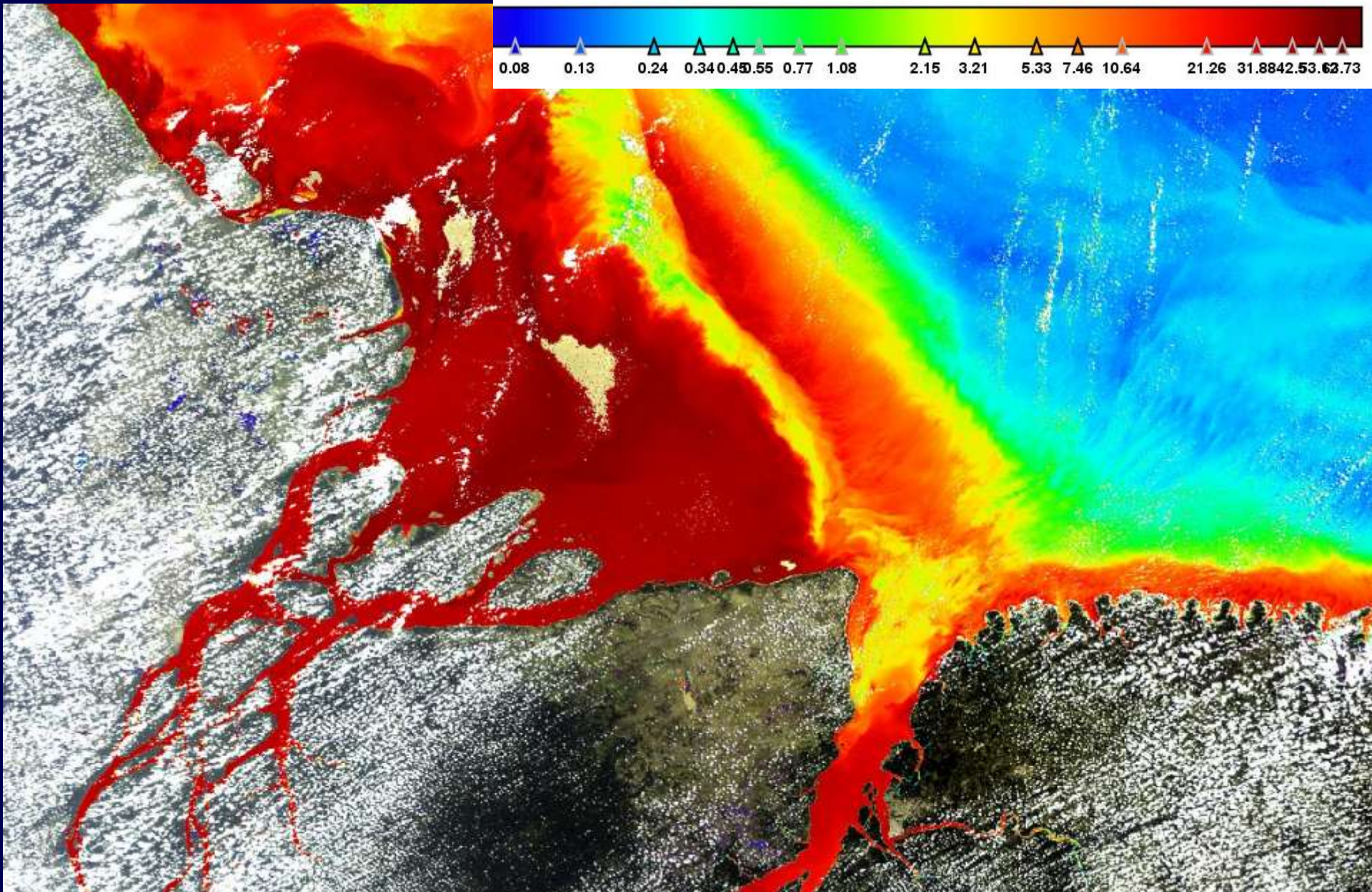
# Water leaving radiance reflectance band 5



# Total suspended matter



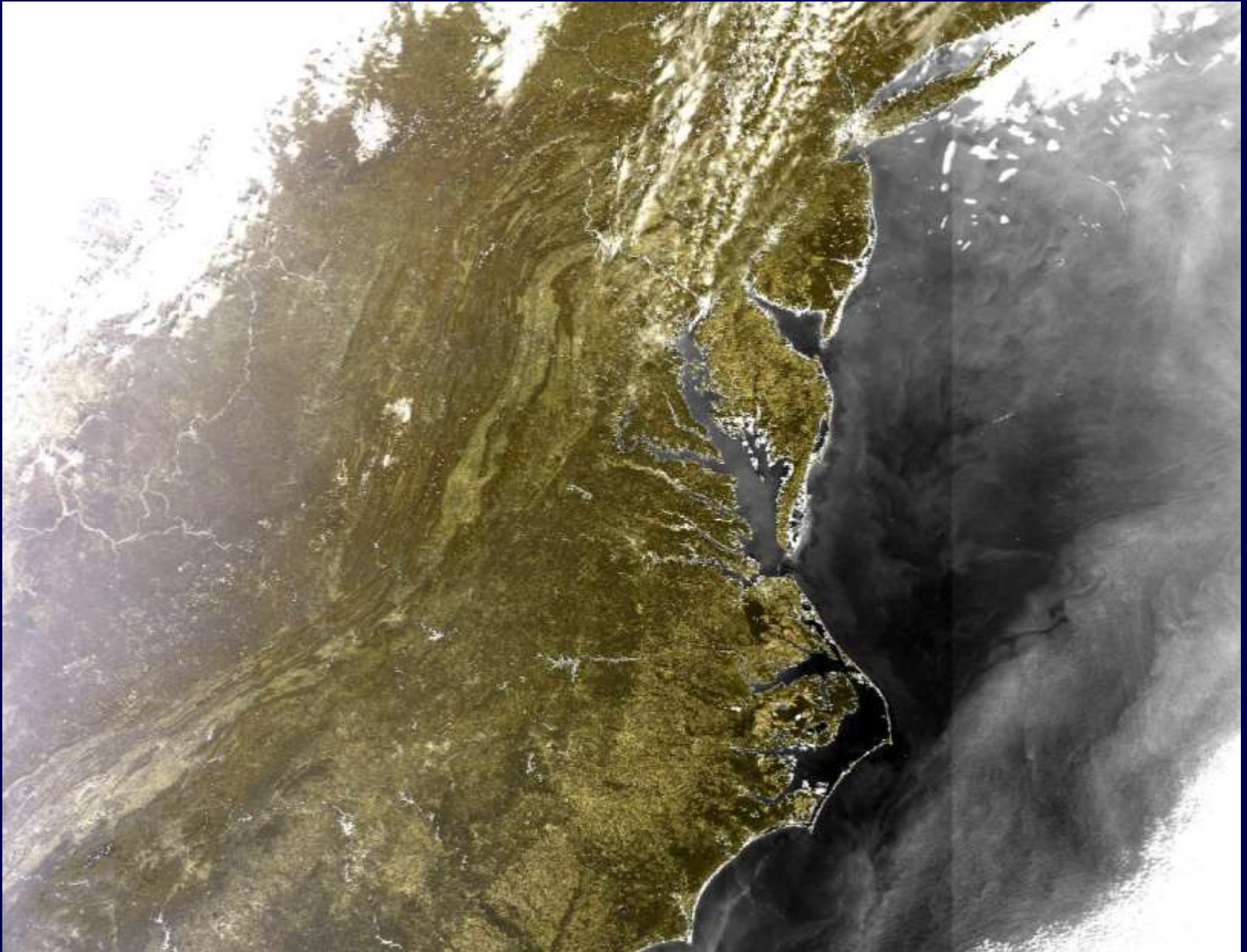
# Total suspended Matter



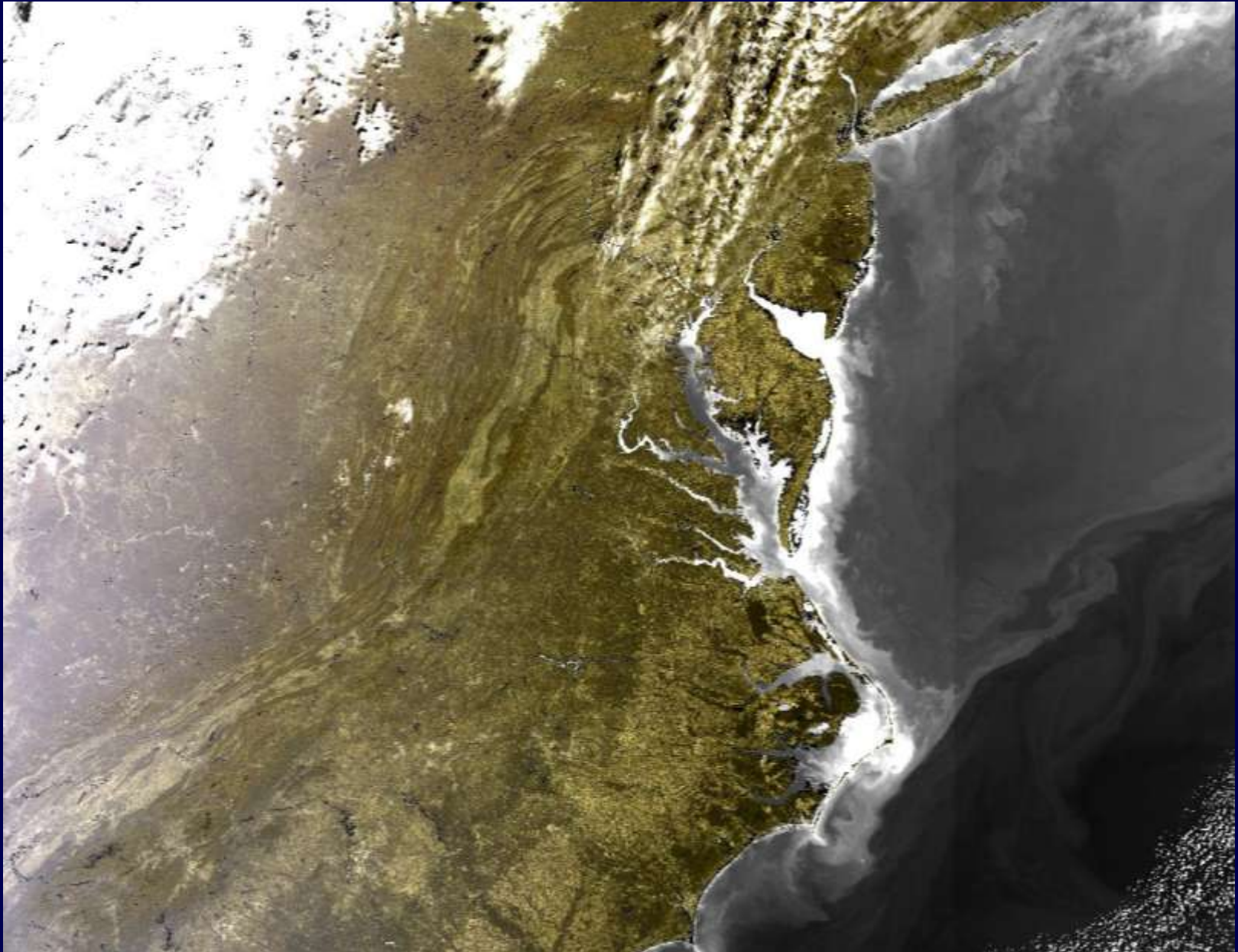
# USA North East Coast 20051031



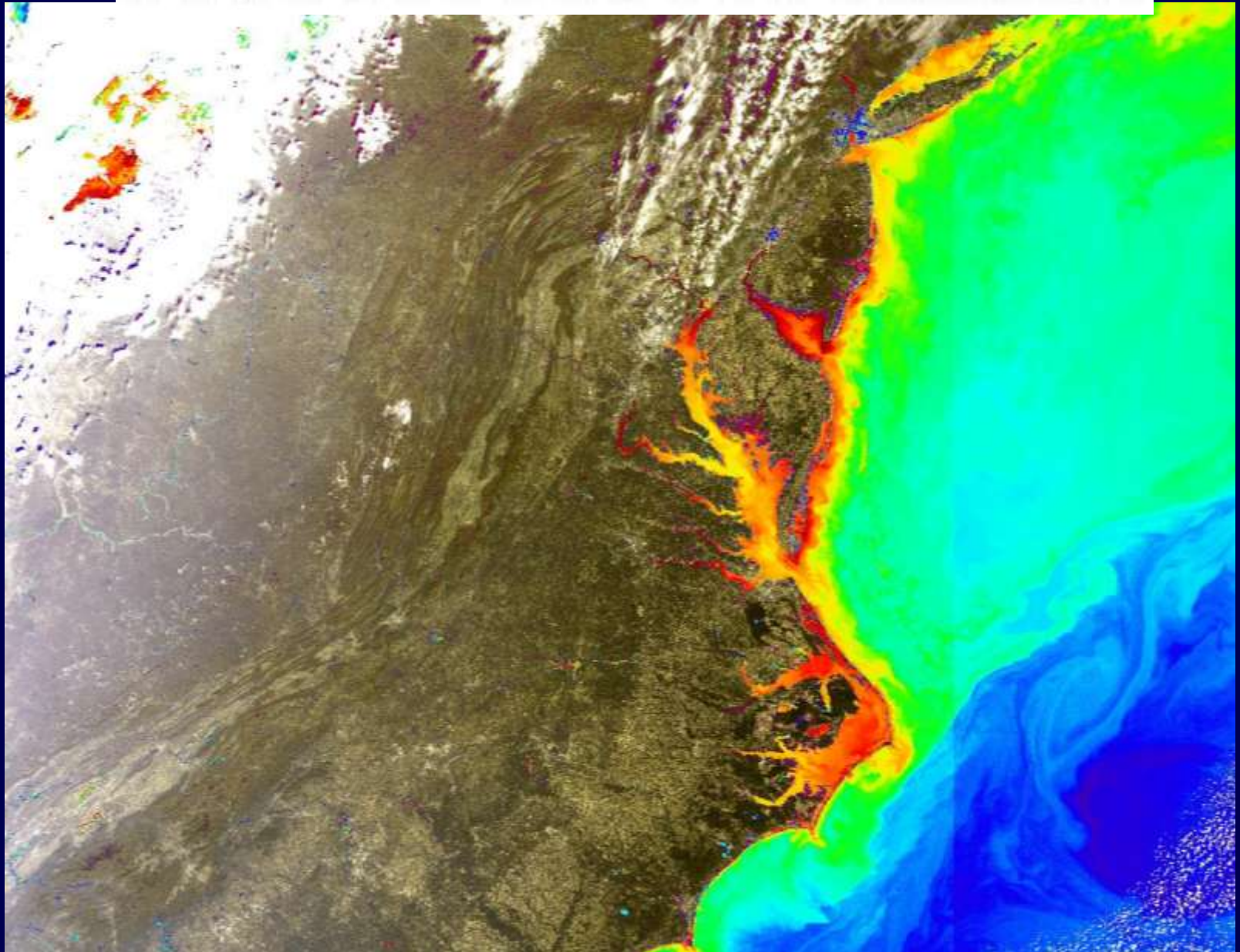
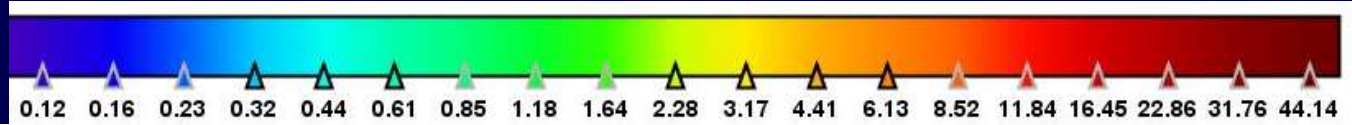
# RL\_path band 5



