OSU:VIIRS CAL/VAL
August Demo, NCT4 data

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23 August 2011

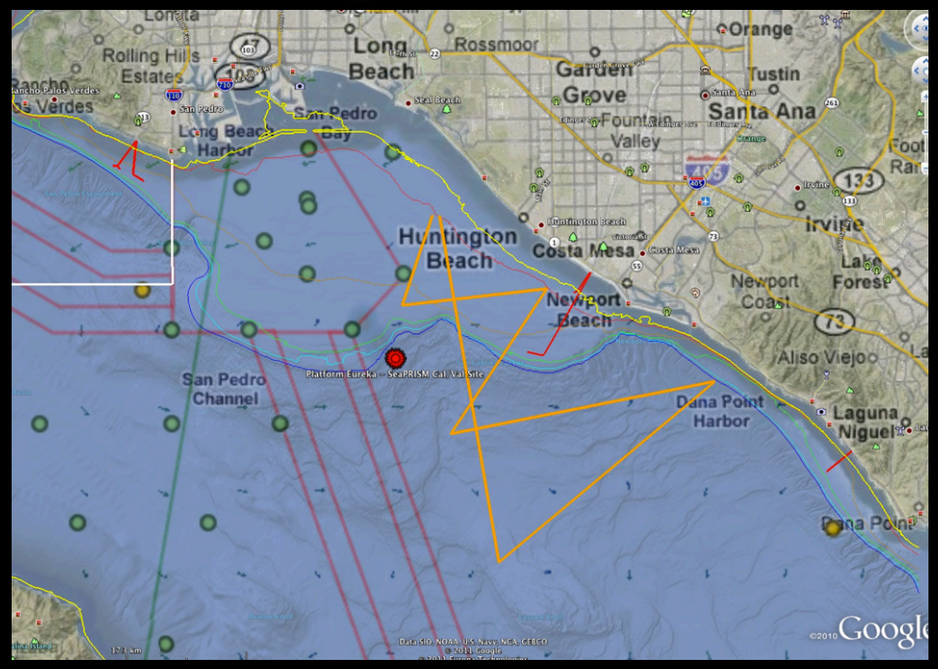
Thanks to NRL and CUNY Groups!

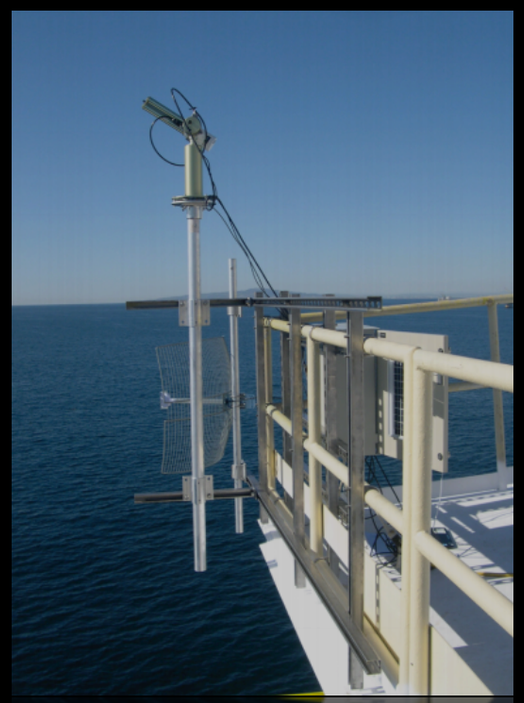
Outline

- OSU Ocean Color Validator Site Review
- Download statistics for NCT4 Ocean Color data
- NCT3 Day 10 Sept 2010 Match up
  - HyperPro and VIIRS off Oregon Coast (Strawberry Hill Line south of Newport, OR)
- OSU Database Query Demo

