

# SeaDAS

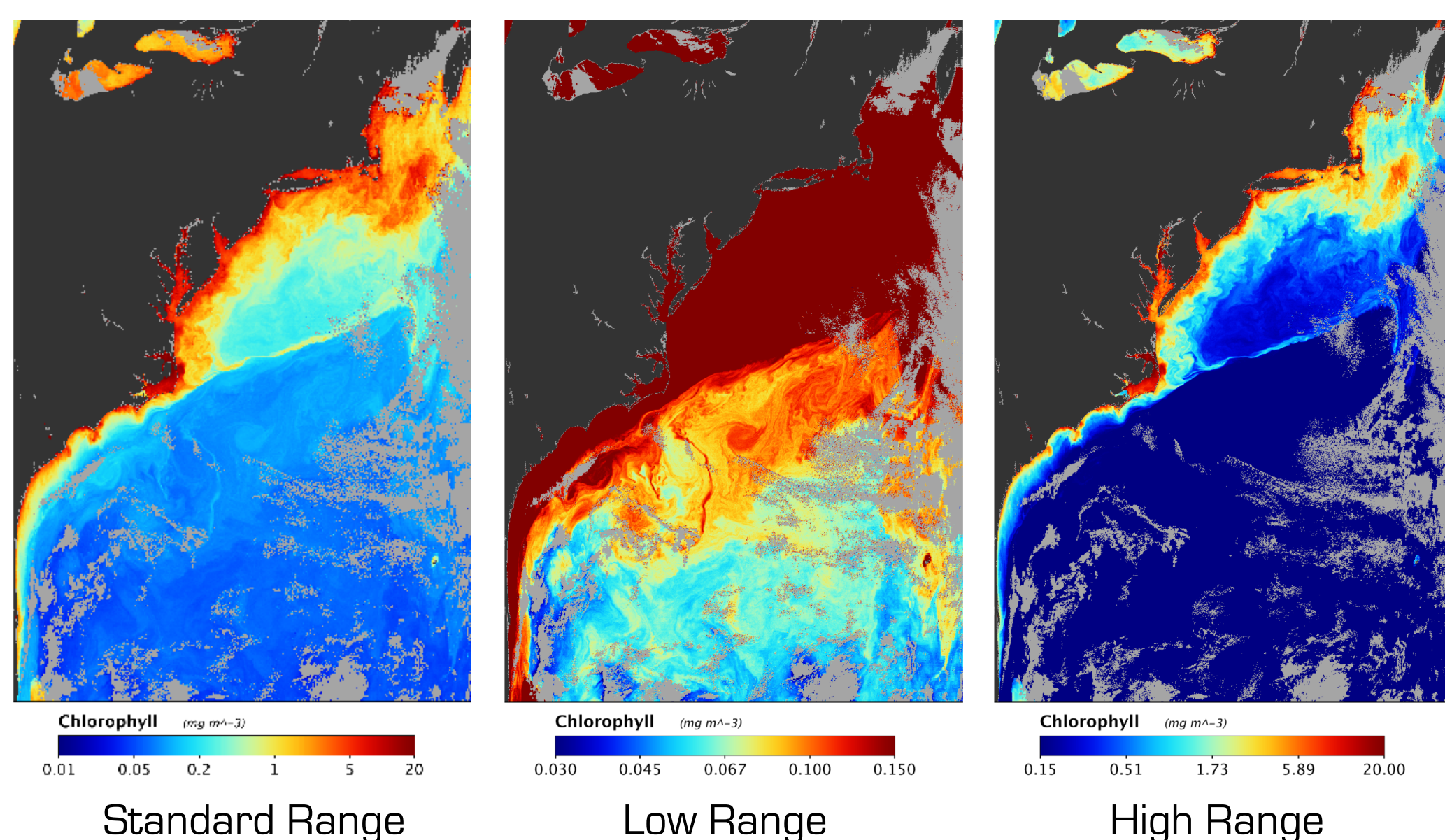
## SeaDAS: NASA Software for the Analysis of Earth-Viewing Satellite Data