# Water leaving radiance reflectance band 5



# Total suspended Matter

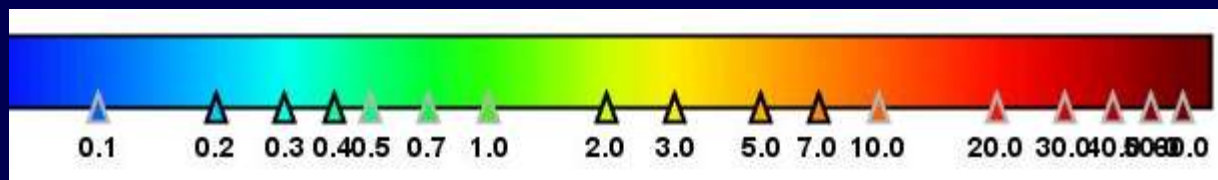
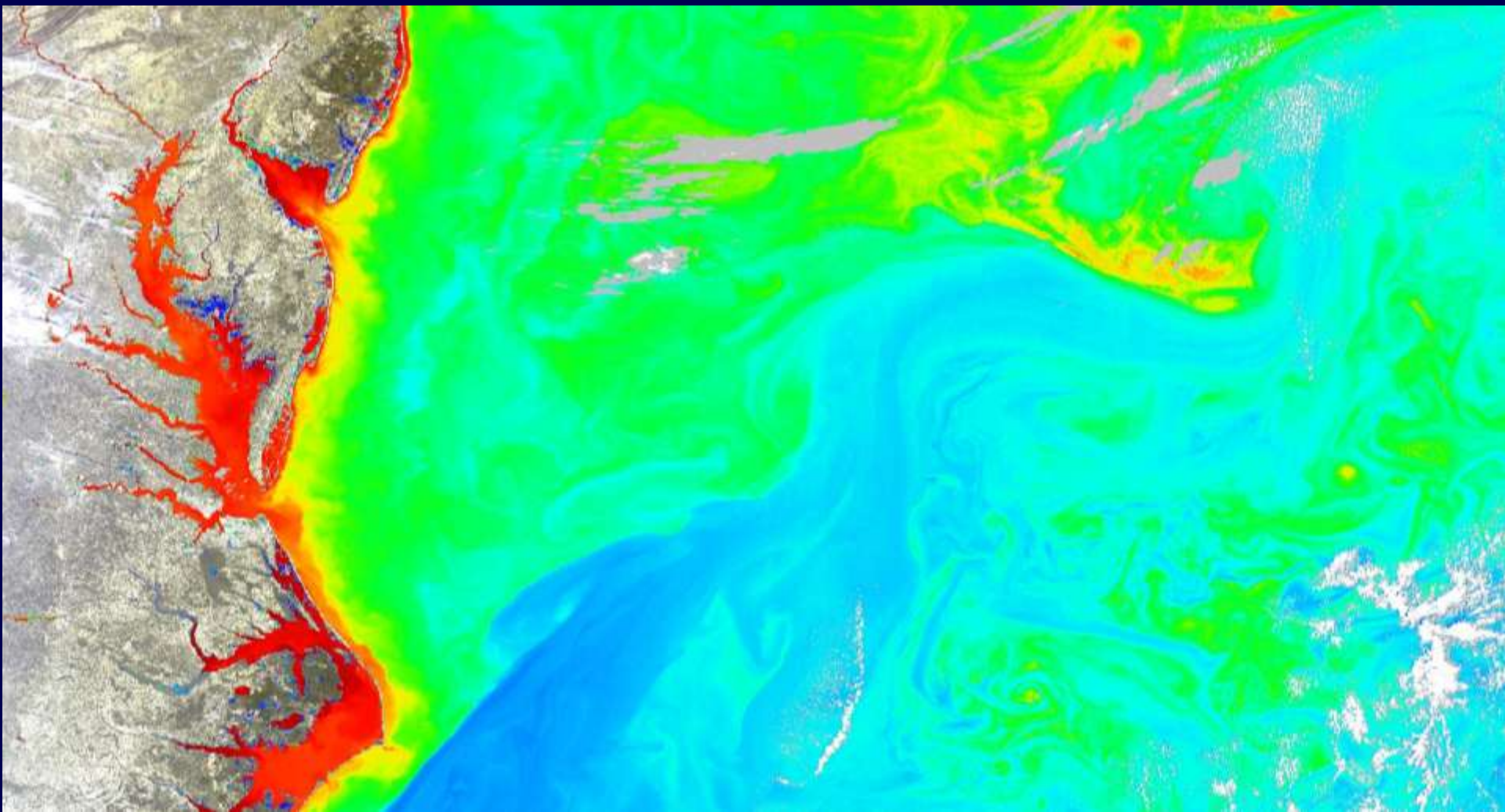


# US Coast Atlantic Ocean 20050411

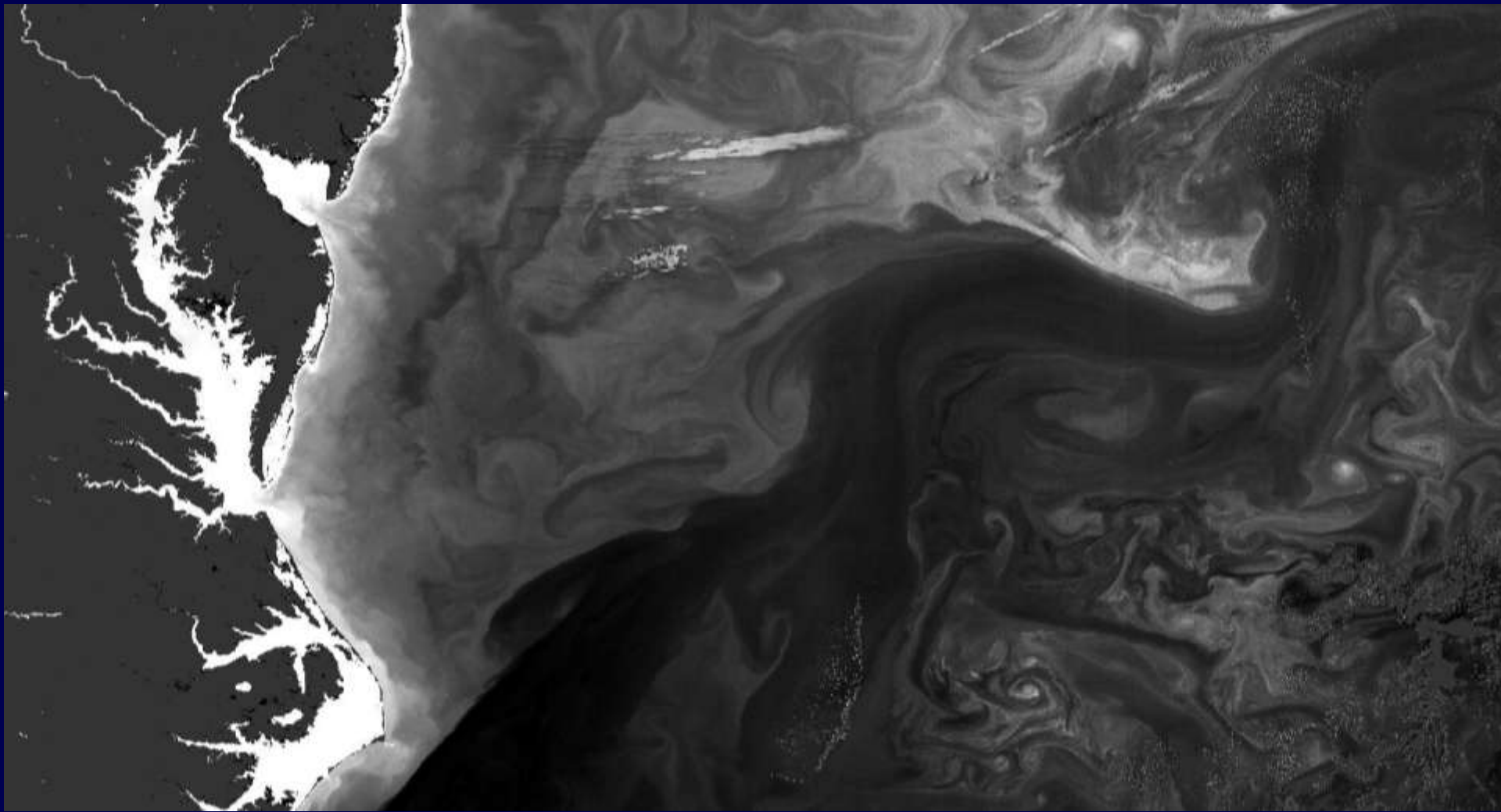




# Chlorophyll Concentration



# Chlorophyll distribution



Adadia 20050905



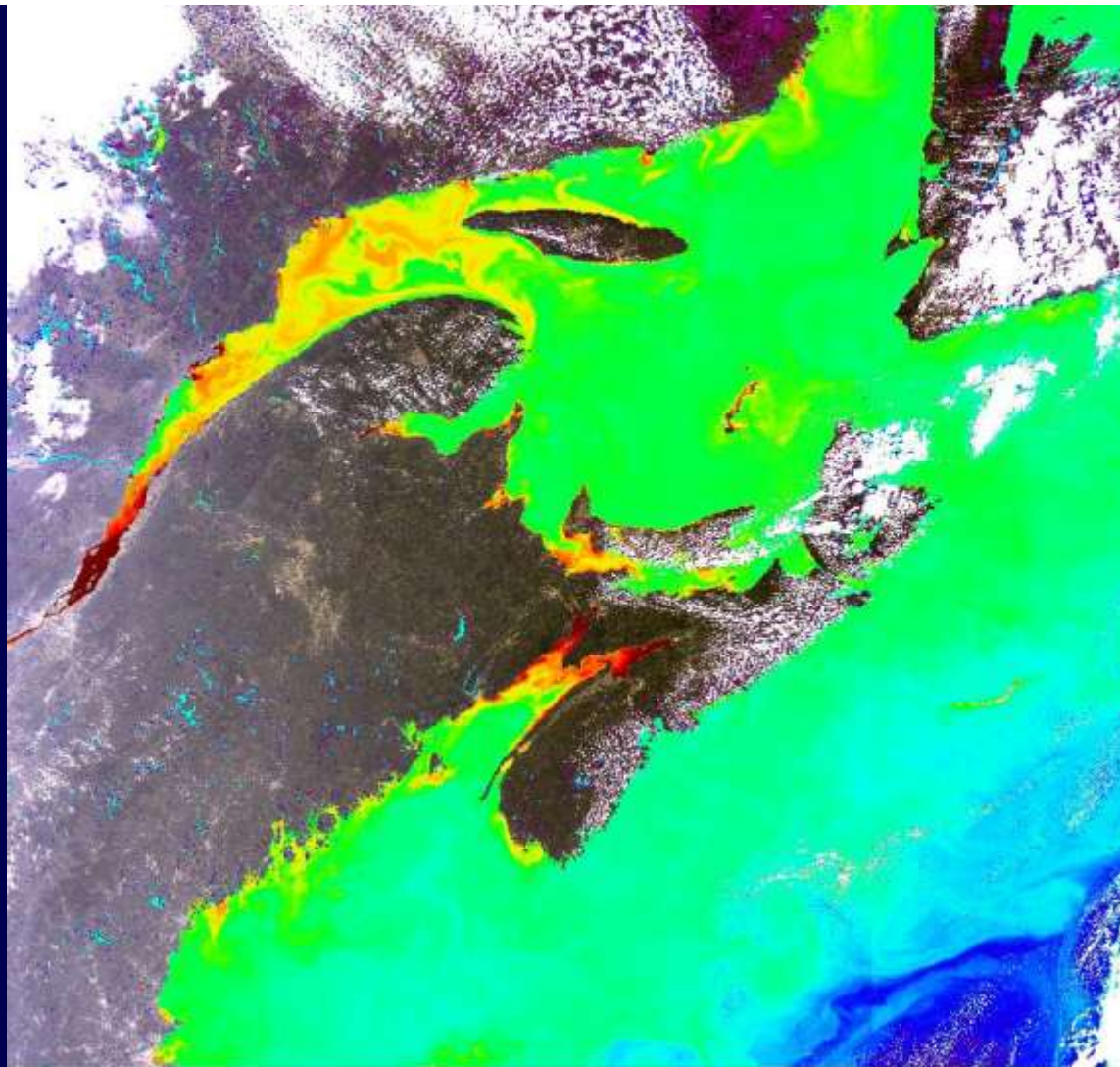
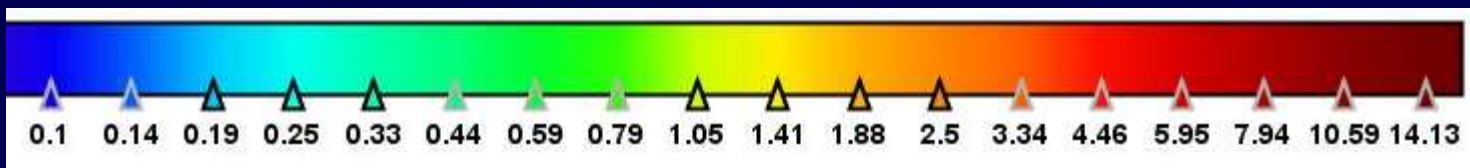
North East Canada 20050905