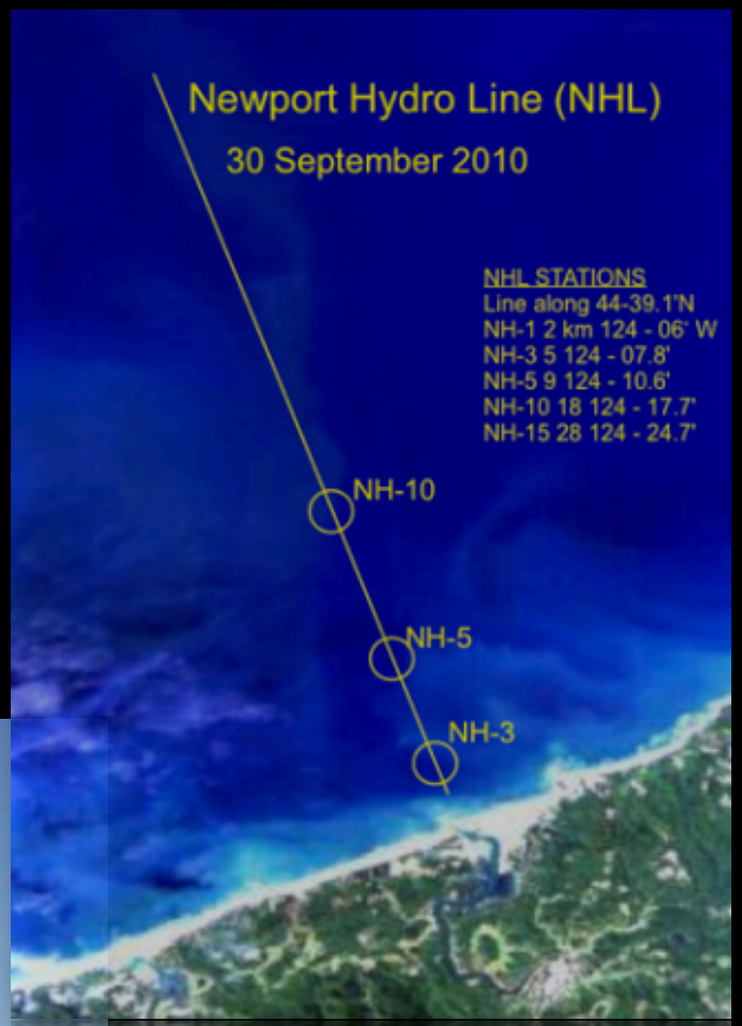
SeaPrism, Gliders and HyperPRO

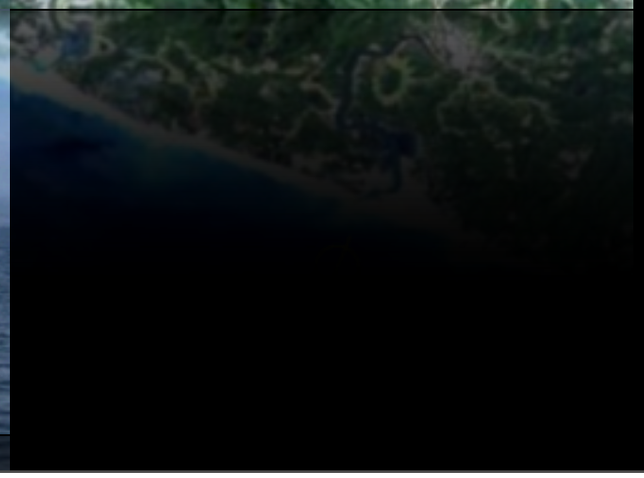
Los Angeles Harbor



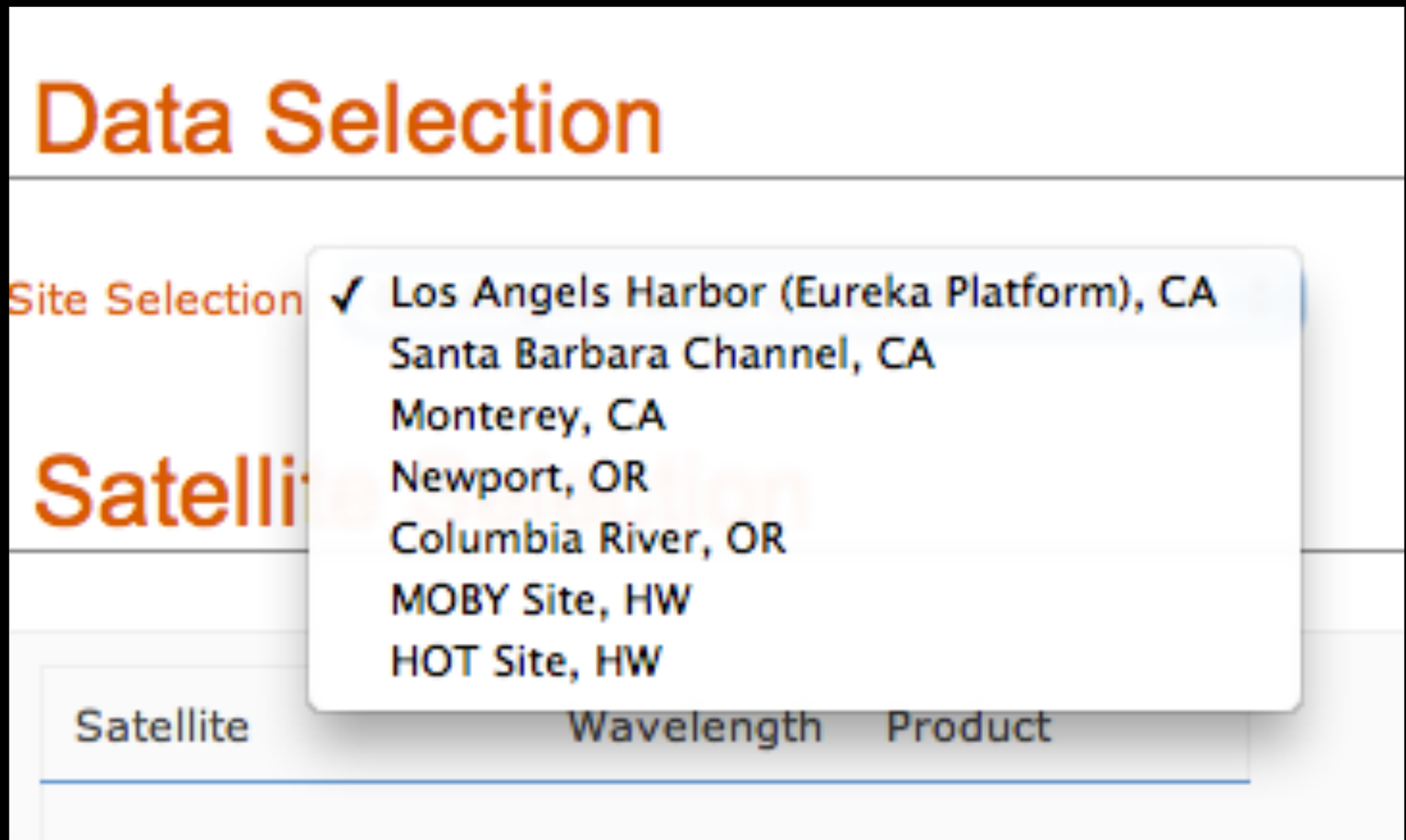


Oregon Coast





OSU: Daily Ocean Color Downloads Sites



http://meris.coas.oregonstate.edu/viirs

Instruments Comparisons

Satellites

Satellite Selection

Satellite	Wavelength	Product
☐ HMERIS (21x21)	560	nLw
☐ HMODIS (21x21)	547	nLw
☐ MERIS (5x5)	560	nLw
☐ MODIS (5x5)	547	nLw
☐ VIIRS (5x5)	551	nLw

