NOAA CoastWatch Ocean Color Data Dissemination

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NRT & Science Quality Data

Attribute	Near-Real Time	Delayed-Mode/Science-Quality
Latency:	Best effort, as soon as possible (~12-24h)	Best effort, ~1-2 weeks delay
Processing System:	MSL12	MSL12
SDR:	IDPS Operational SDR	OC-improved SDR
Ancillary Data:	Global Forecast System (GFS) Model	Science quality (assimilated; GDAS) from NCEP
Spatial Coverage:	May be gaps due to various issues	Complete global coverage
Processed by:	CoastWatch, transferring to OSPO (operational) FY16	NOAA/STAR
Disributed by:	CoastWatch	CoastWatch, NCEI
Archive Plans:	TBD (but not through STAR)	Yes, from CoastWatch to NCEI
Full Mission Reprocessing:	No	Yes, ~2-3 years or as needed

Suomi NPP VIIRS OC Data Products

- Near Real Time (Jan 21,2015 – Present; 2/2012 – Present in November)
  - Global
  - Regional

Suomi NPP VIIRS OC Data Products

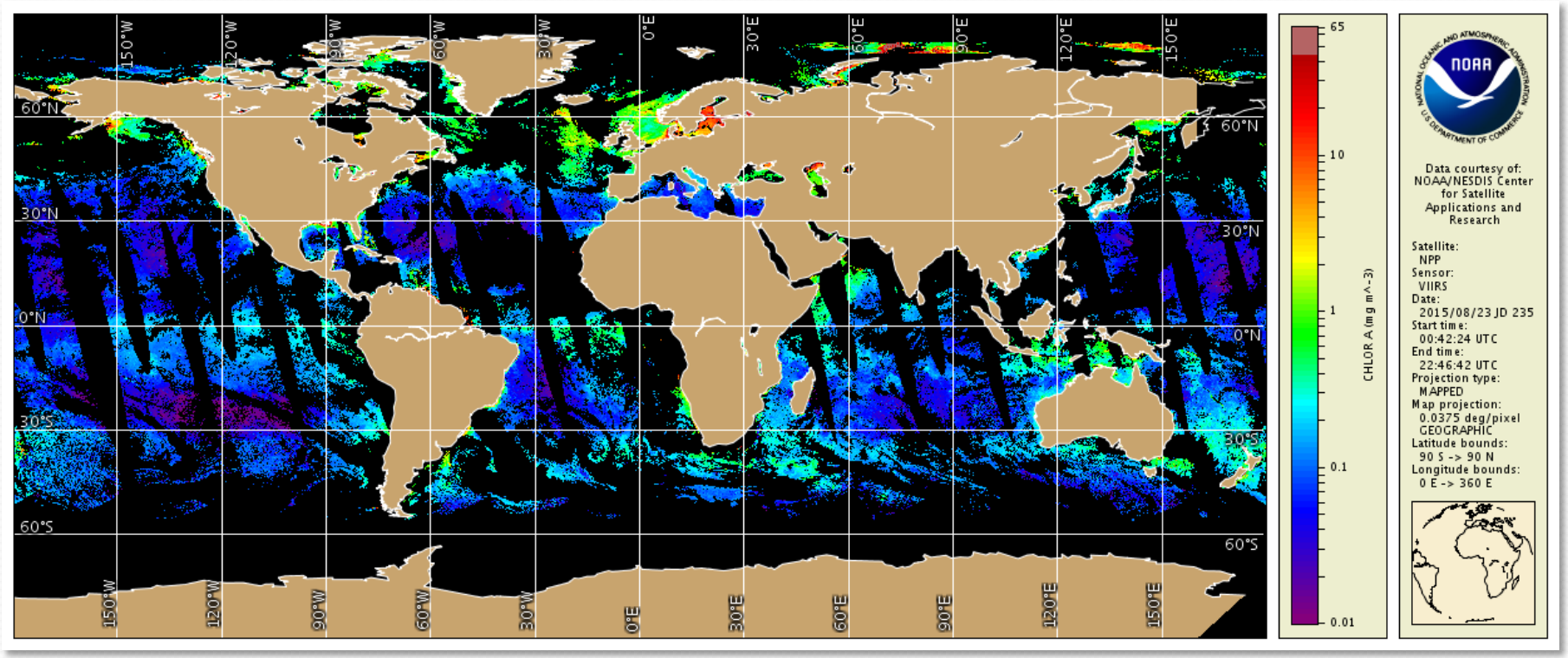
- Near Real Time (Days 1-8)
  - Global
  - Regional