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SeaDAS is a comprehensive software package developed by NASA OBPG (Ocean Biology Processing Group) for the processing, display, analysis, and quality control of remote-sensing Earth data. SeaDAS is open-source and serves as the official distribution point of the NASA OBPG Science Software. This science processing component of SeaDAS applies the OBPG algorithms to satellite data in order to characterize and calibrate the data and generate science quality OBPG products. Additional coinciding ancillary data are retrieved and used to correct for and calibrate out the atmospheric components of the signal in order to determine an Earth/ocean surface component of the signal and consequently to generate higher order products in the optical path such as Chlorophyll, SST, KD\_490, etc. SeaDAS processing provides a standardized data format across a multitude of satellites, currently supporting over 15 US and international satellite missions. The visualization and analysis tools can also be used on many other unsupported satellite missions. Customized algorithms can be developed and applied within SeaDAS to evaluate ocean, land and atmospheric data, as well as to produce True Color imagery. SeaDAS can also integrate SeaBASS format field measurement (in situ) data for comparative analysis with relevant satellite data. Scientific data products can be exported from SeaDAS in file formats readily readable by many third party GIS analysis packages.

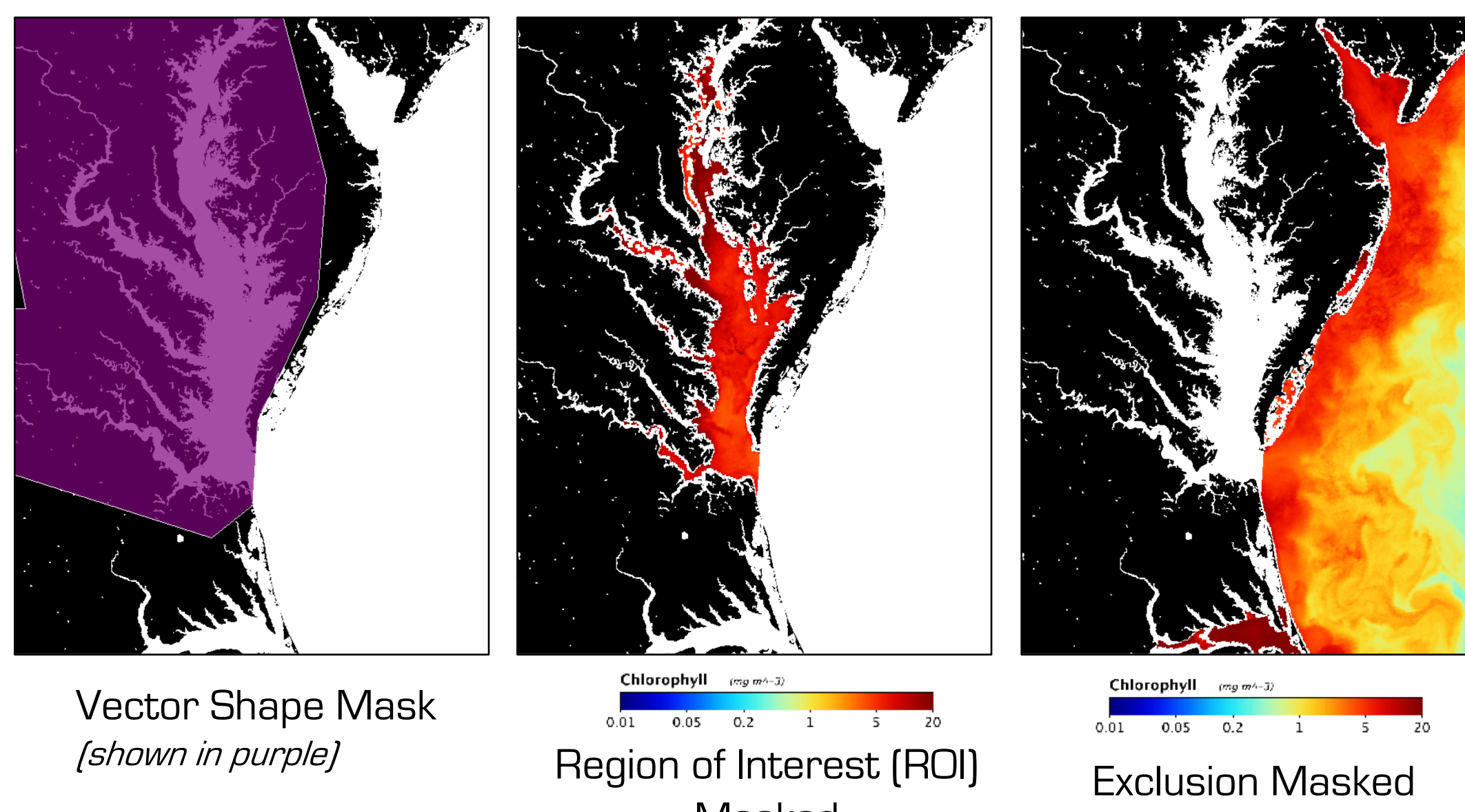
SeaDAS 7.5.1

### Color Palette Scaling



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### Masking (Vector)



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### Standard Products

#### Ocean Color (OC) Product Suite

- aot Aerosol Optical Thickness
- angstrom Aerosol Angstrom Exponent
- Rrs Remote Sensing Reflectance
- chlor\_a Chlorophyll Concentration
- Kd\_490 Diffuse Attenuation Coefficient
- pic Particulate Inorganic Carbon
- poc Particulate Organic Carbon
- ipar Instantaneous Photosynthetically Available Radiation
- nflh Normalized Fluorescence Line Height
- par Photosynthetically Available Radiation

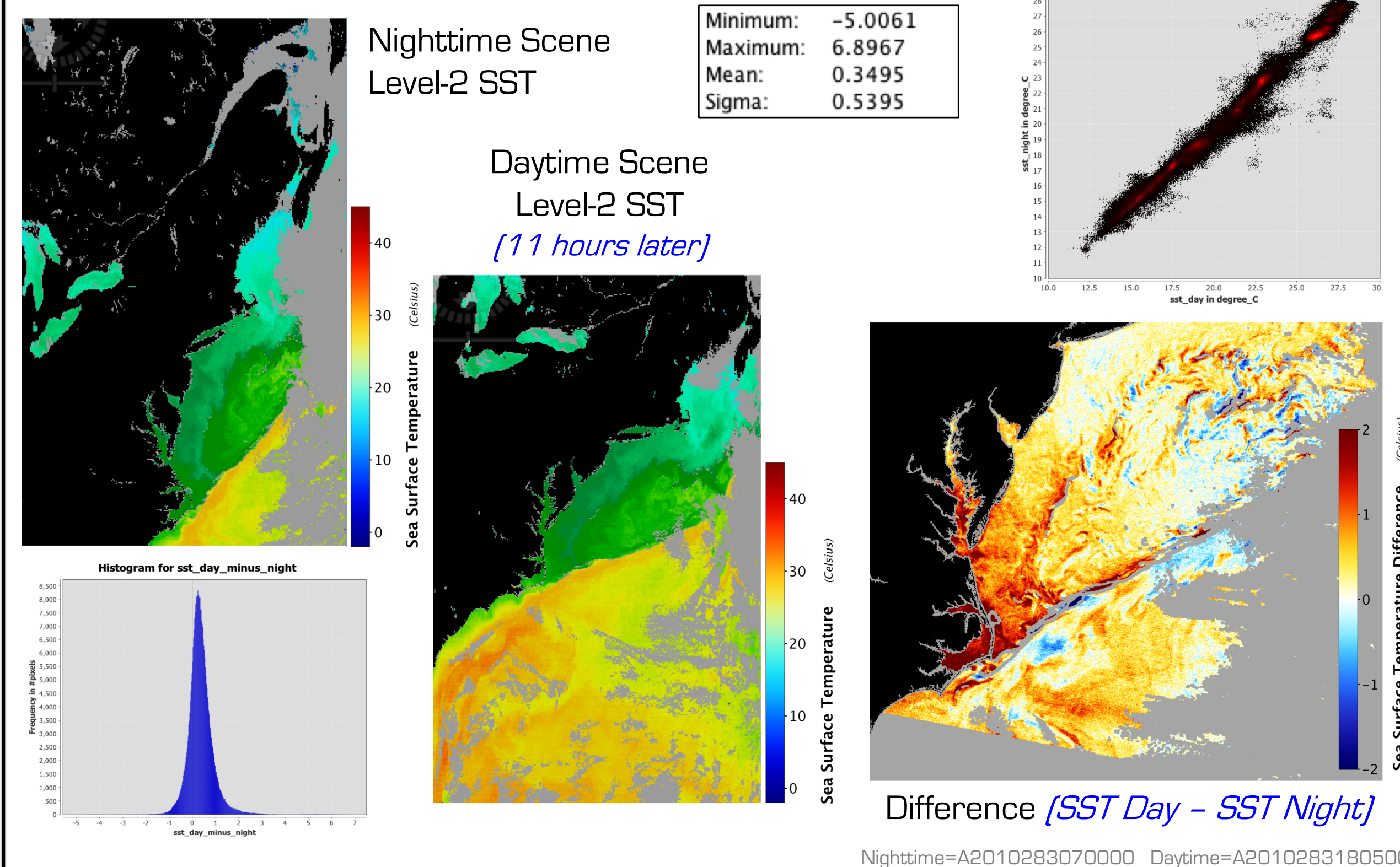
#### Sea Surface Temperature (SST) Product Suite