In-Situ

SeaPRISM Selection

Enable	Wavelength	Property	Level
☐	555	nLw (Lwn_fQ)	1.5

HyperPro Selection

Enable	Wavelength	Property	Level
☐	549.5	nLw (Lwn_fQ)	2.0

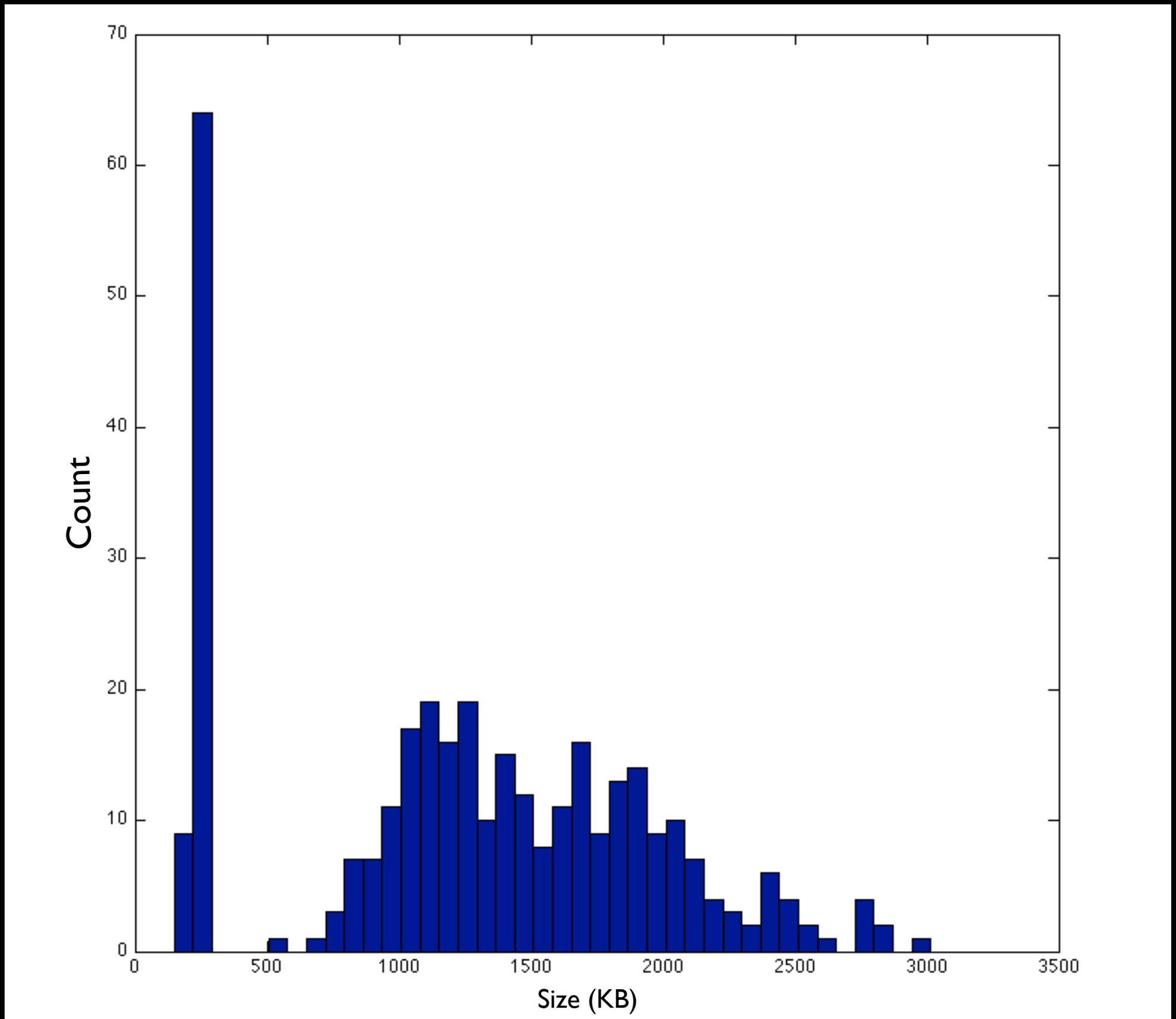
http://meris.coas.oregonstate.edu/viirs

Gravite NCT4 Download
Ocean Color Files from 10 September 2010