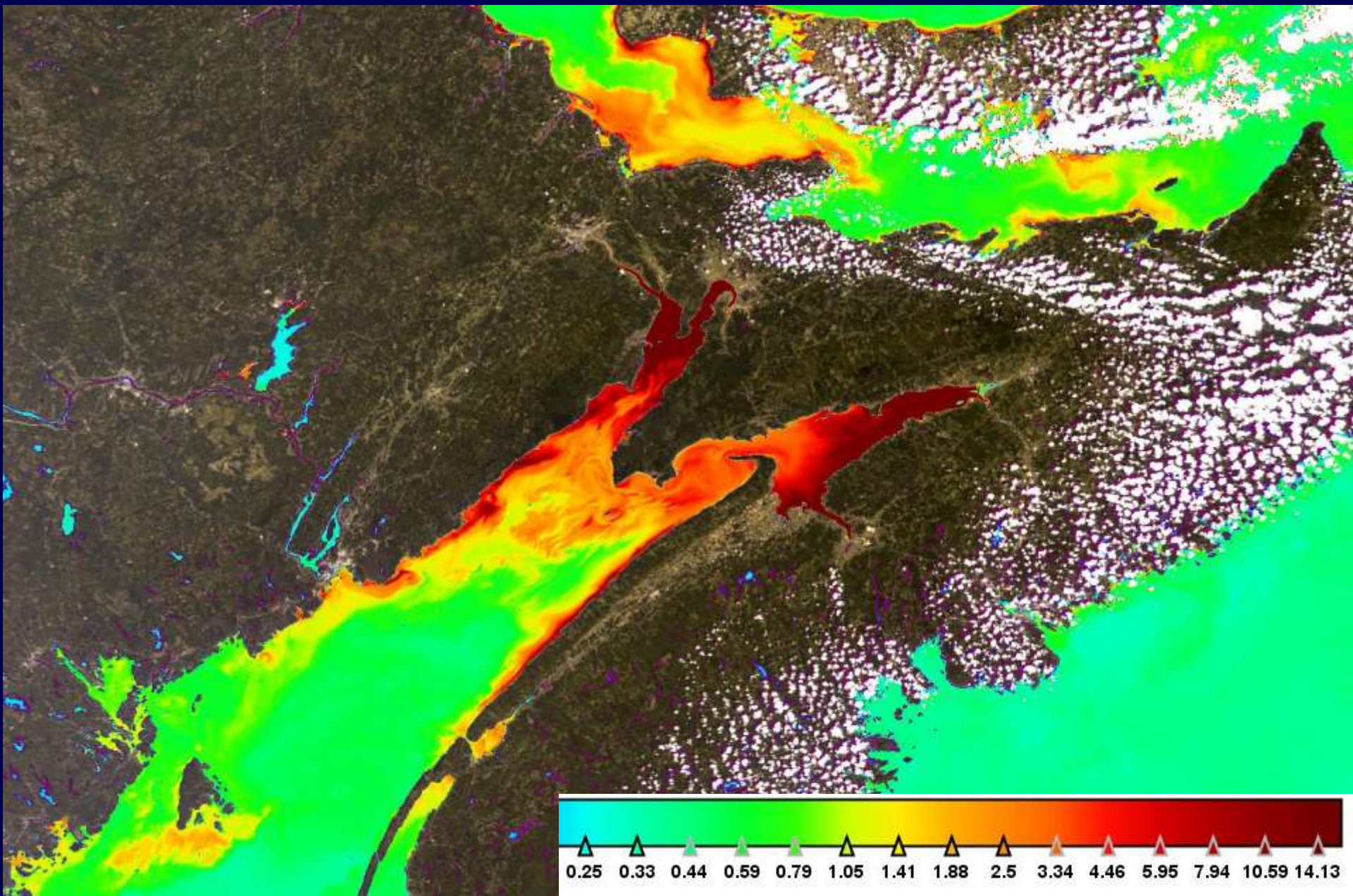
RLw band 5



# Total suspended matter



# Bay of Fundy, TSM



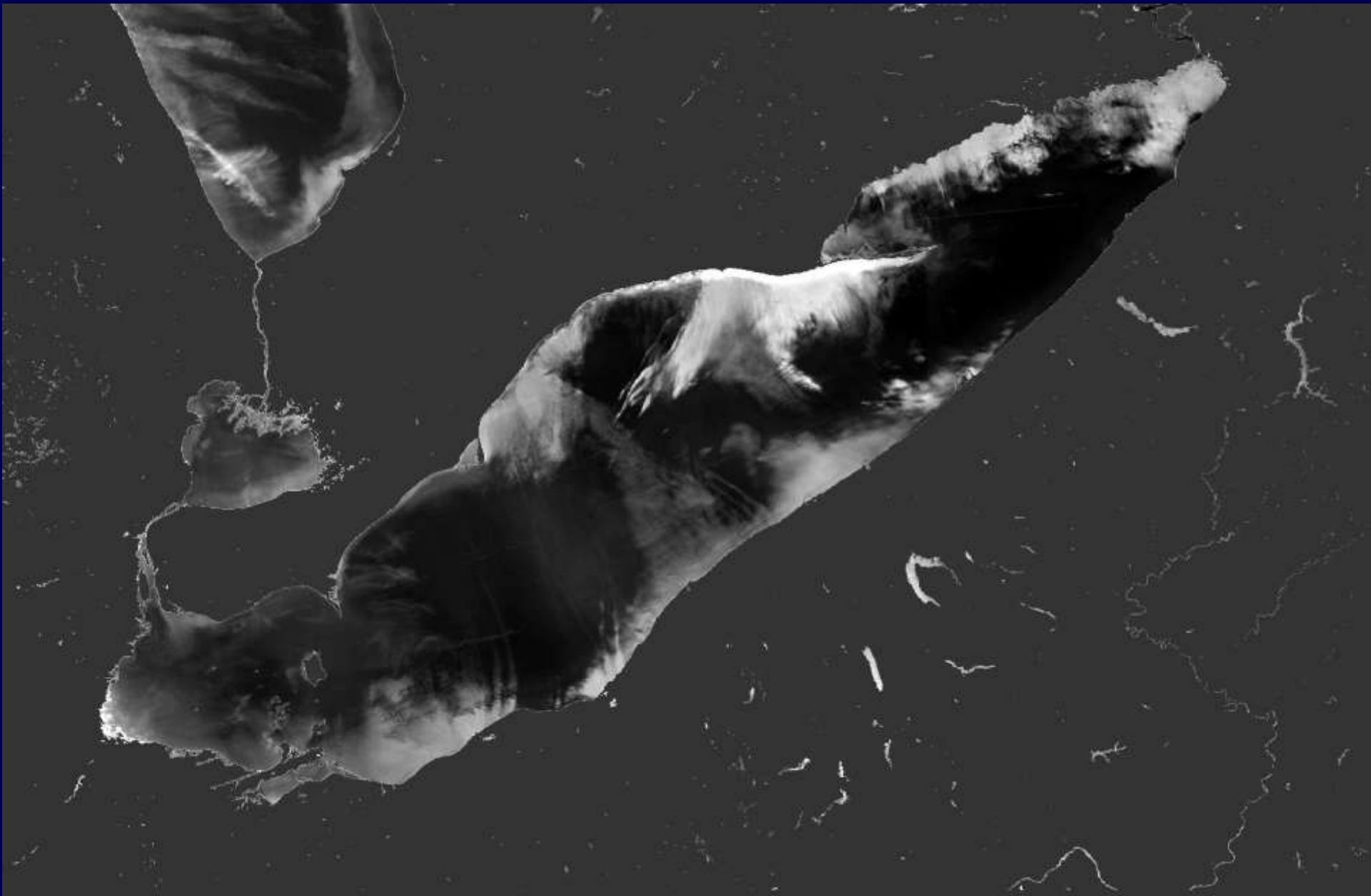




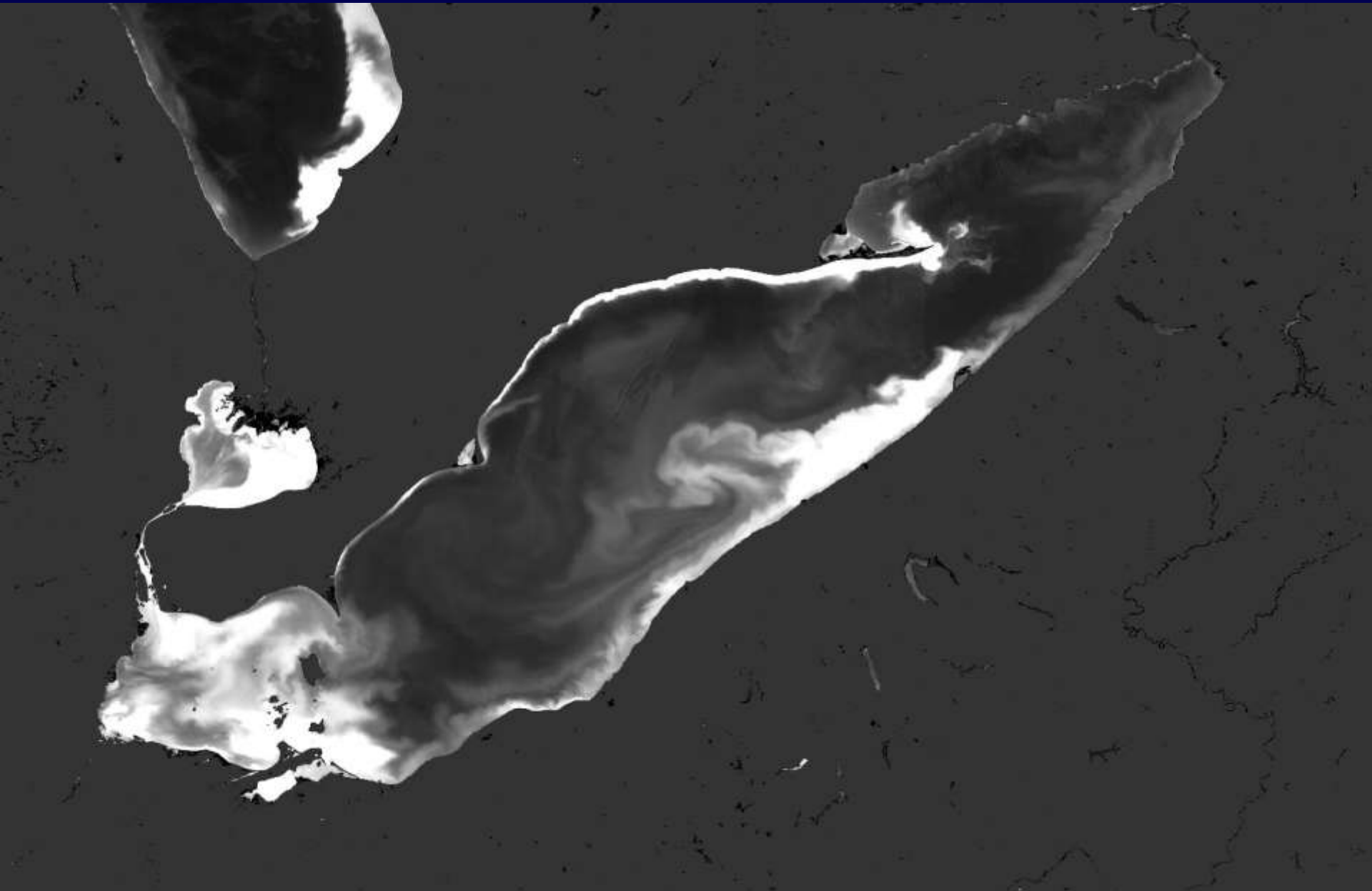
# Lake Erie RLtoa



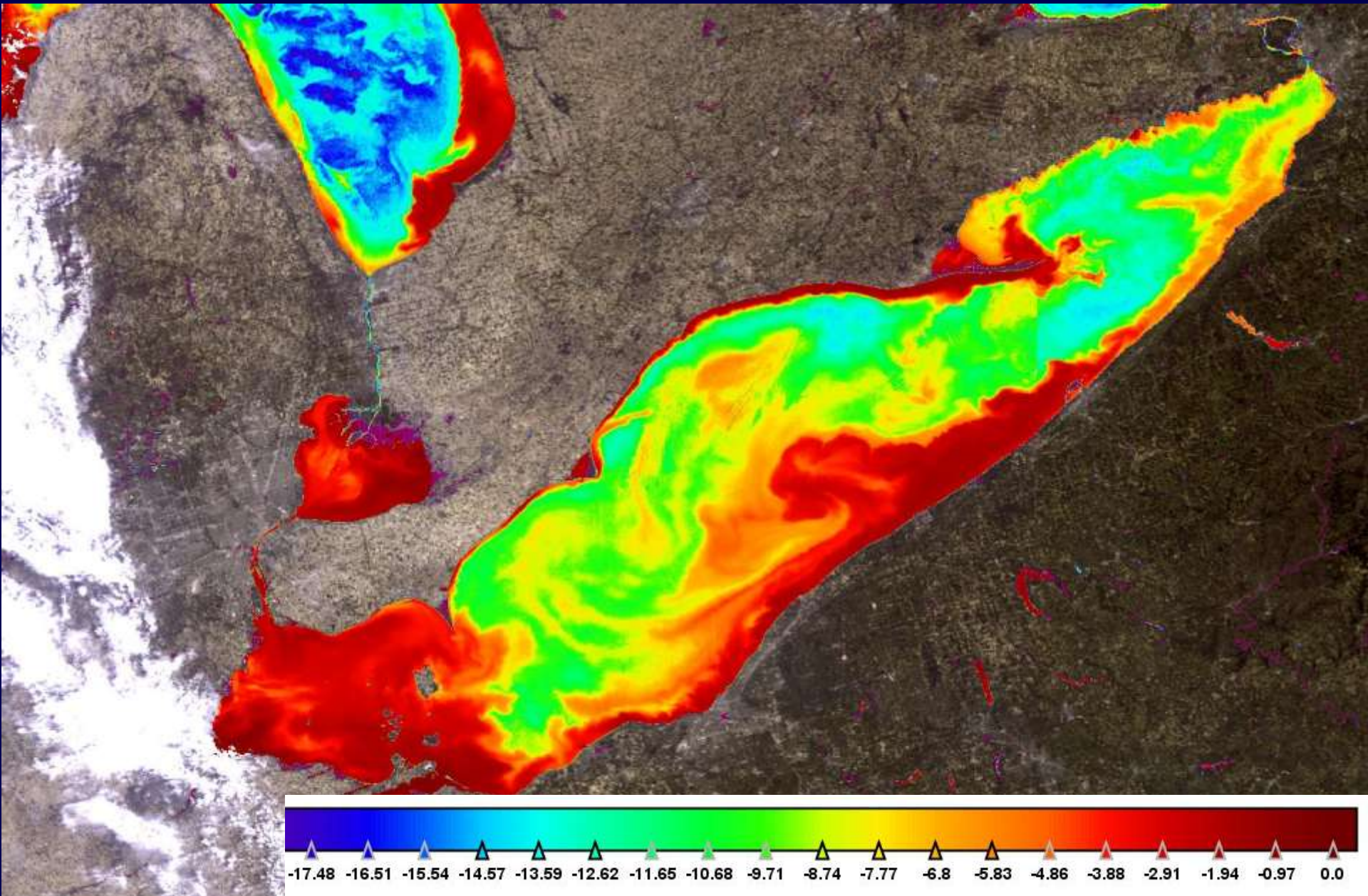
## Path radiance reflectance band 5



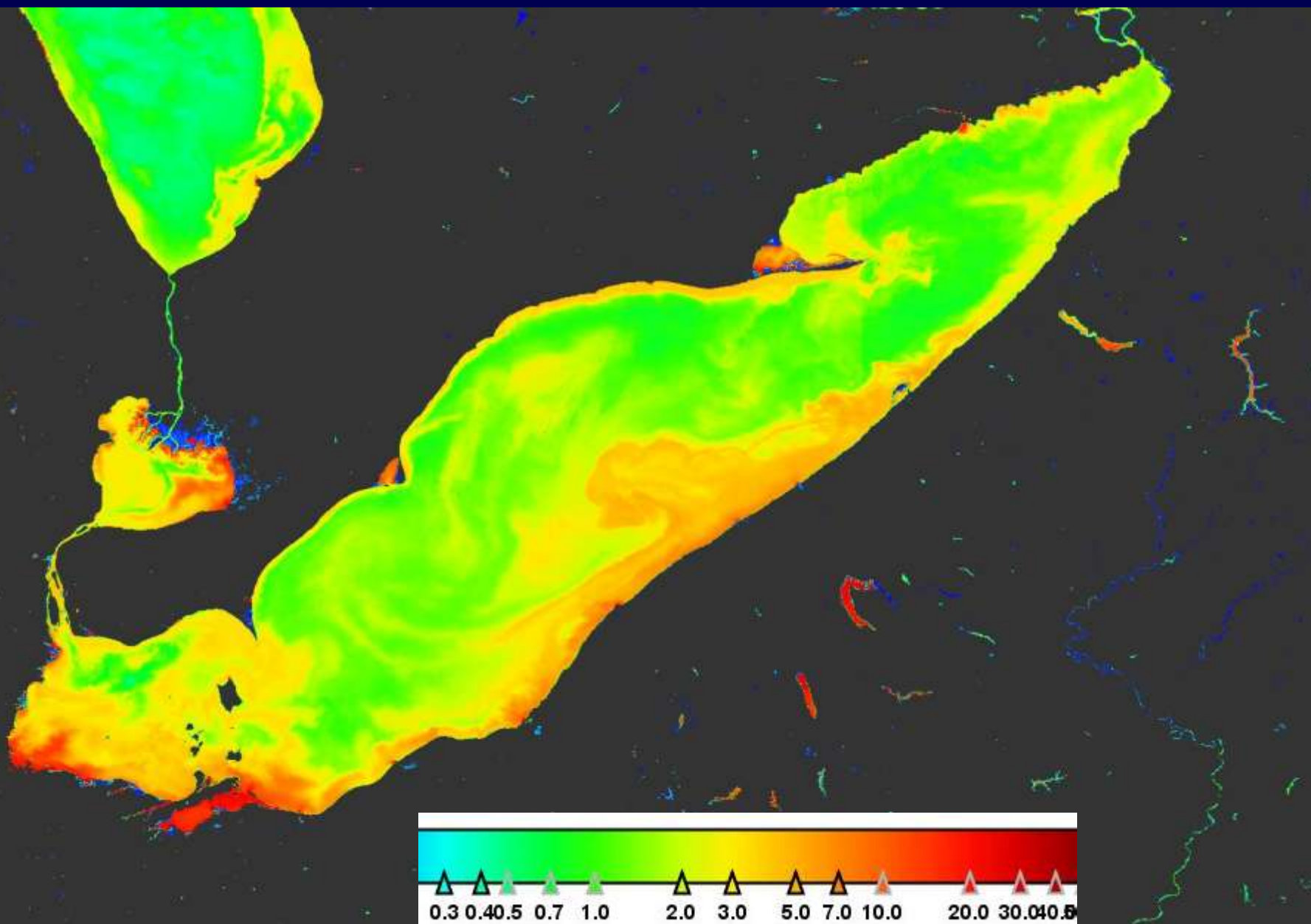
# Water leaving radiance reflectance band 5



z90



# Chlorophyll



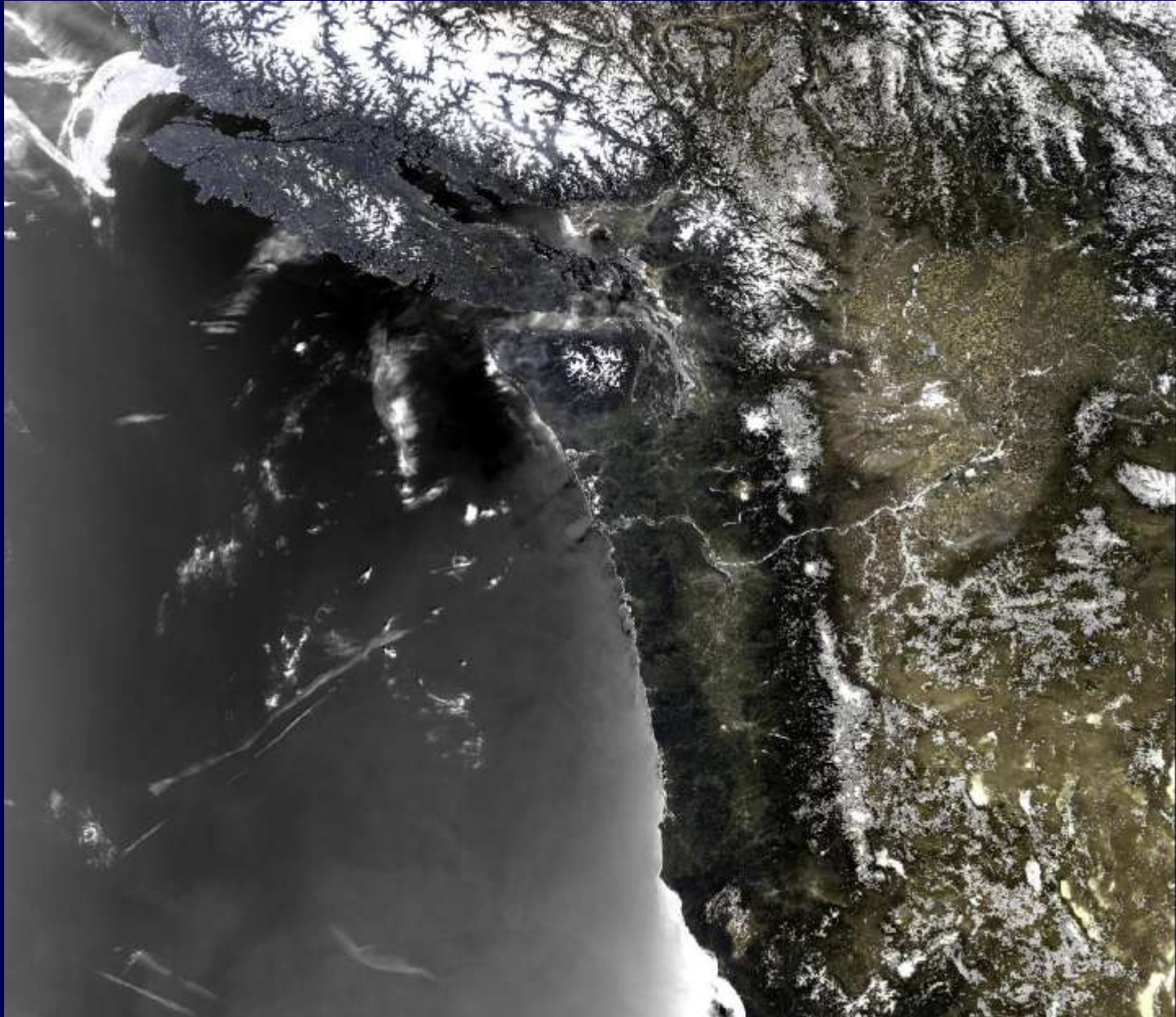
# Washington / British Columbia, 20050525