- sst Sea Surface Temperature

#### Inherent Optical Properties (IOP) Product Suite

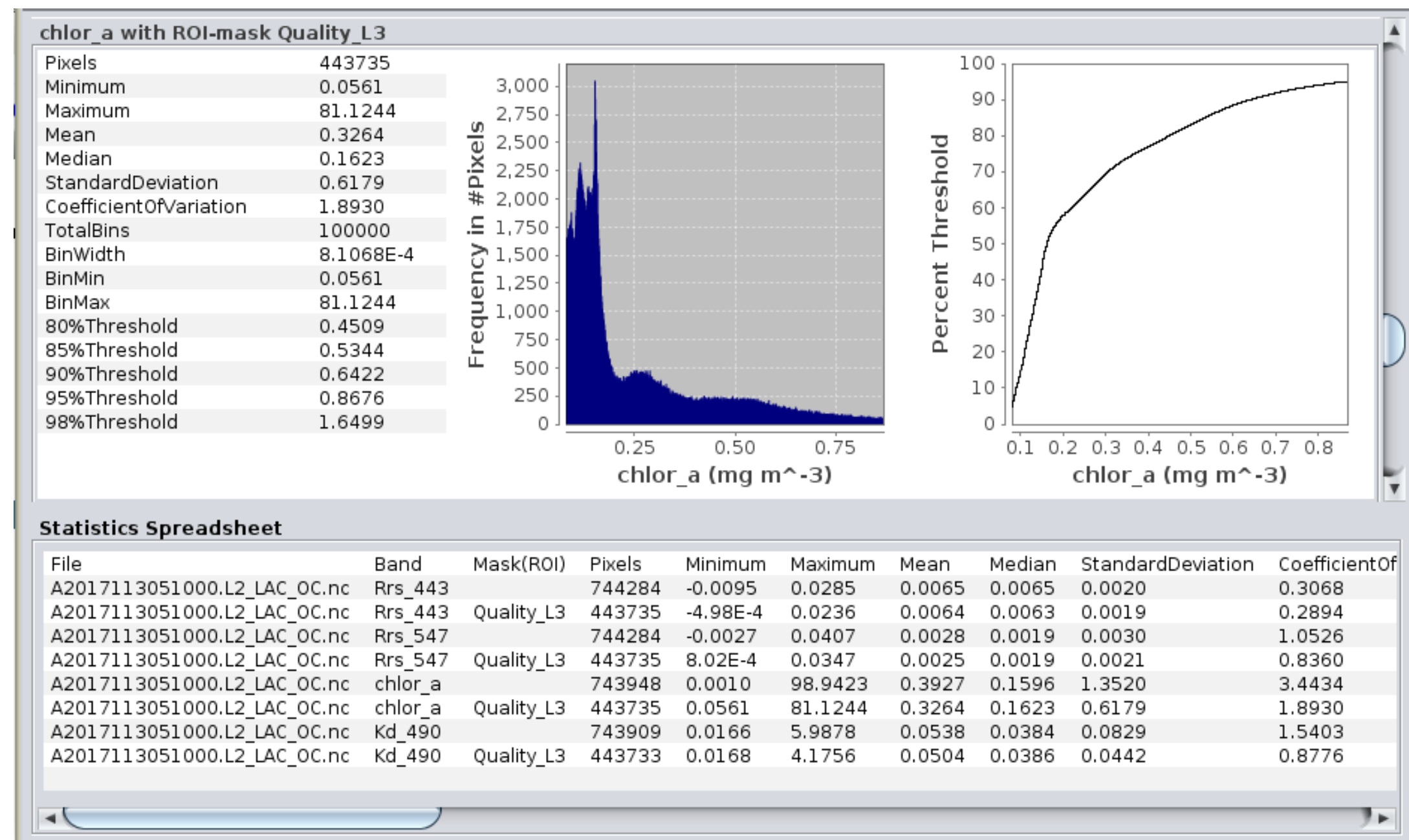
- a Total Absorption
- bb Total Backscattering
- aph Absorption due to Phytoplankton
- adg Absorption due to gelbstoff and detrital matter
- bbp Particulate Backscattering