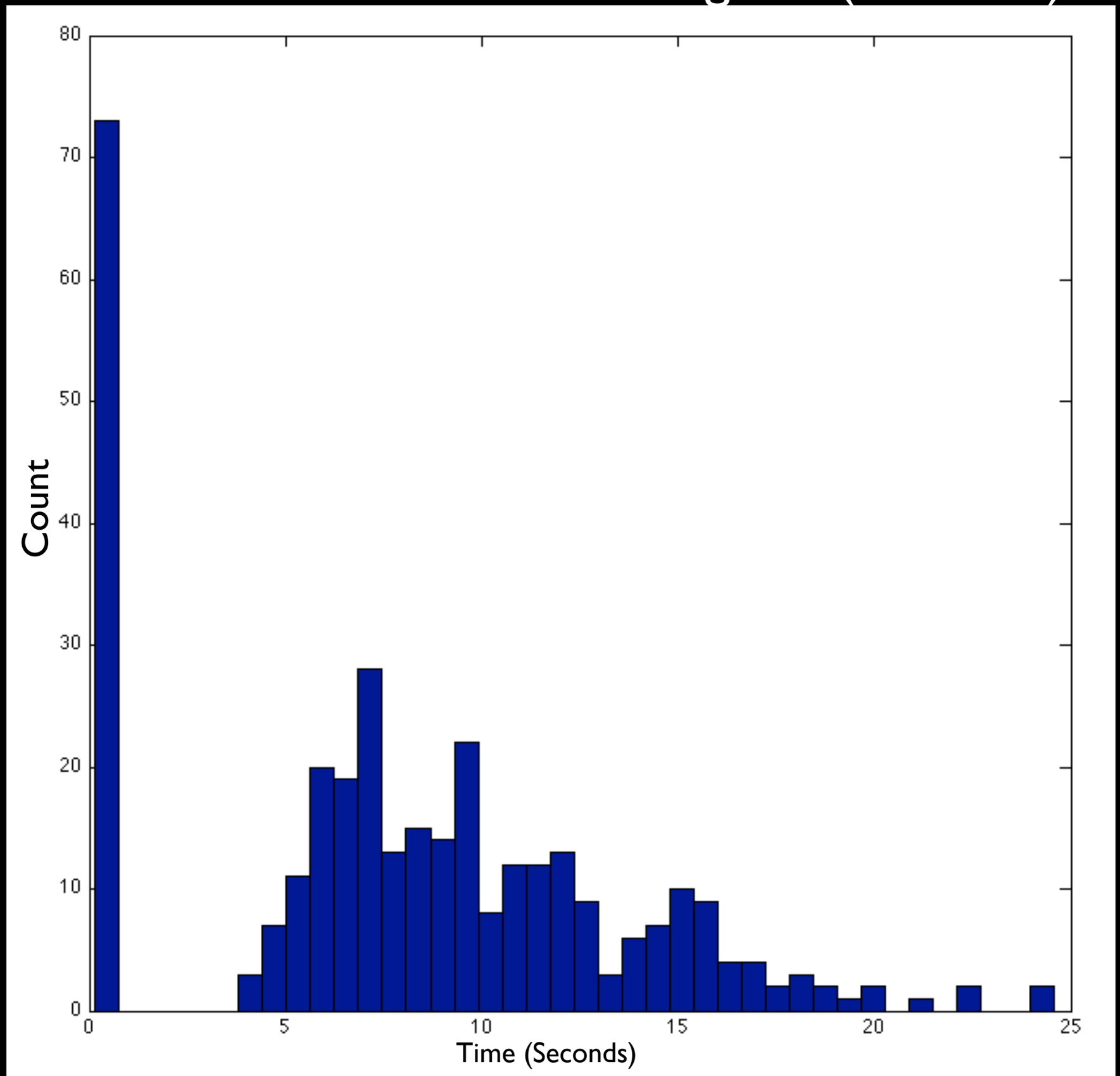
FILES:	337
TOTAL SIZE:	425 MB
TOTAL TIME:	2694 seconds
MEAN FILE SIZE:	1.26 MB
MEDIAN FILE SIZE:	1.28 MB
MEAN DOWNLOAD TIME:	7.9 seconds
MEDIAN DOWNLOAD TIME:	7.7 seconds

Download speed is slower than July Demo but no timeouts (?)