Oregon – Washington – British Columbia 20050525, RLtoa

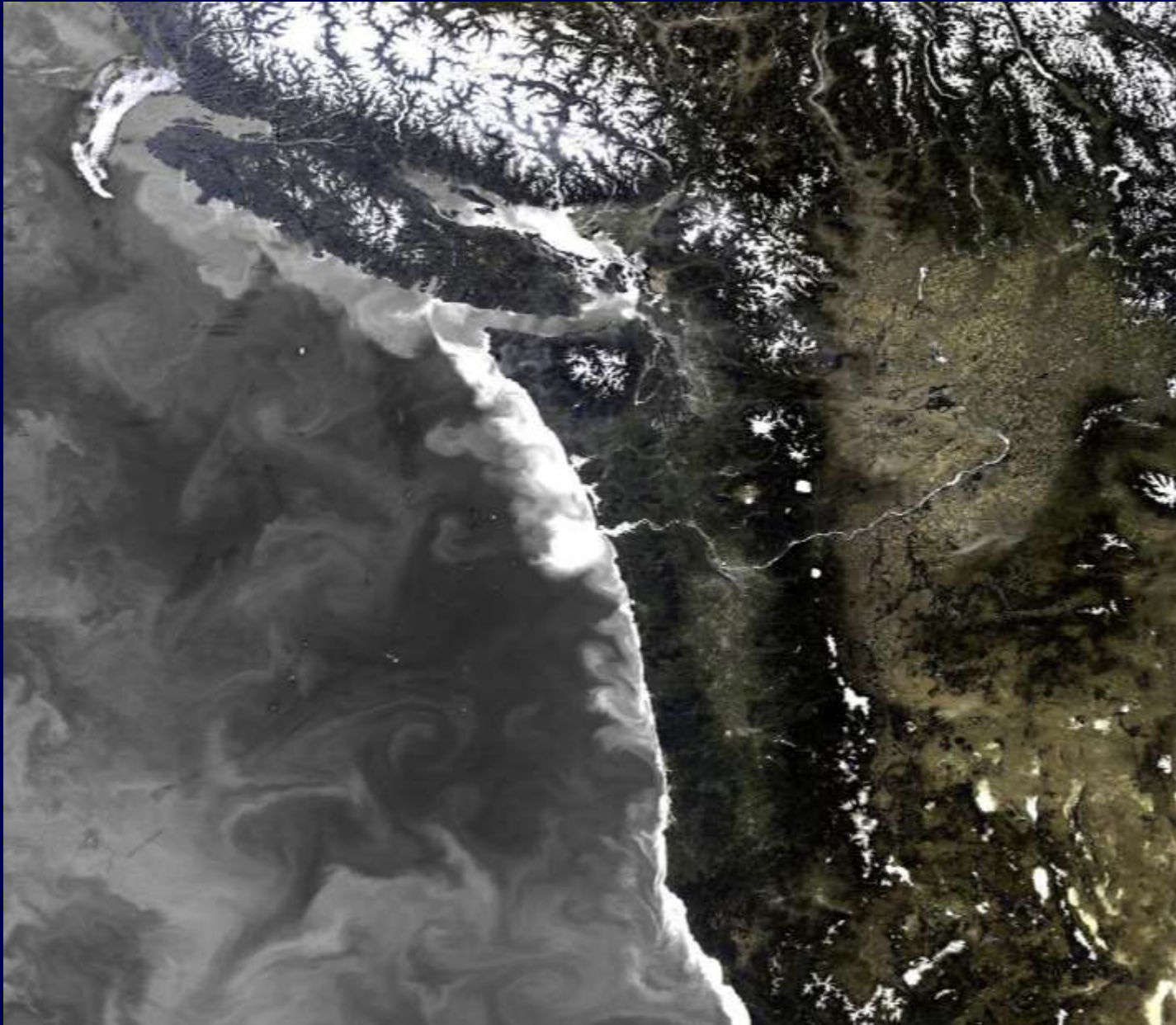


# RLpath band 5

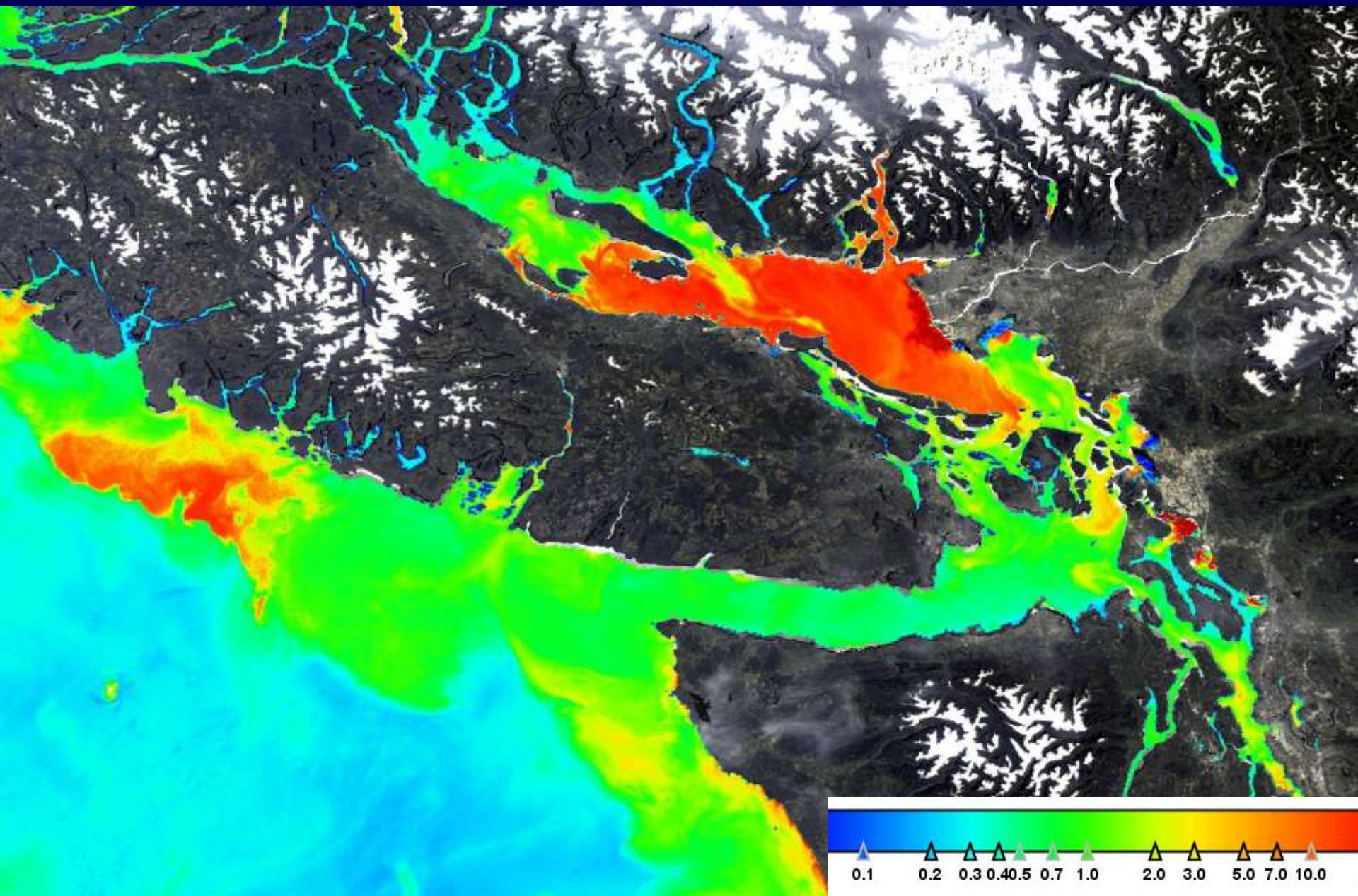




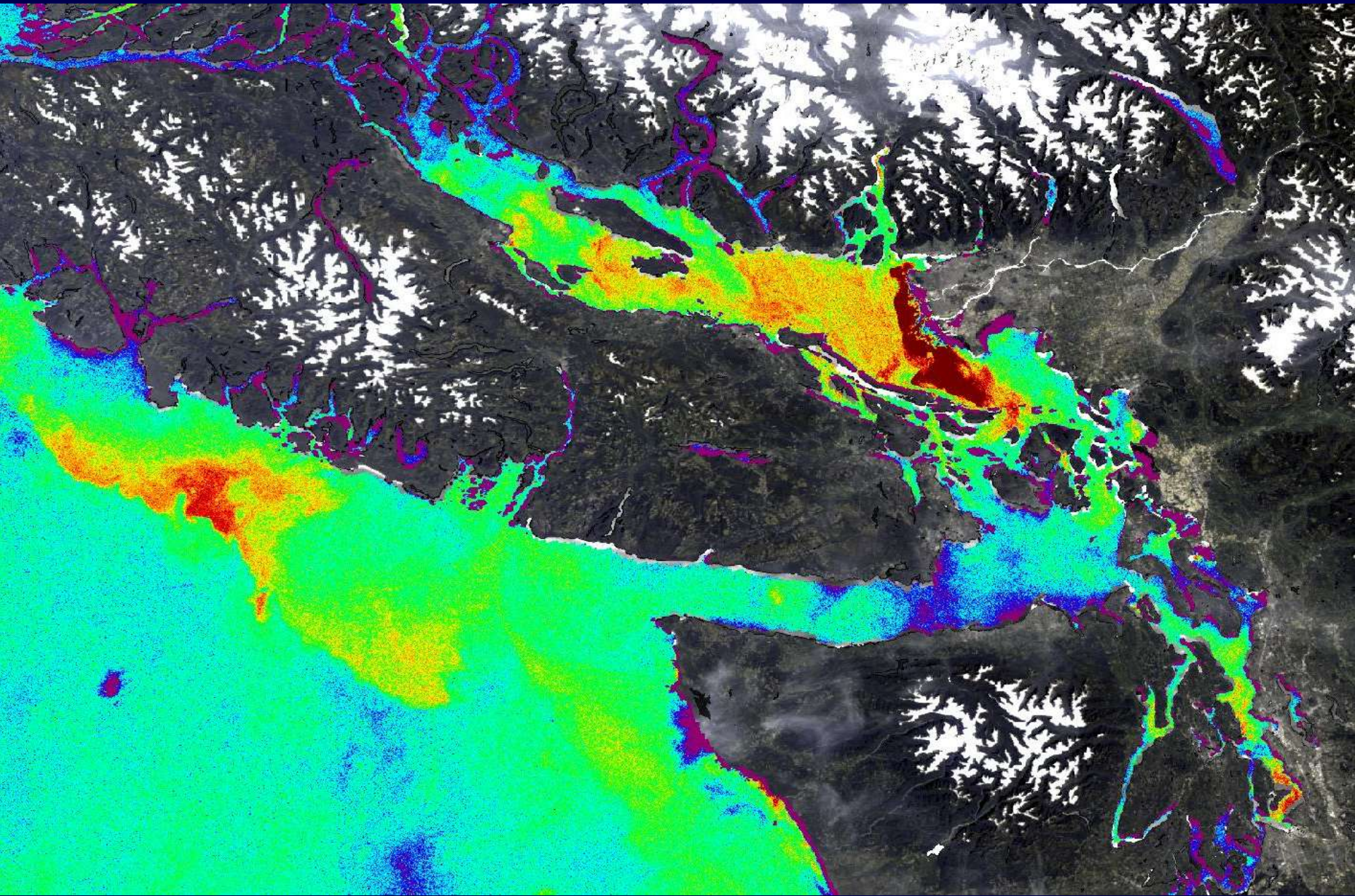
# RLw band 5



# chlorophyll



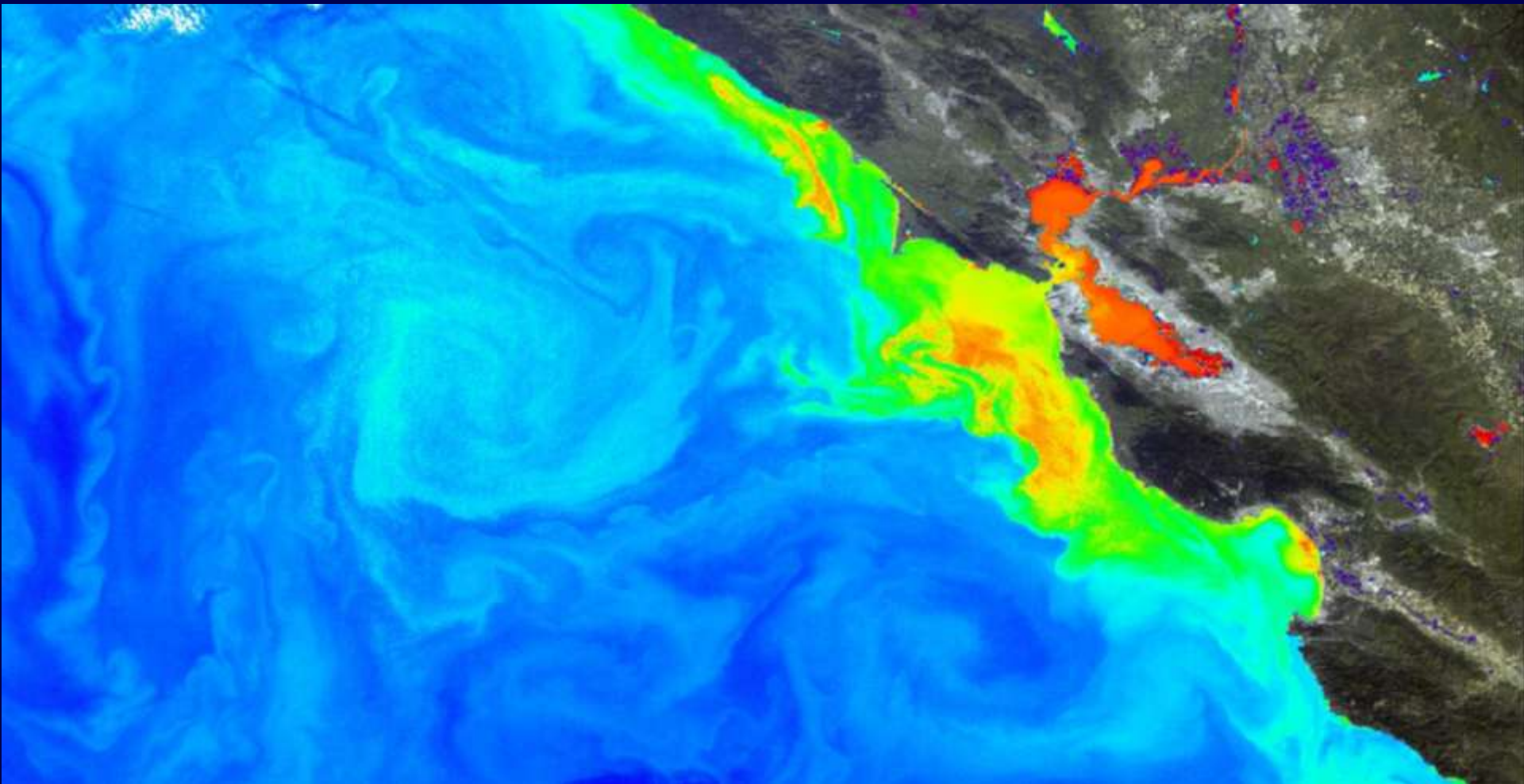
# Fluoreszenz Line Height (FLH)