Available Now

- Science Quality (Days 8 – n)
  - Global
  - Regional
- Reprocessed (Mission)
  - Global

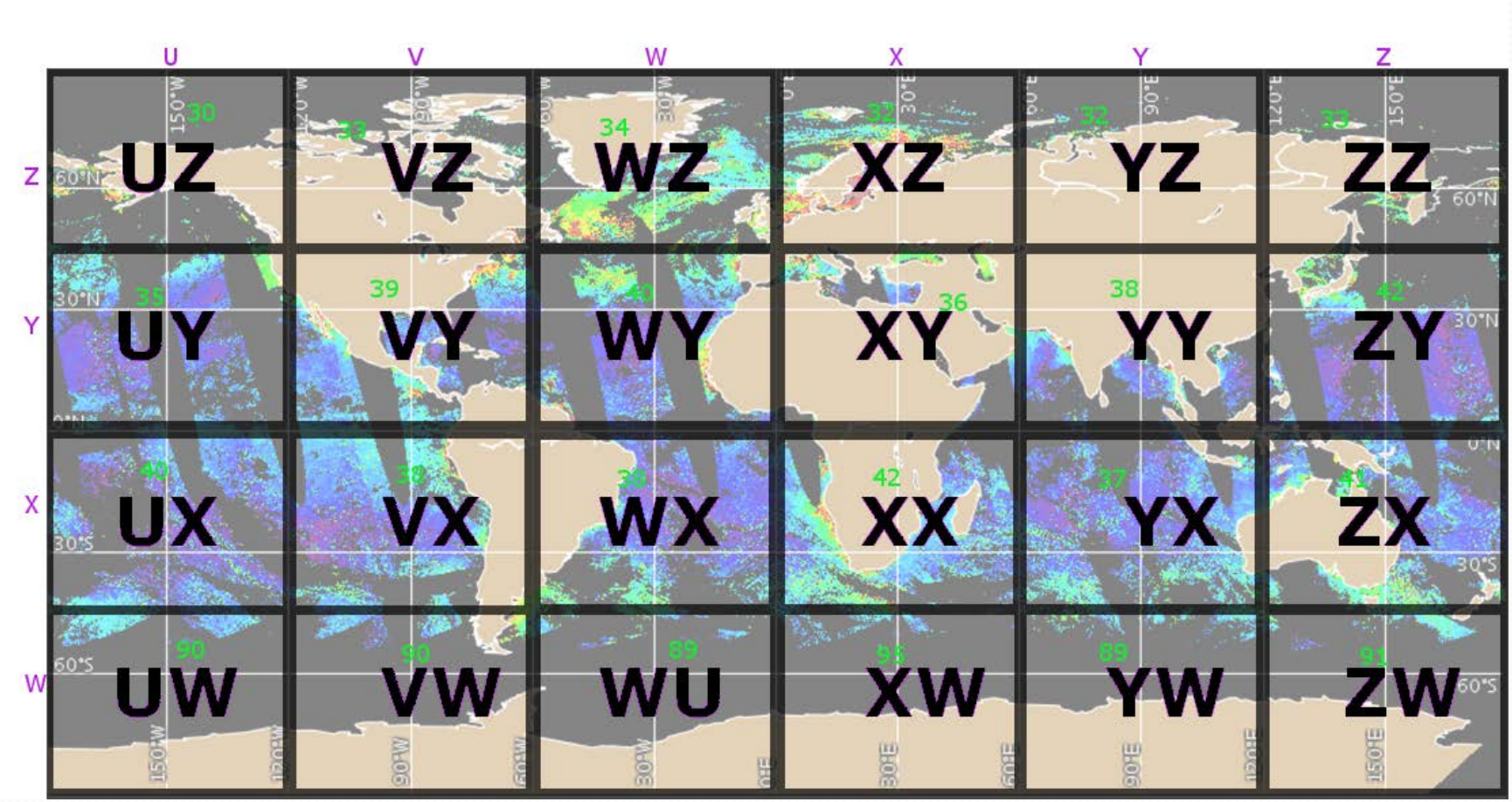
Available Early 2016

L3 Global 4km



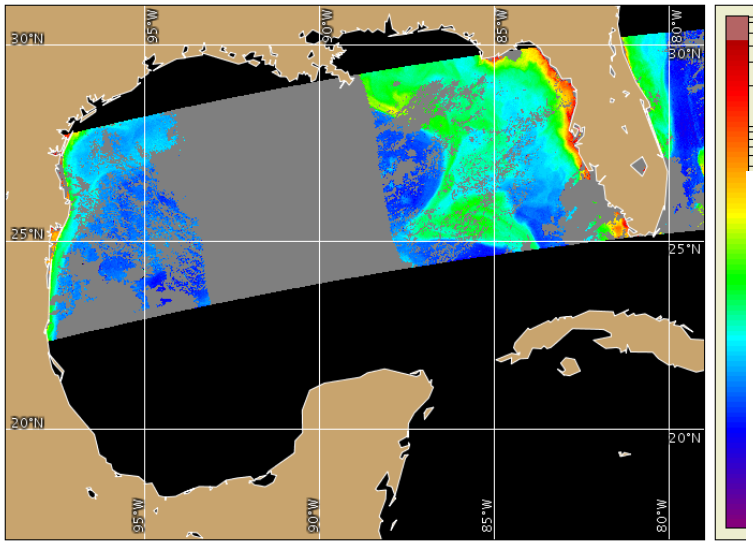