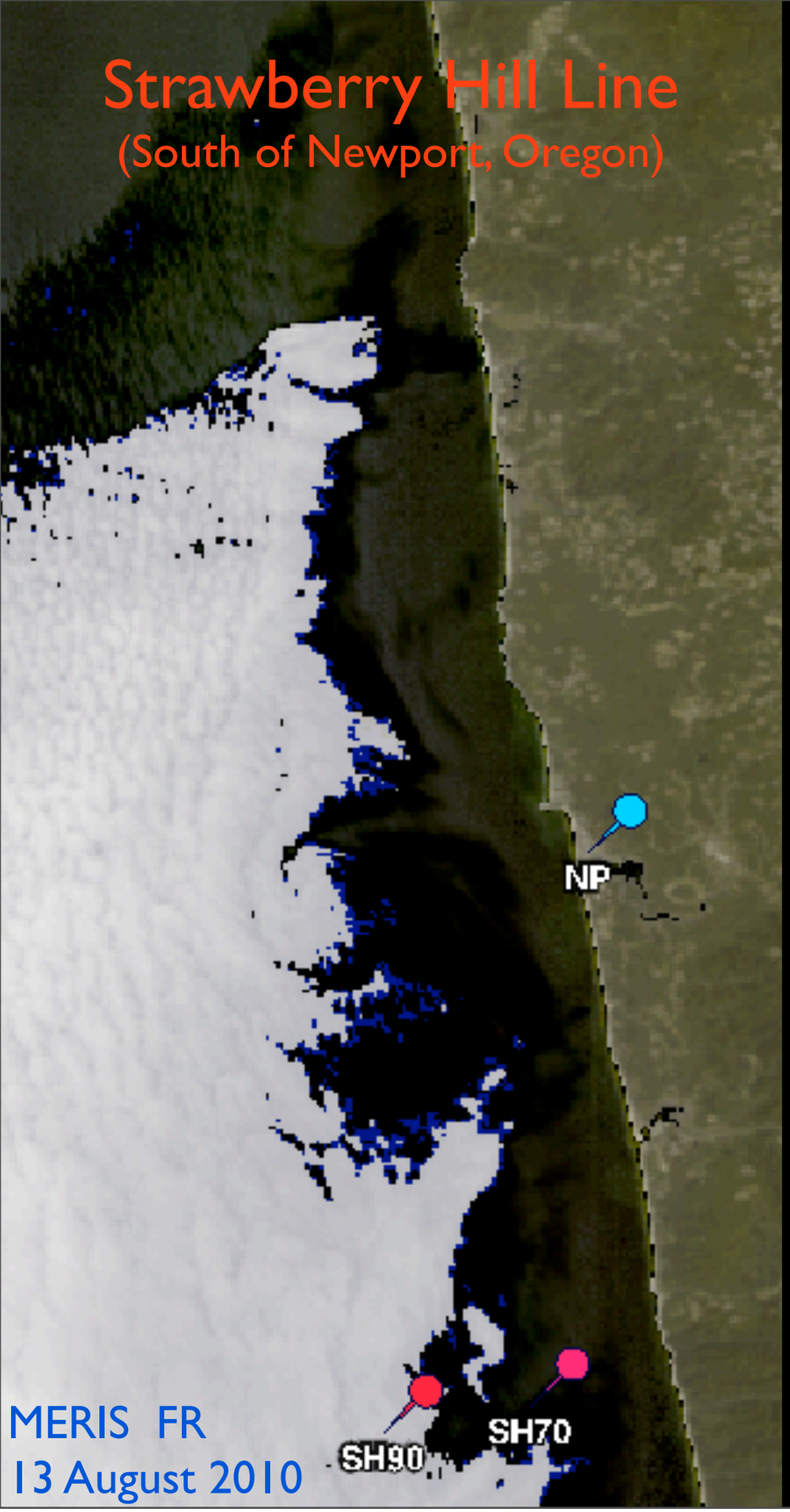
OSU: File Size Histogram (KB)



SU: Download Time Histogram (Seconds)