### Data Comparison



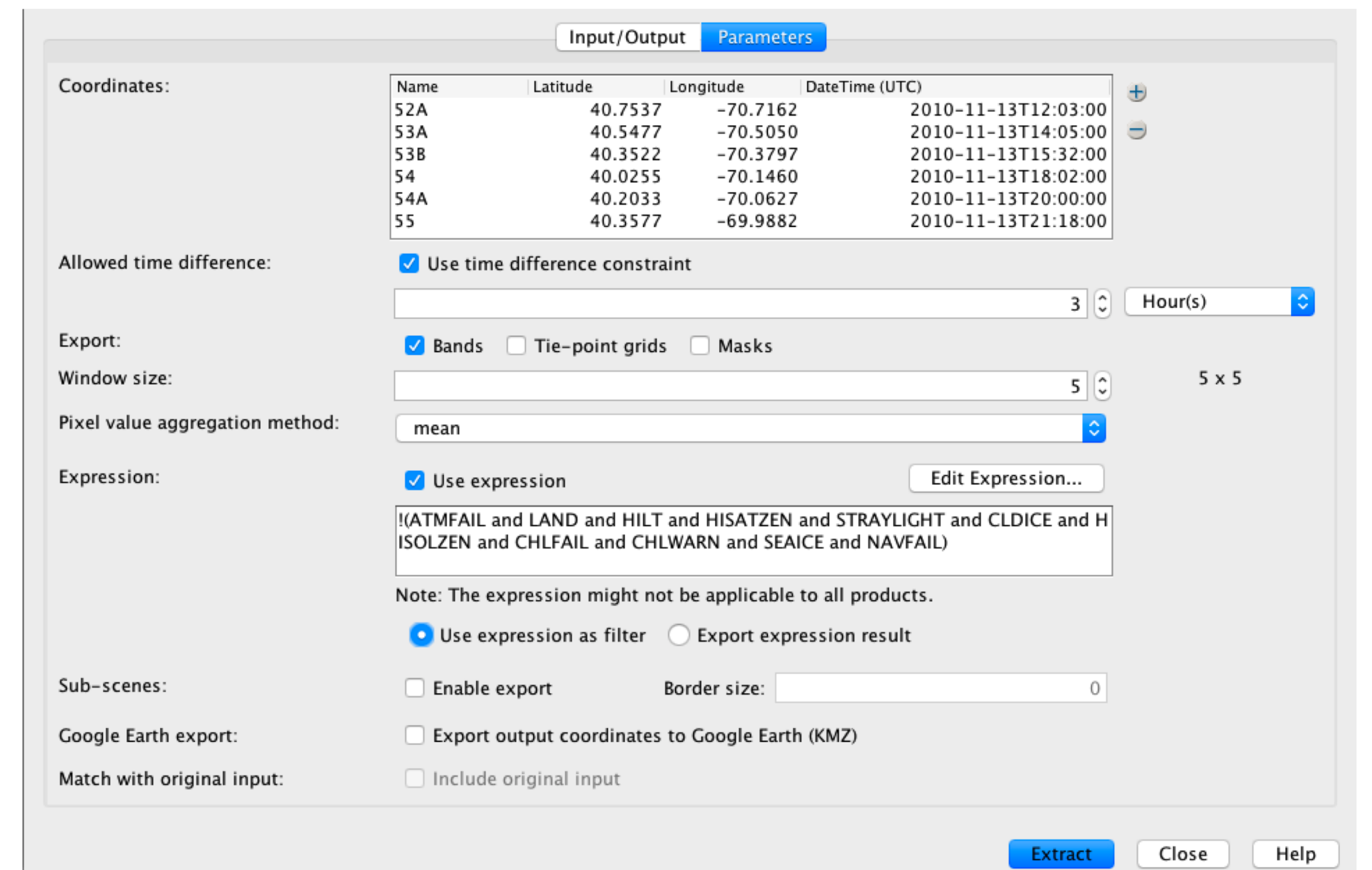
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### Statistics