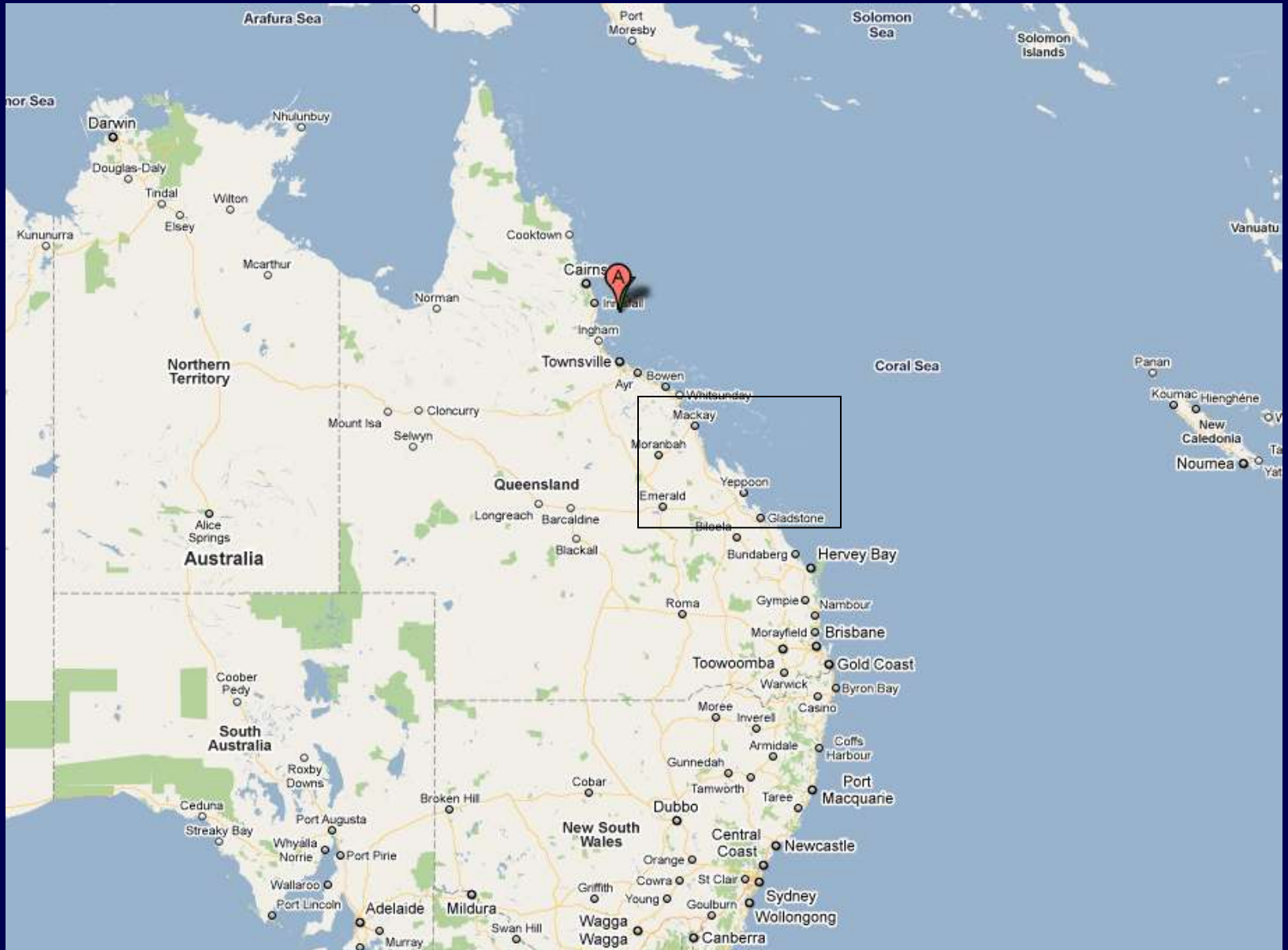
San Francisco, 20050405, RLtoa



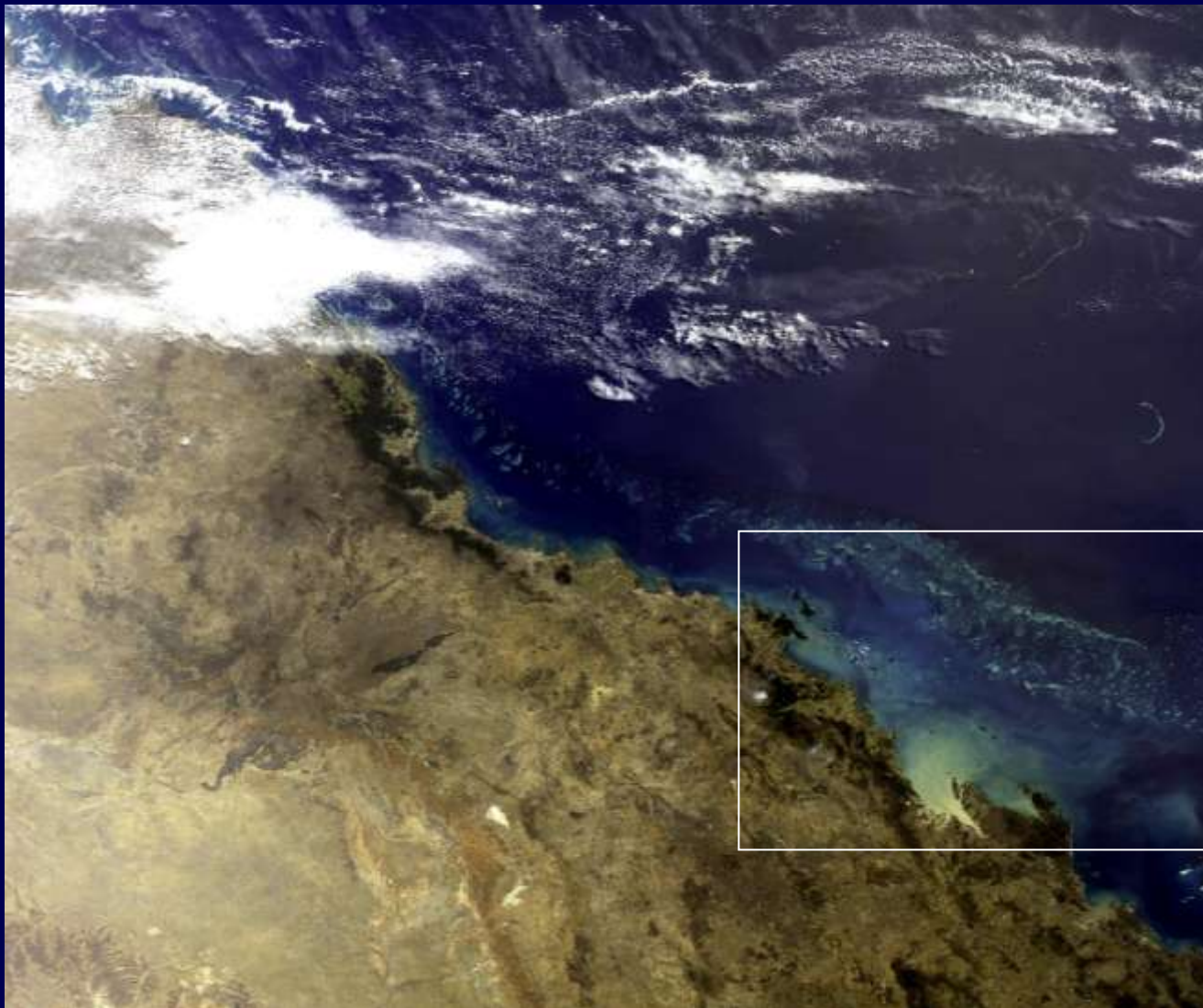
# Chlorophyll



# Great Barrier Reef



# Great Barrier Reef Australia 20050917

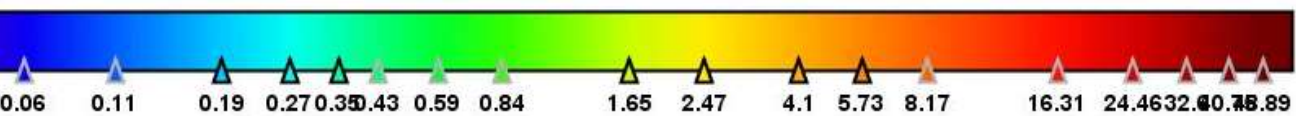
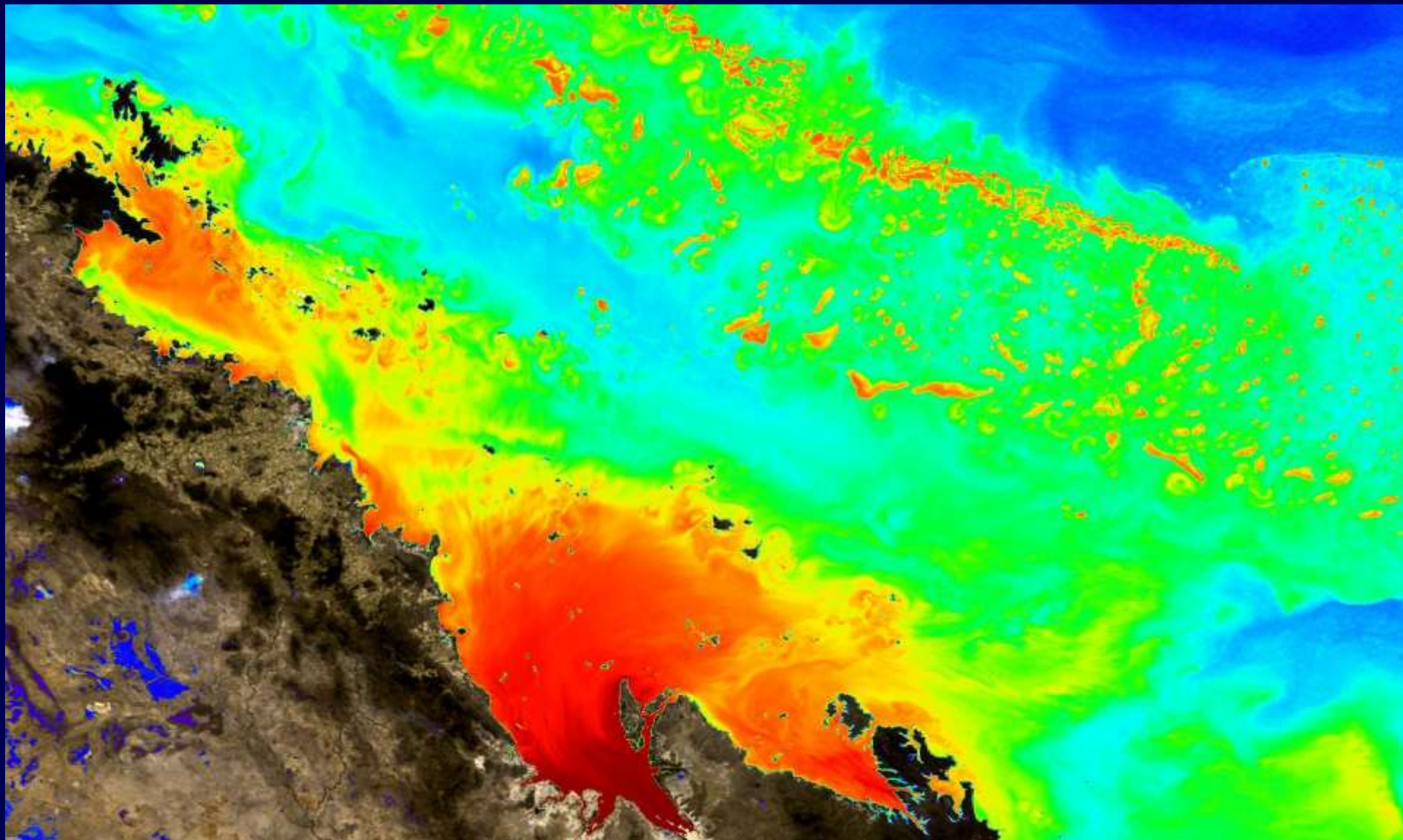


RLtoa

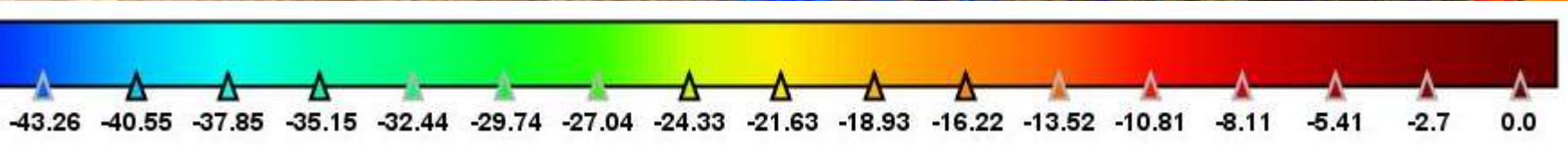
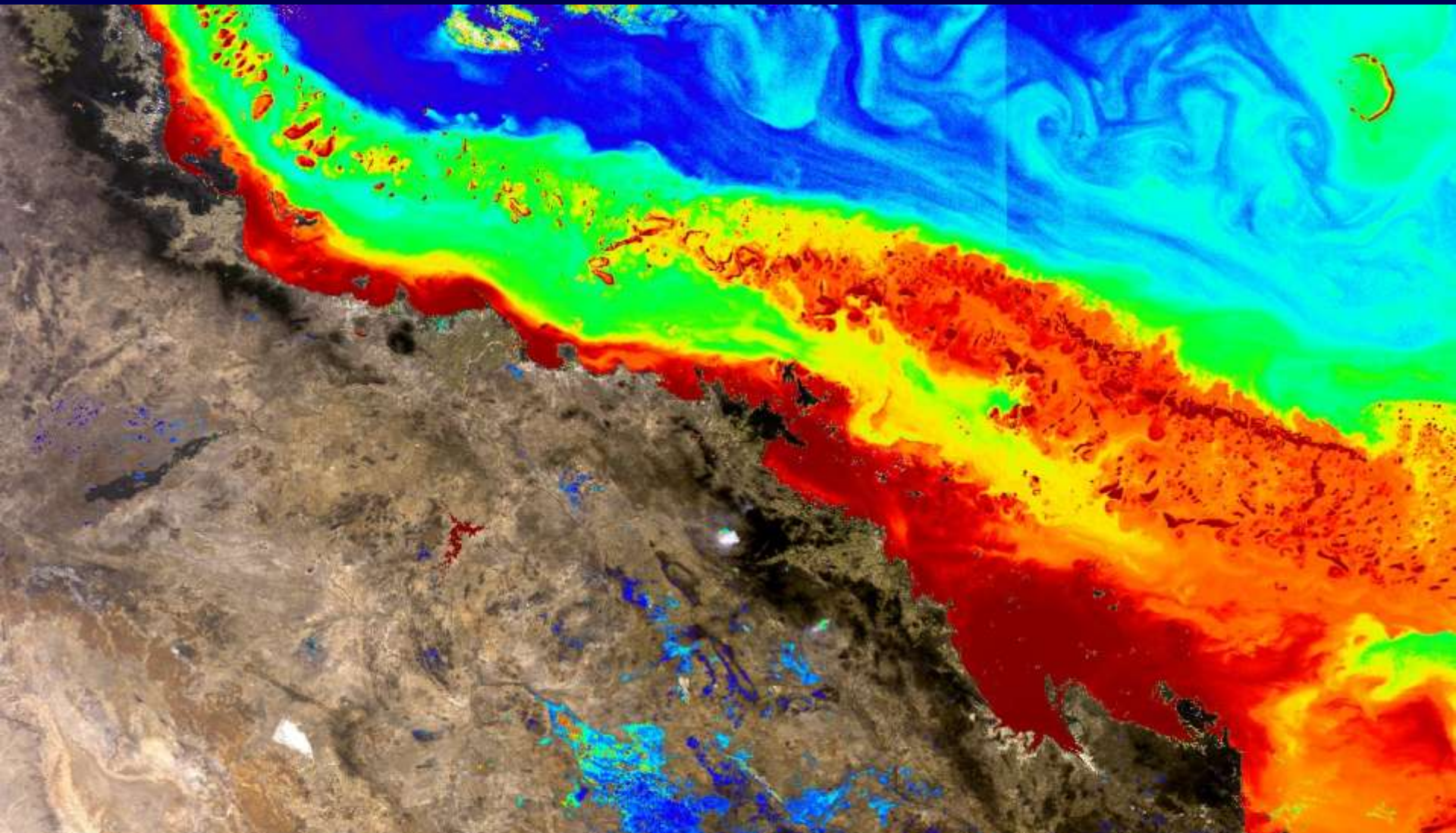