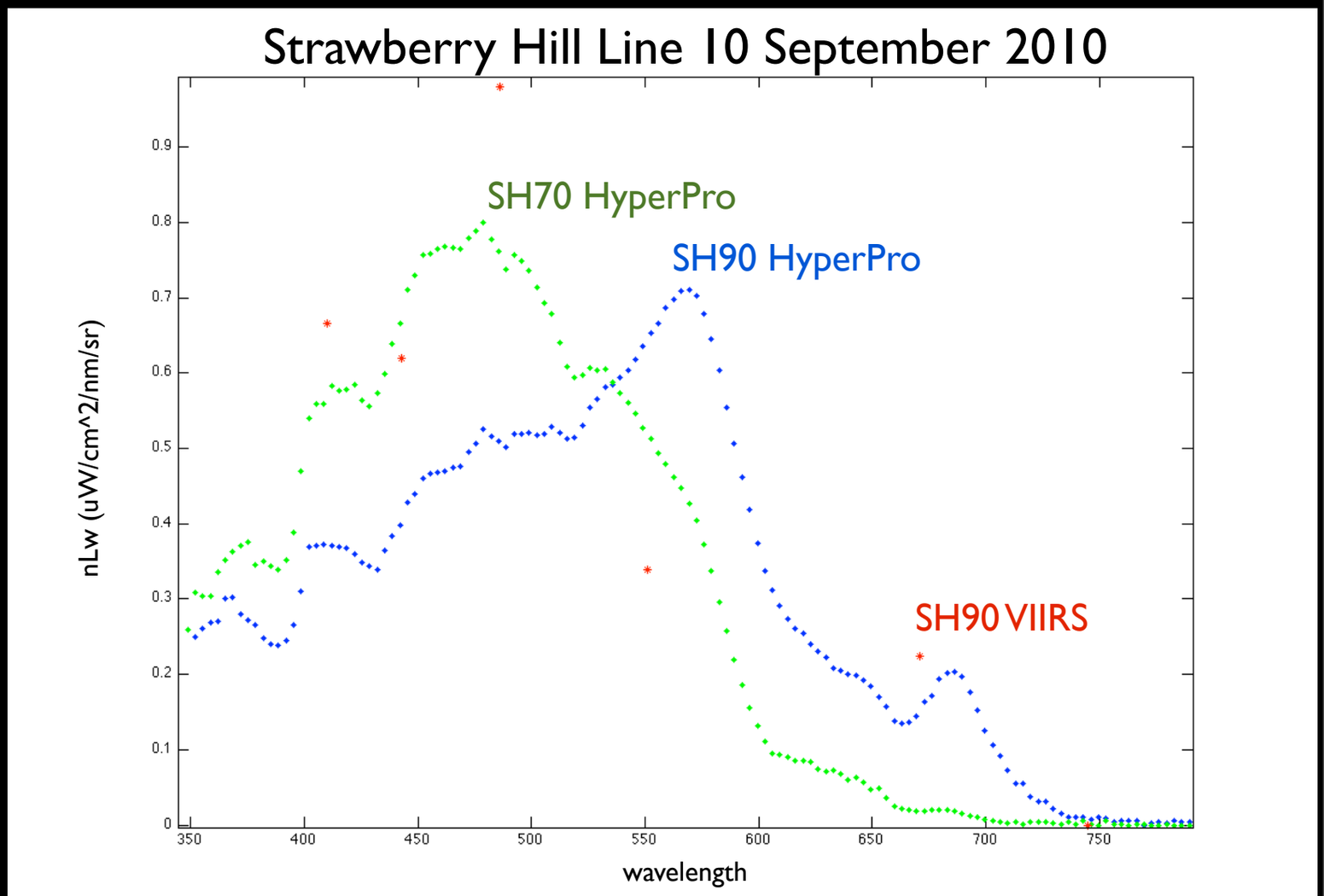
Strawberry Hill Line
(South of Newport, Oregon)



MERIS FR
13 August 2010

OREGON HyperPRO STATIONS

STAT	LAT	LONG
NH25	44.625	-124.650
SH15	44.252	-124.120
SH50	44.252	-124.169
SH70	44.252	-124.252
SH90	44.252	-124.392



Back end stuff

mySQL
(optimized tables)

PHP, CSS, jQuery
(AJAX stuff)
thanks to Carl Chinatomby, CUNY

Matlab, Python

Satellite and In-situ data stored in SQL data base following NRL schema

In-Situ Table

Field Type ...

Instrument Number
Year
Day
Time
latitude
longitude
....

Satellite Table

Field Type ...