Daily Weekly Monthly

L3 Global 750m Sectors



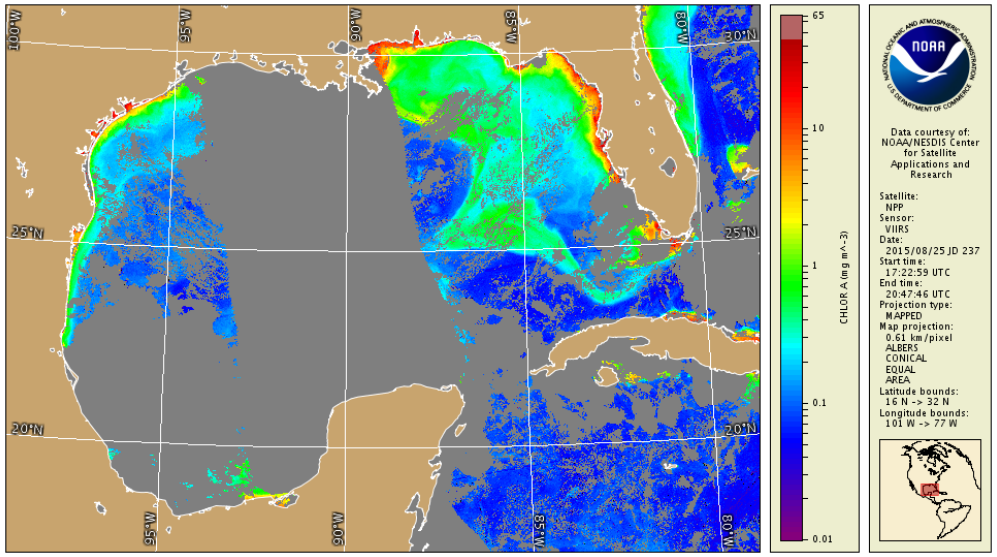
L3 Regional

- "CONUS" 750m regions: Hawaii, West Coast, Great Lakes, Northeast, Southeast, Gulf of Mexico, Caribbean