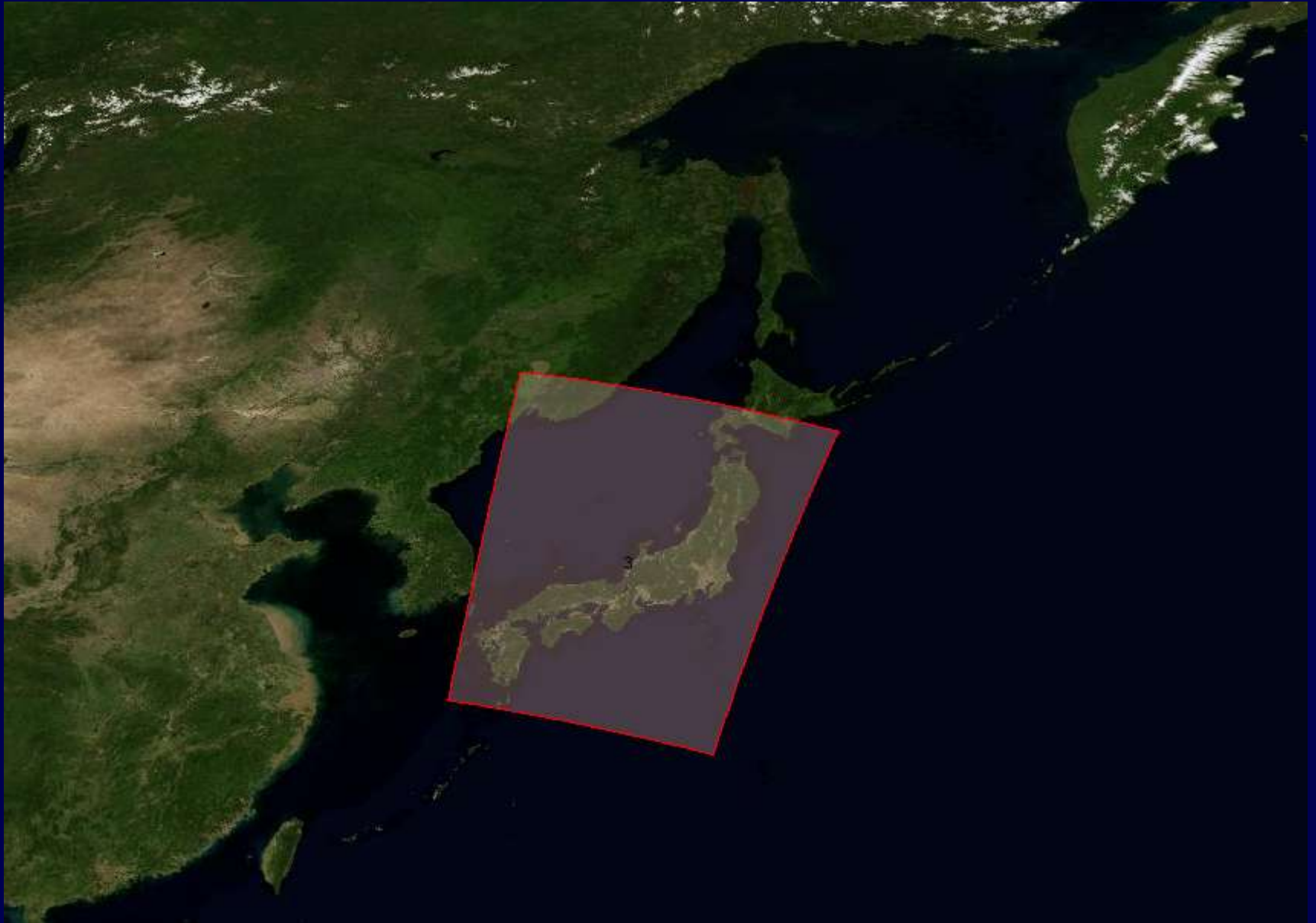
# TSM



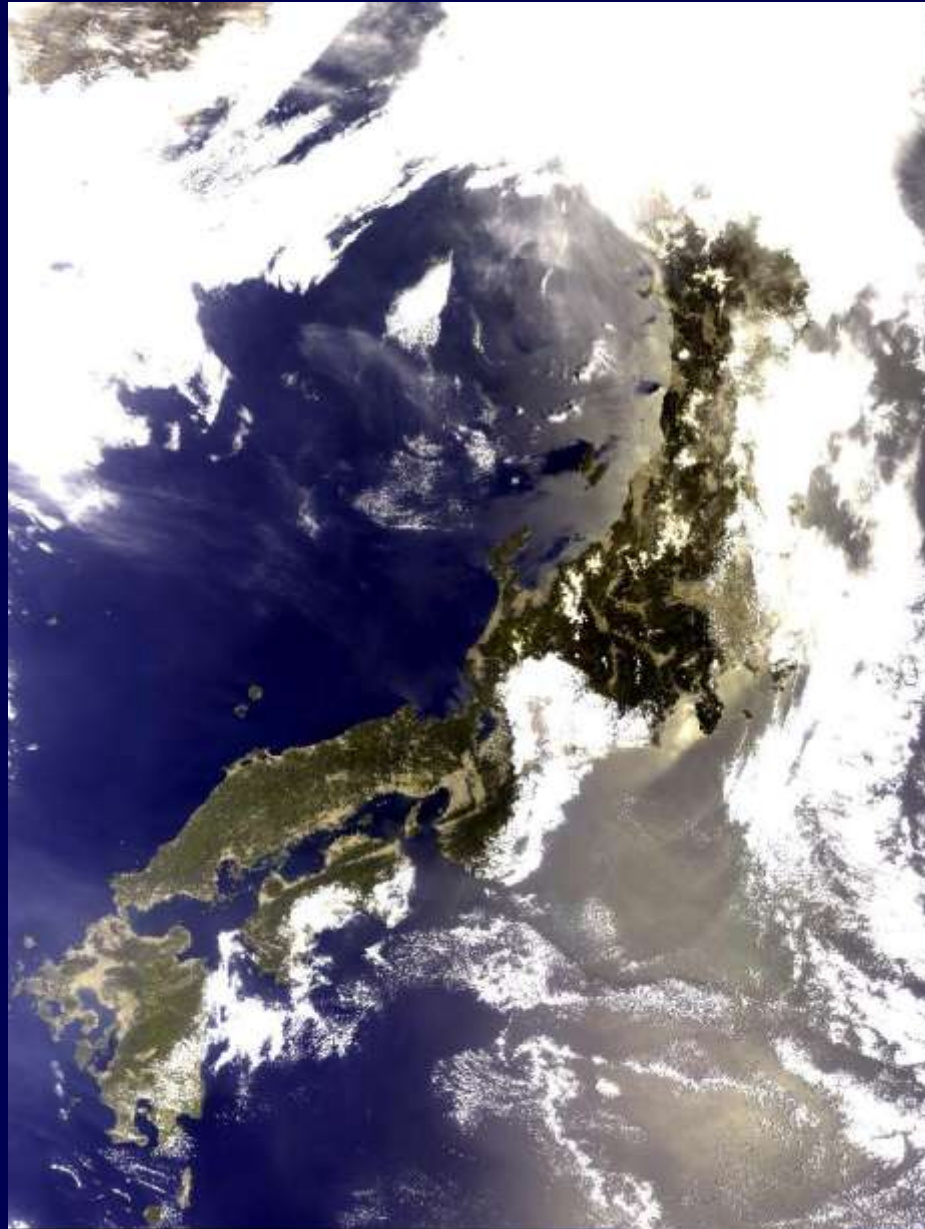
z90



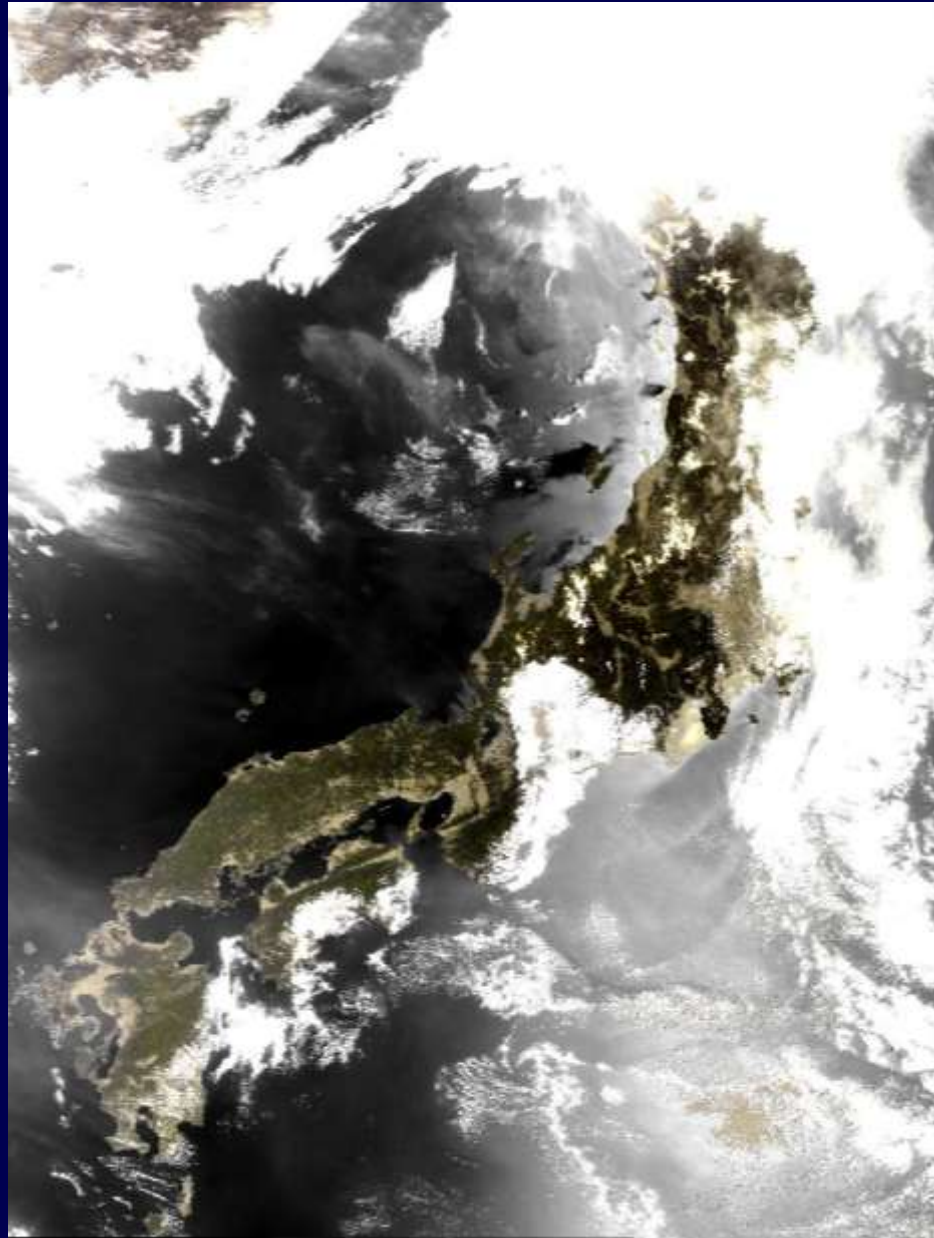
Japan 20050517



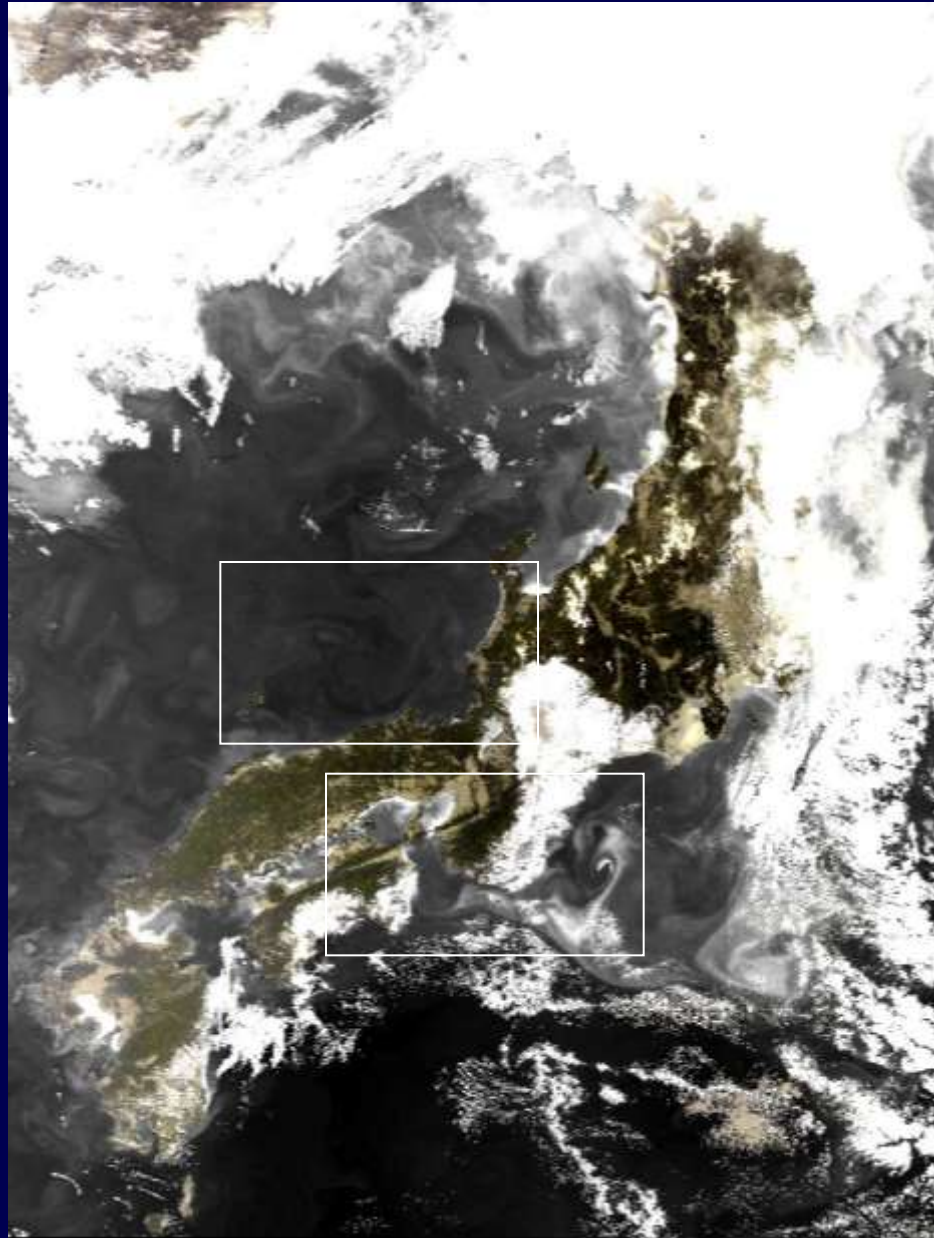
Japan 20050517



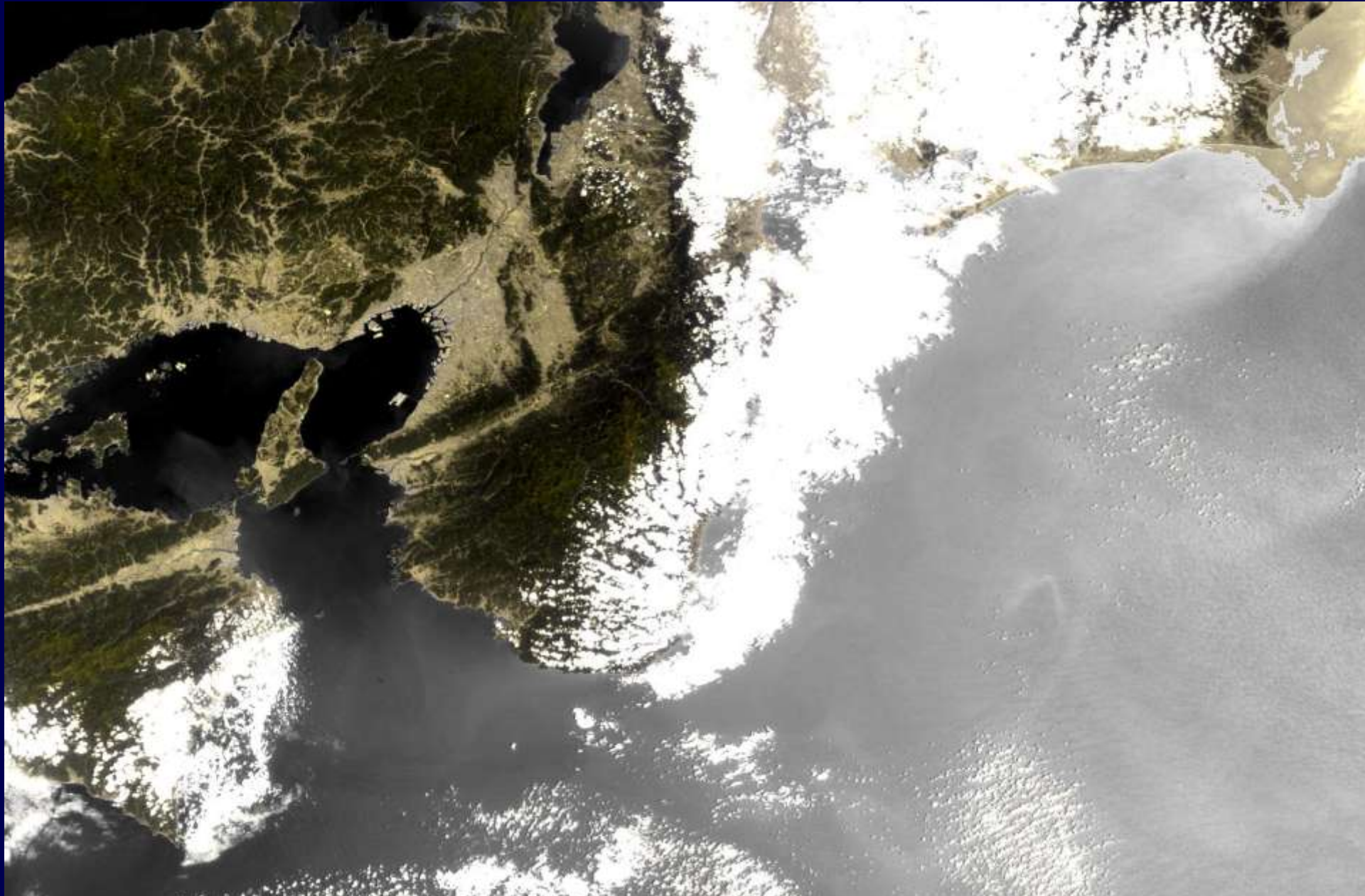