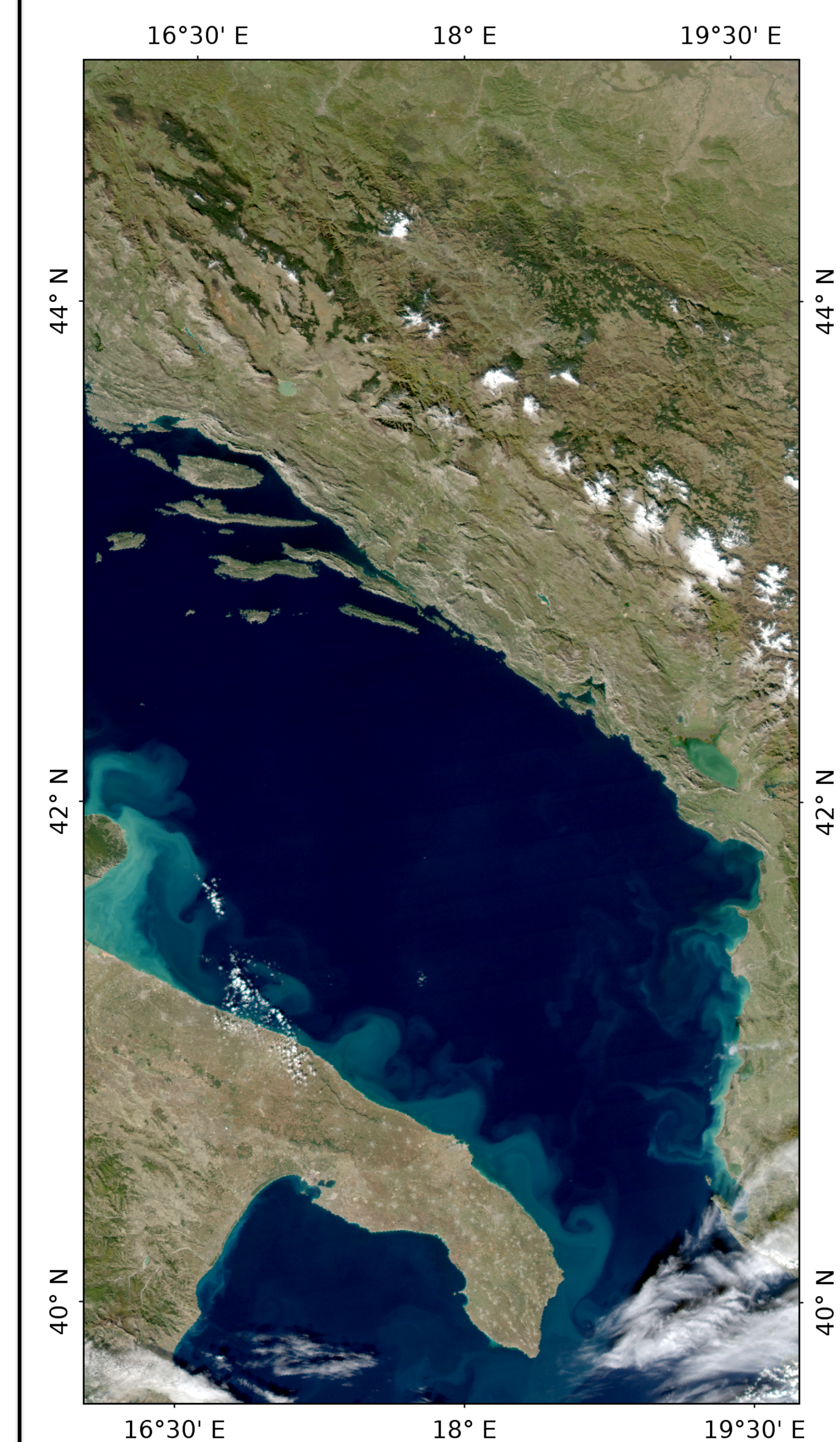
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### Pixel Extraction