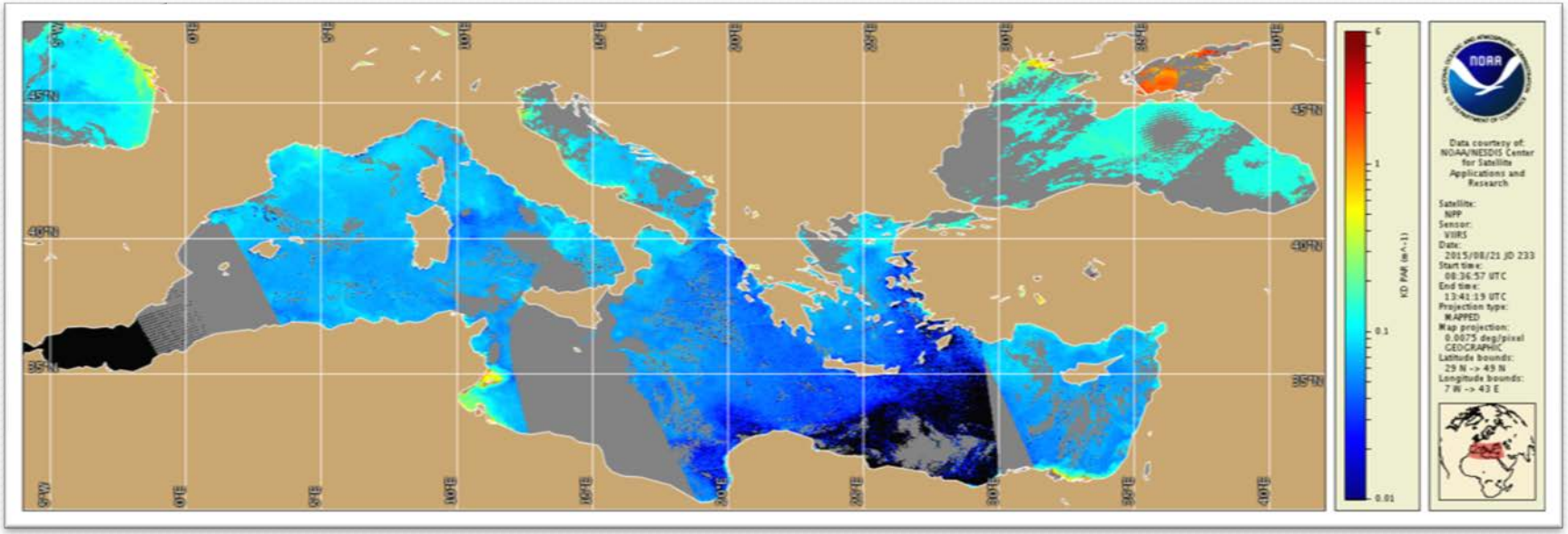
Granule

Daily Merge



Regional Partners (1)