# RLpath band 5



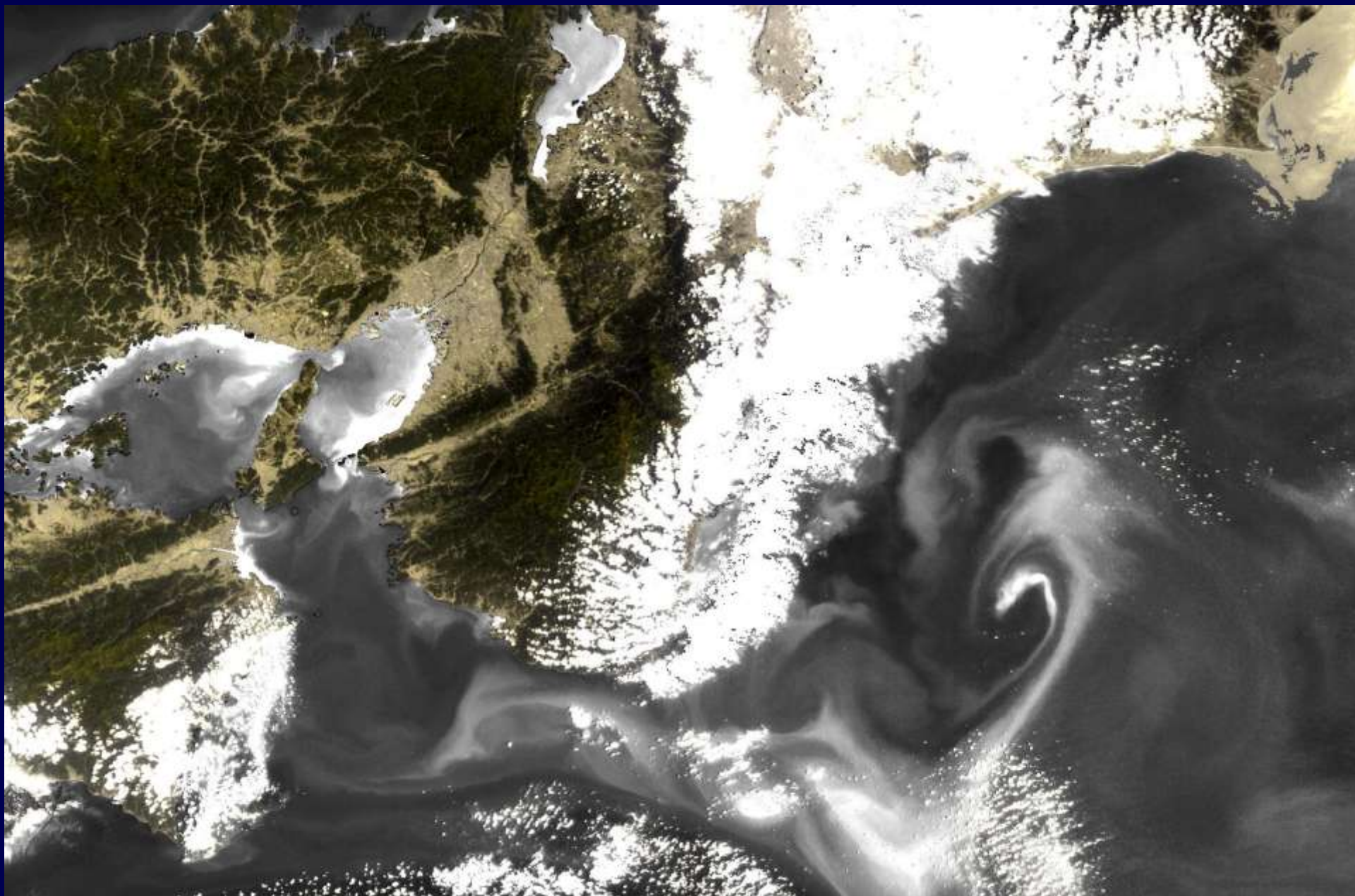
# RLw band 5



# RLpath band 5

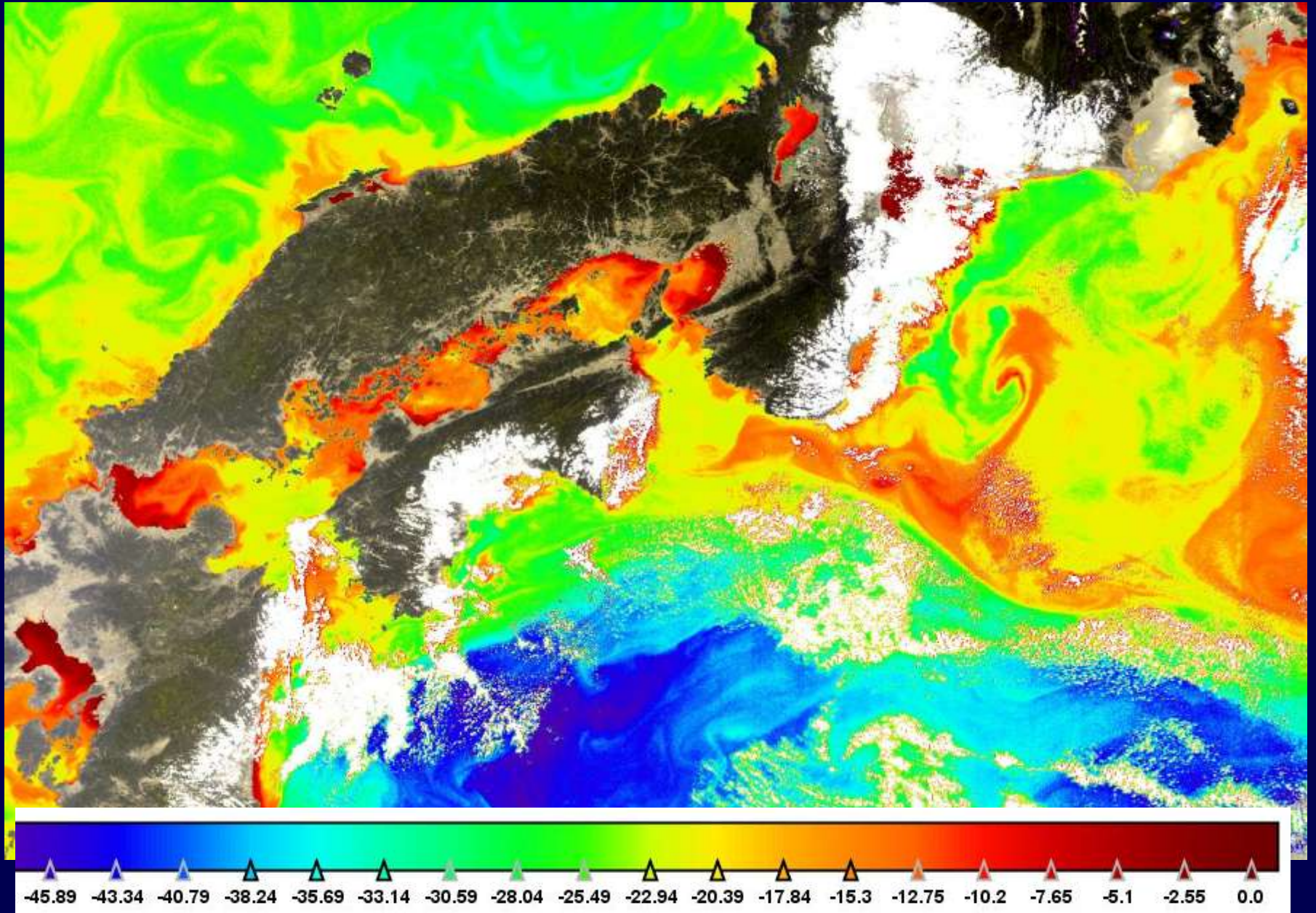


RLw 5

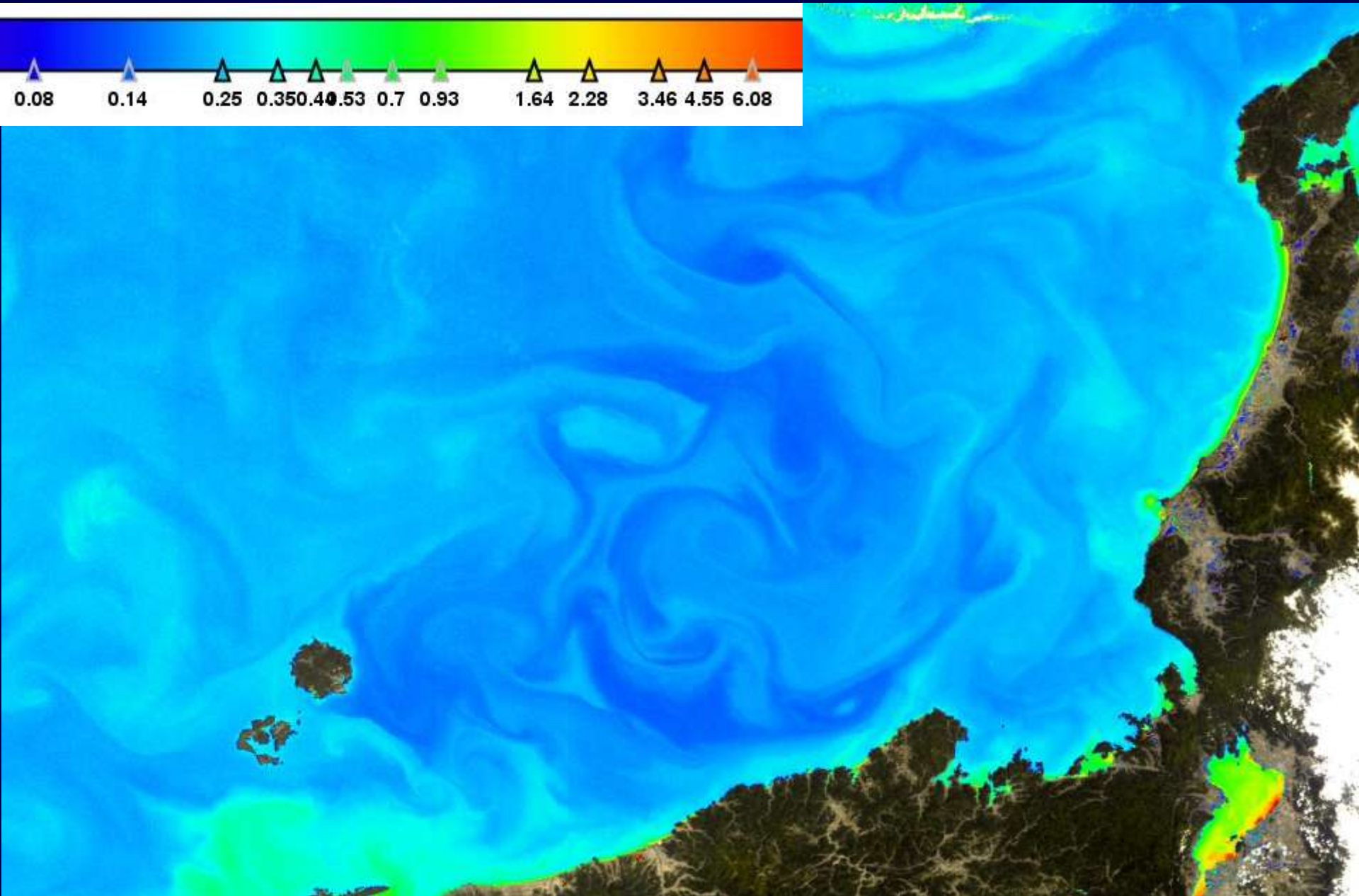
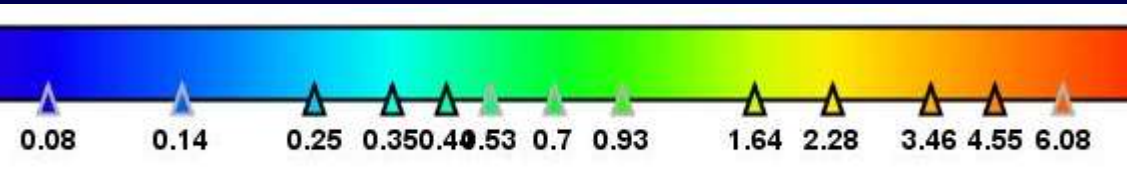