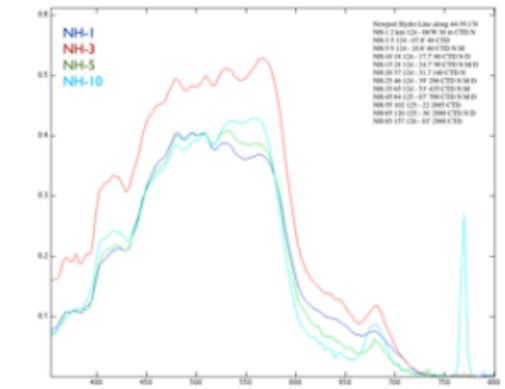
Instrument Number
Year
Day
Time
wavelength
value
....

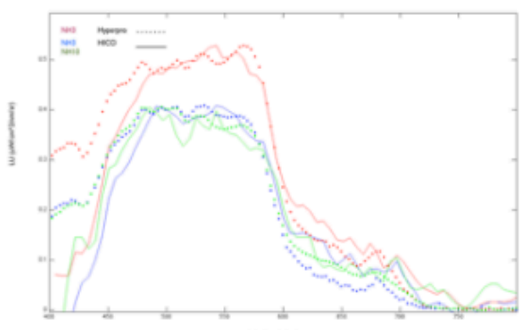
Instrument
Hyperpro
...

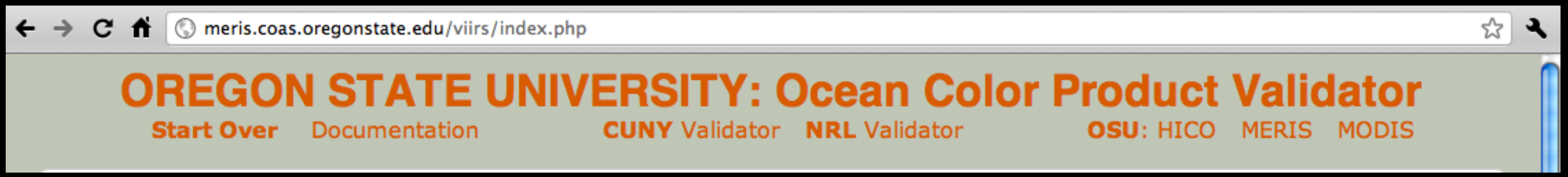
_L4_LU_surface_hyperspectral_downcast.txt
_L4_Lw_LU_hyperspectral_downcast.txt
_L4_Lwn_LU_hyperspectralED_hyperspectral_downcast.txt
_L4_Lwn_LU_hyperspectralES_hyperspectral_downcast.txt
_L4_Morel_Chlorophyll_Mean_Profile_hyperspectral_downcast.txt
_L4_Morel_Chlorophyll_Profile_hyperspectral_downcast.txt
_L4_Particle_Volume_Scattering_470nm_downcast.txt
_L4_Particle_Volume_Scattering_700nm_downcast.txt
_L4_Particulate_Backscattering_Coefficient_470nm_downcast.txt
_L4_Particulate_Backscattering_Coefficient_700nm_downcast.txt
_L4_Profiler_Par_hyperspectral_downcast.txt
_L4_Reference_Par_hyperspectral_downcast.txt
_L4_RFL_EU_hyperspectralED_hyperspectral_downcast.txt
_L4_RFL_EU_hyperspectralES_hyperspectral_downcast.txt
_L4_RSR_LU_hyperspectralED_hyperspectral_downcast.txt
_L4_RSR_LU_hyperspectralES_hyperspectral_downcast.txt
_L4_Salinity_downcast.txt
_L4_SeaBAM_OC2_Surface_Chlorophyll.txt
_L4_Total_Backscattering_Coefficient_470nm_downcast.txt
_L4_Total_Backscattering_Coefficient_700nm_downcast.txt
_L4_Total_Volume_Scattering_470nm_downcast.txt
_L4_Total_Volume_Scattering_700nm_downcast.txt
_L4_Water_Temperature_downcast.txt
_L4_Water_Volume_Scattering_470nm_downcast.txt
_L4_Water_Volume_Scattering_700nm_downcast.txt

Extraction and automated match up with graphics, statistics and summary reports in Matlab or Python

HyperPro --- Newport Hydro Line 22 September 2010







Demo: 23 August 2011

- OSU database queries

https://meris.coas.oregonstate.edu:4200/