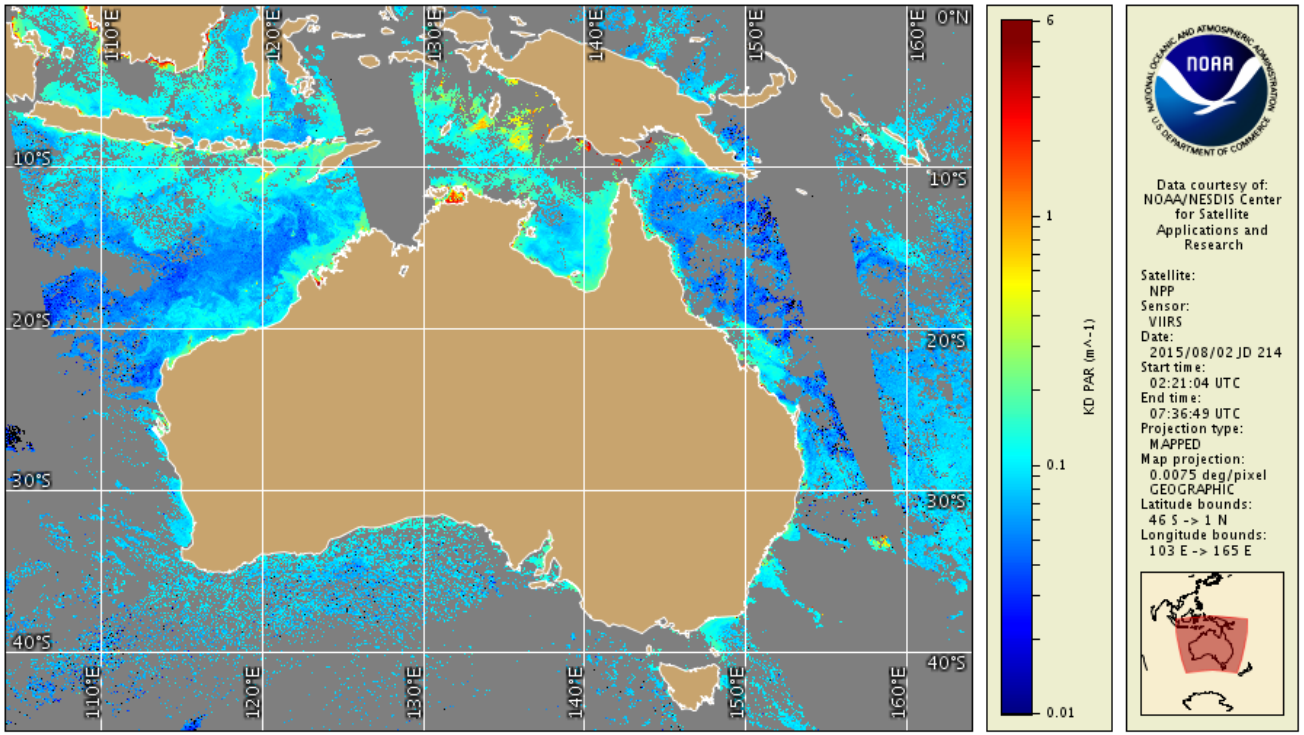
- EUMETSAT
  - Processing and staging of 750m Mediterranean datasets (L3 available through CoastWatch)
  - EUMETcast (Copernicus Service) broadcasts L2 VIIRS



Shown: L3 Daily merge, kdPAR

Regional Partners (2)

- CSIRO
  - Processing and staging of L3 Australia 750m datasets



Daily Merge, kdPAR

L2 & L3 Global Products

- Standard:
  - Chlorophyll-a
  - Kd490
  - KdPAR
  - nLw_412
  - nLw_445
  - nLw_488
  - nLw_555
  - nLw_672
- L2_flags
- Latitude
- Longitude
- Experimental:
  - IOPs
  - PAR

Future Inclusion

L2 & L3 Regional Products

- Standard:
  - Chlorophyll-a
  - Kd490
  - KdPAR
  - nLw_412
  - nLw_445
  - nLw_488
  - nLw_555
  - nLw_672
- L2 flags
- Latitude
- Longitude
- Edgemask
- User Driven:
  - HAB anomaly product
  - Rrs
  - Others TBD