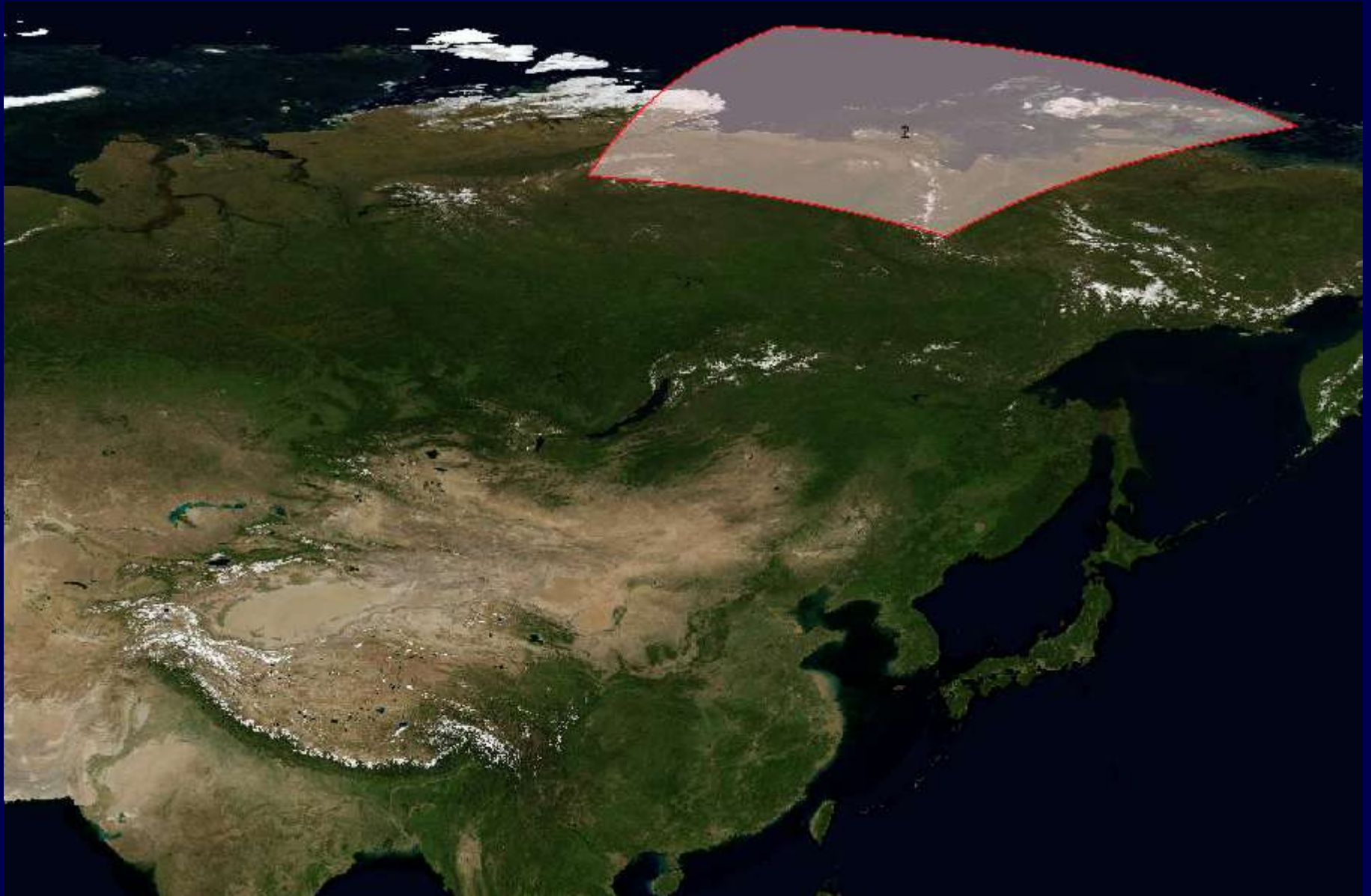
z90



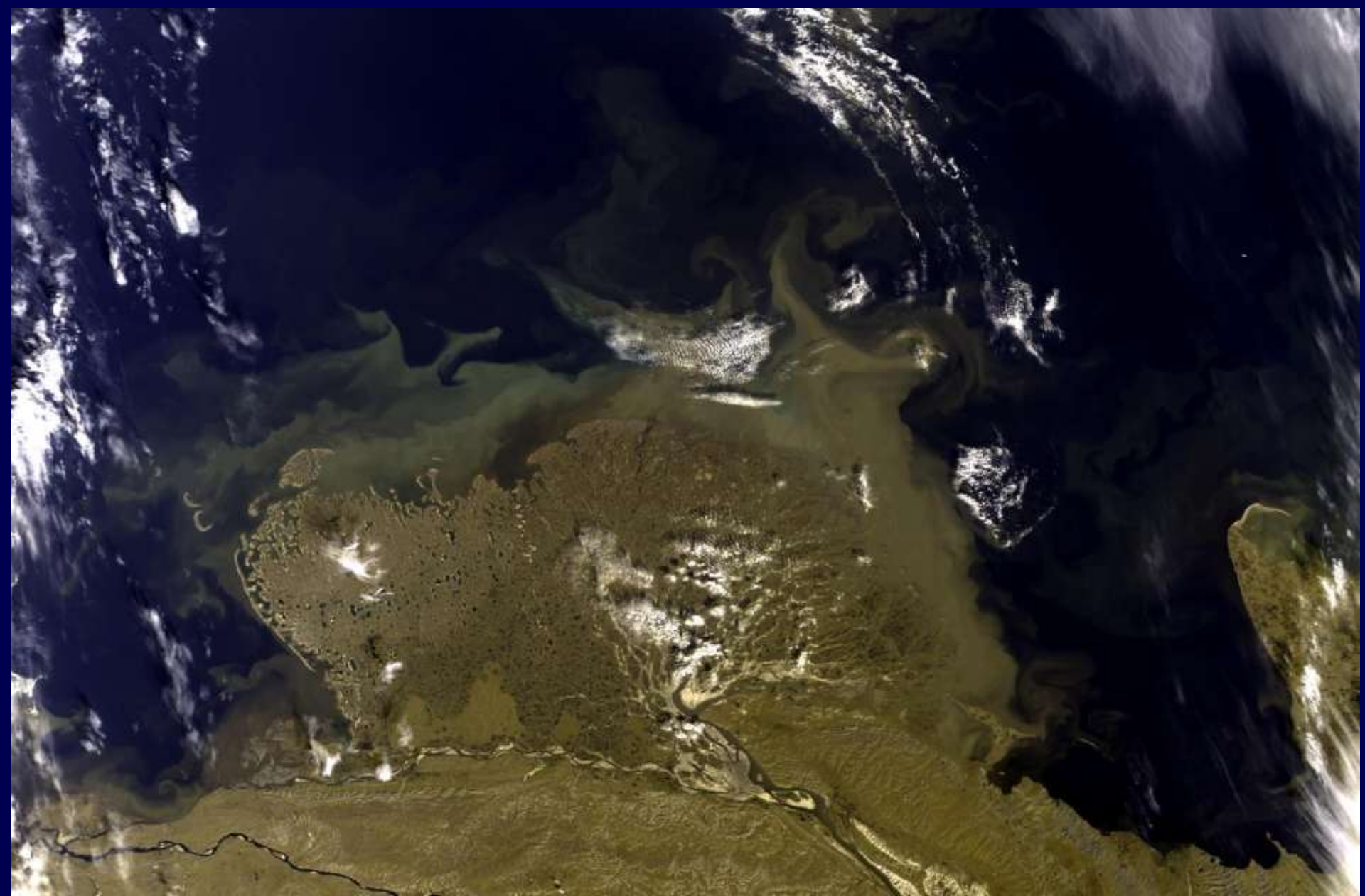
# chlorophyll



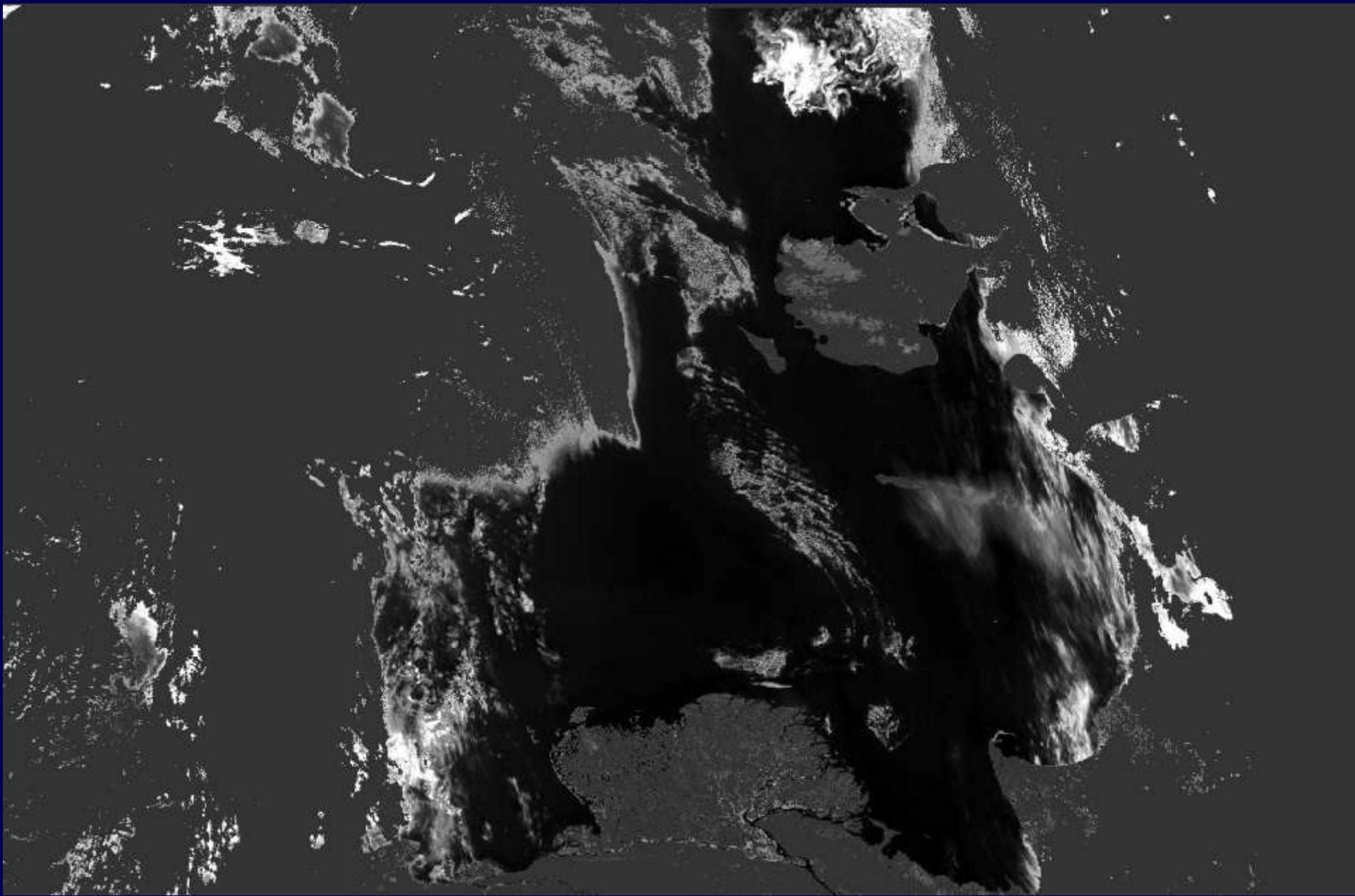
# Lena Delta, Aug 19 2005



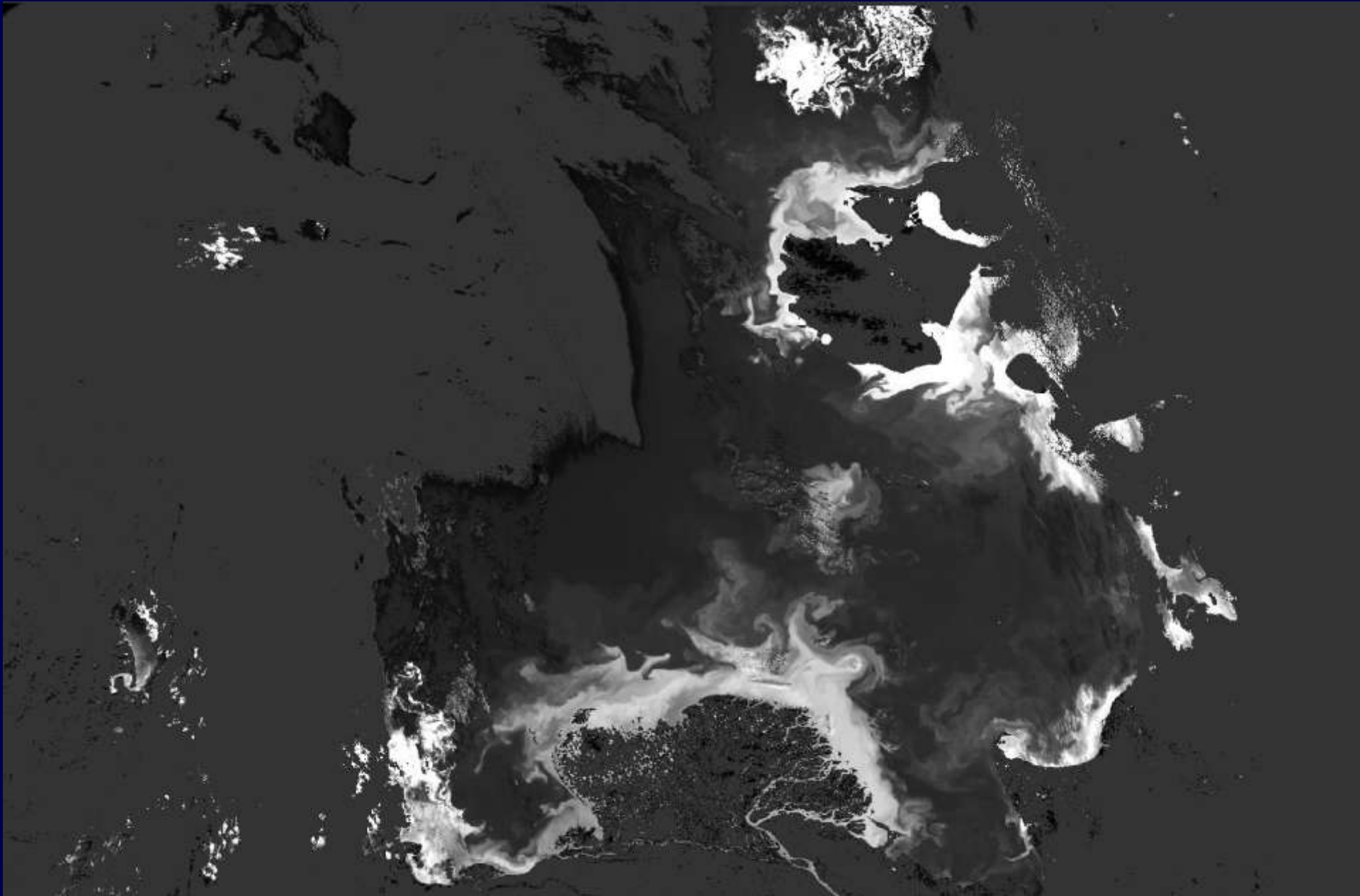
Lena Delta, Siberia 20050819



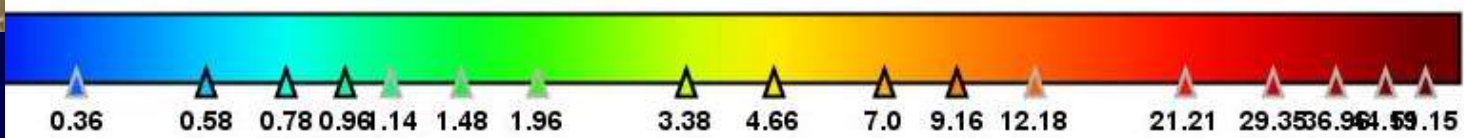
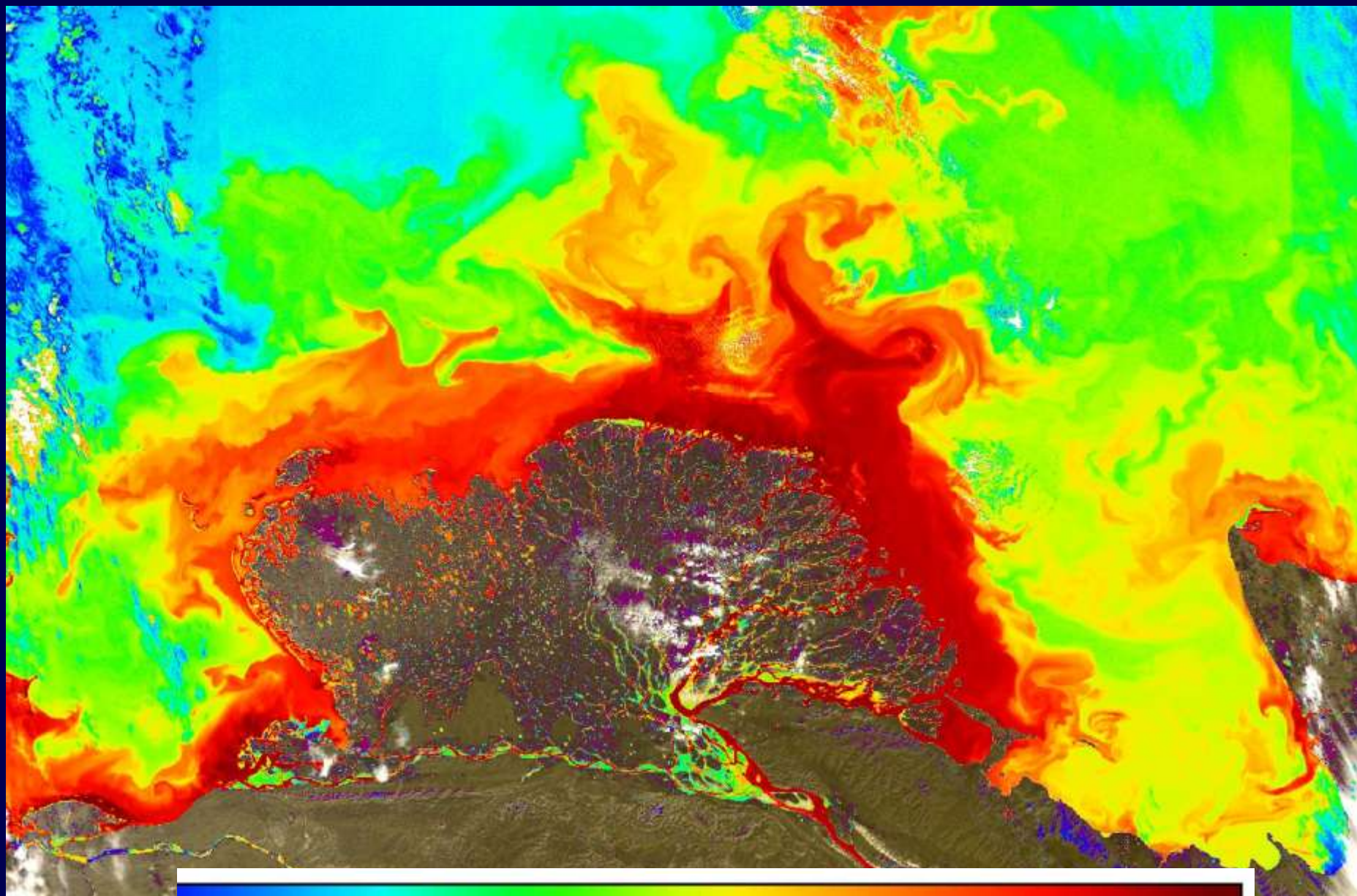
RL\_path band 5



# RLw band 5



# TSM



# Lake Erie 20050508