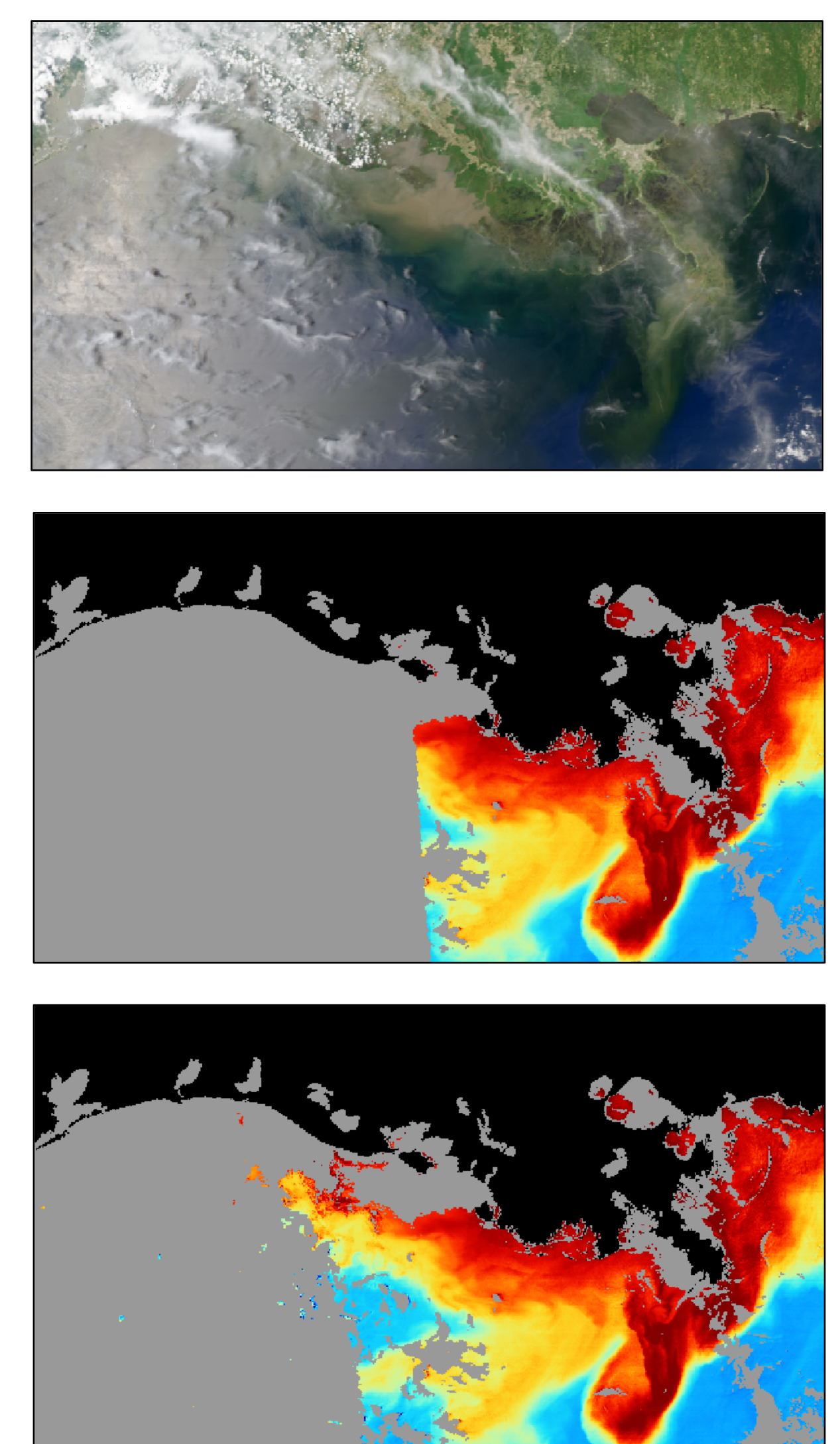
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### True Color



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### Masking (Raster)



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