Future Inclusion

- Experimental:
  - IOPs
  - PAR

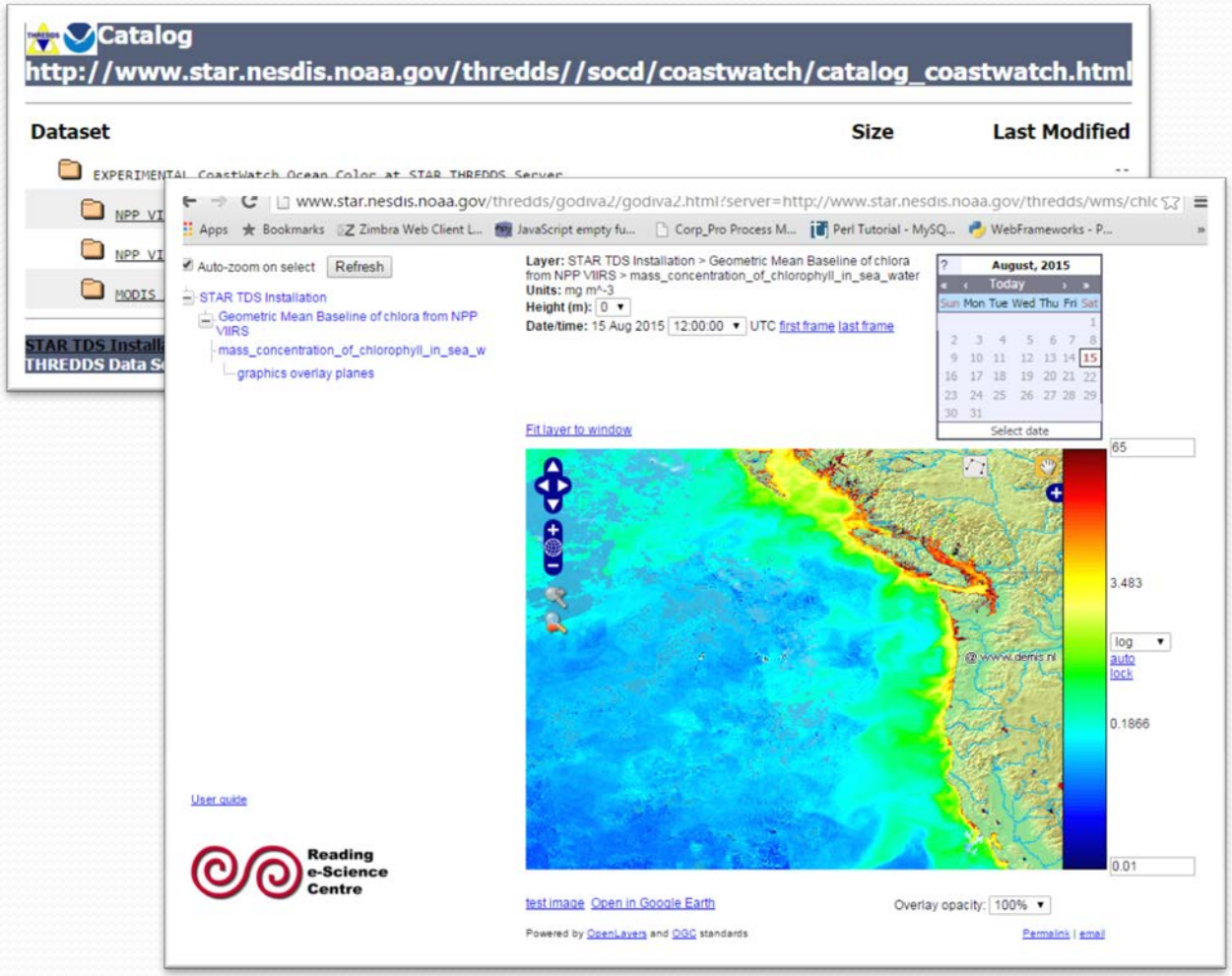
Data Formats

- Global / Sector:
  - NetCDF (v4 CF)
  - GeoTIFF & PNG

- Regional:
  - NetCDF(v4 CF)
  - HDF (v4 with CoastWatch metadata)
  - GeoTIFF & PNG

Access & Protocols (1)

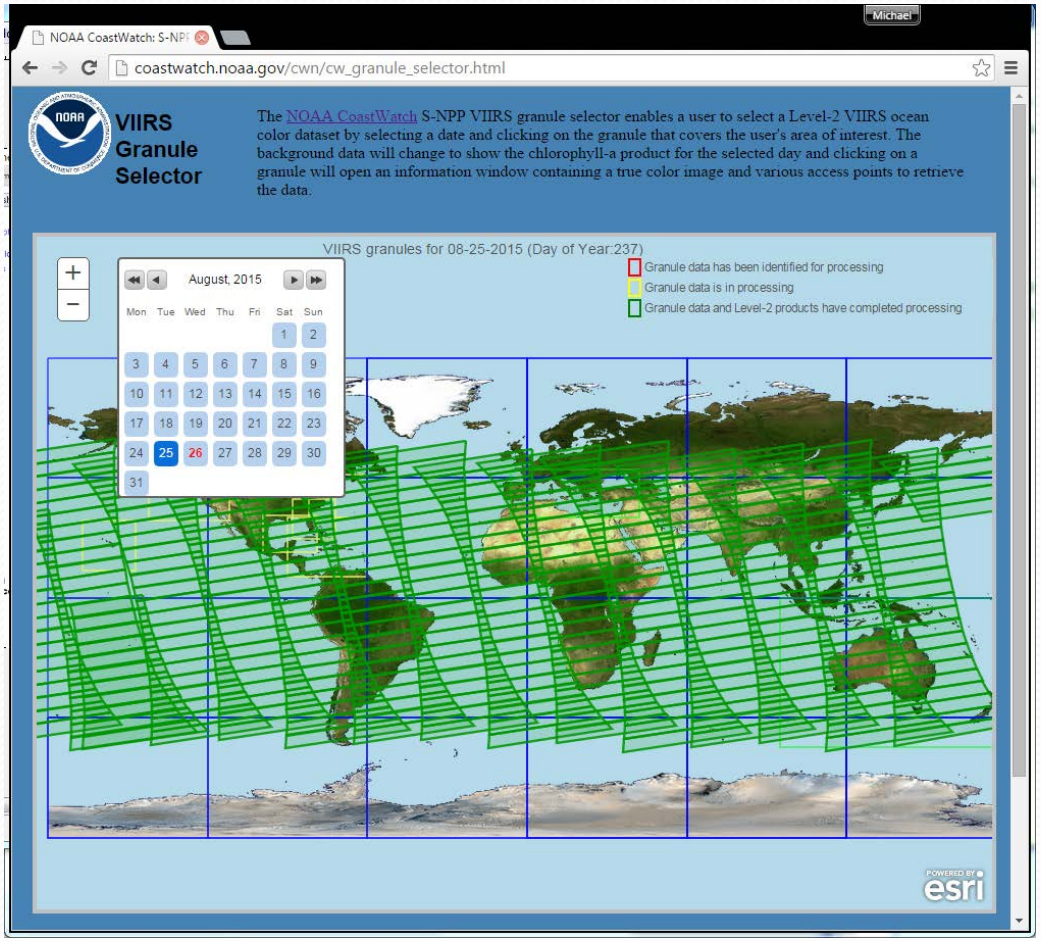
- HTTP
- FTP
- THREDDS
  - **OPENDAP**
  - **NetcdfSubset**
  - **WCS**
  - **WMS**
  - **NCML**
  - **ISO**
  - **UDDC**



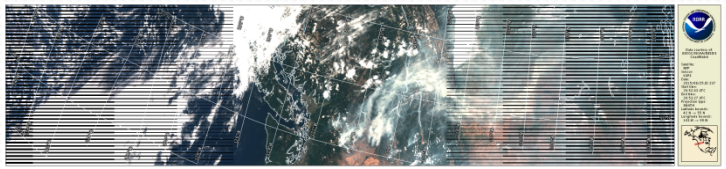
Access & Protocols (2)

- HTTP:
  - http://coastwatch.noaa.gov
- FTP:
  - ftp://star.nesdis.noaa.gov/pub/socd/mecb/coastwatch/viirs/
- THREDDS:
  - http://coastwatch.noaa.gov/thredds

L2 Granule Selector







Date: 2015-08-25 Time: 2052
Download Data:
True Color Image (PNG)
VIIRS L2 Ocean Color Data (CW NetCDF)
VIIRS Ocean Color Channel Data (CW HDF)
THREDDS access

Planned Enhancements

- Data Portal
  - Facilitate the discovery and access to Ocean Data
  - Present a variety of search options
    - Locate the single or handful of datasets (Granule Selector/CW web search)
    - Locate a small to intermediate collection of data meeting user-driven criteria (in development)
    - Locate bulk collections of data (science data on FTP/THREDDS)

Sentinel-3A

- A Cooperative Arrangement between the United States and the European Commission is nearing ratification
- NOAA (NESDIS/)STAR plans to provide near real-time access to global OLCI and SLSTR data products from EUMETSAT
- EUMETSAT data transferred via terrestrial multicast to NOAA – initial tests promising
- OLCI data complements existing JPSS sensors:
  - 300m spatial resolution
  - Spectral bands meeting NOAA NOS HAB requirements
  - Relieves single point-of-failure for HAB forecasting

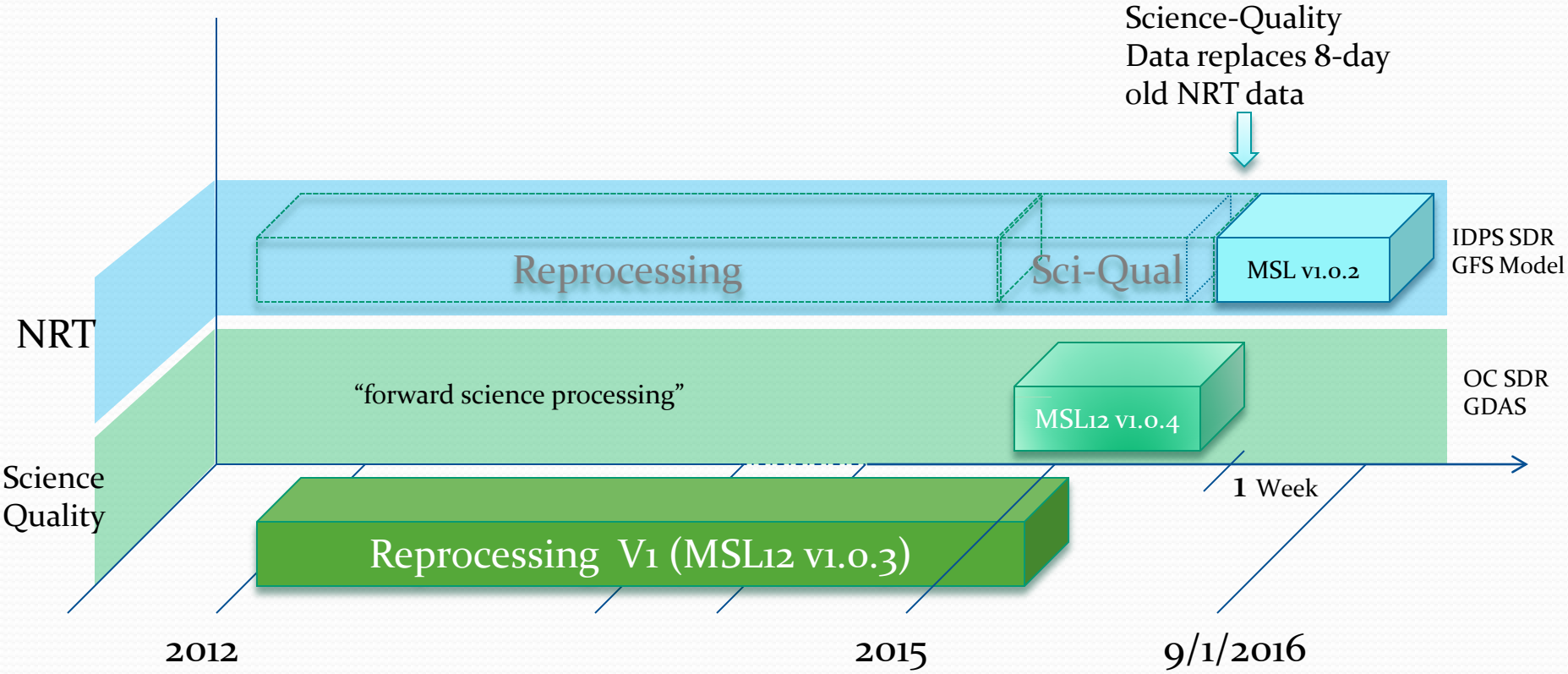
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Backup Slides

Example "Snapshot" 9/2016



Example "Snapshot"

