



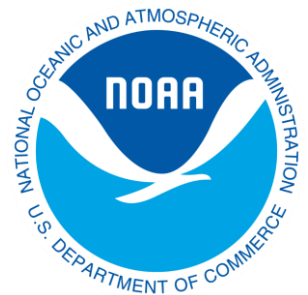
G20 LTSRF Update

**Presented by Kenneth Casey on
behalf of the LTSRF Team**

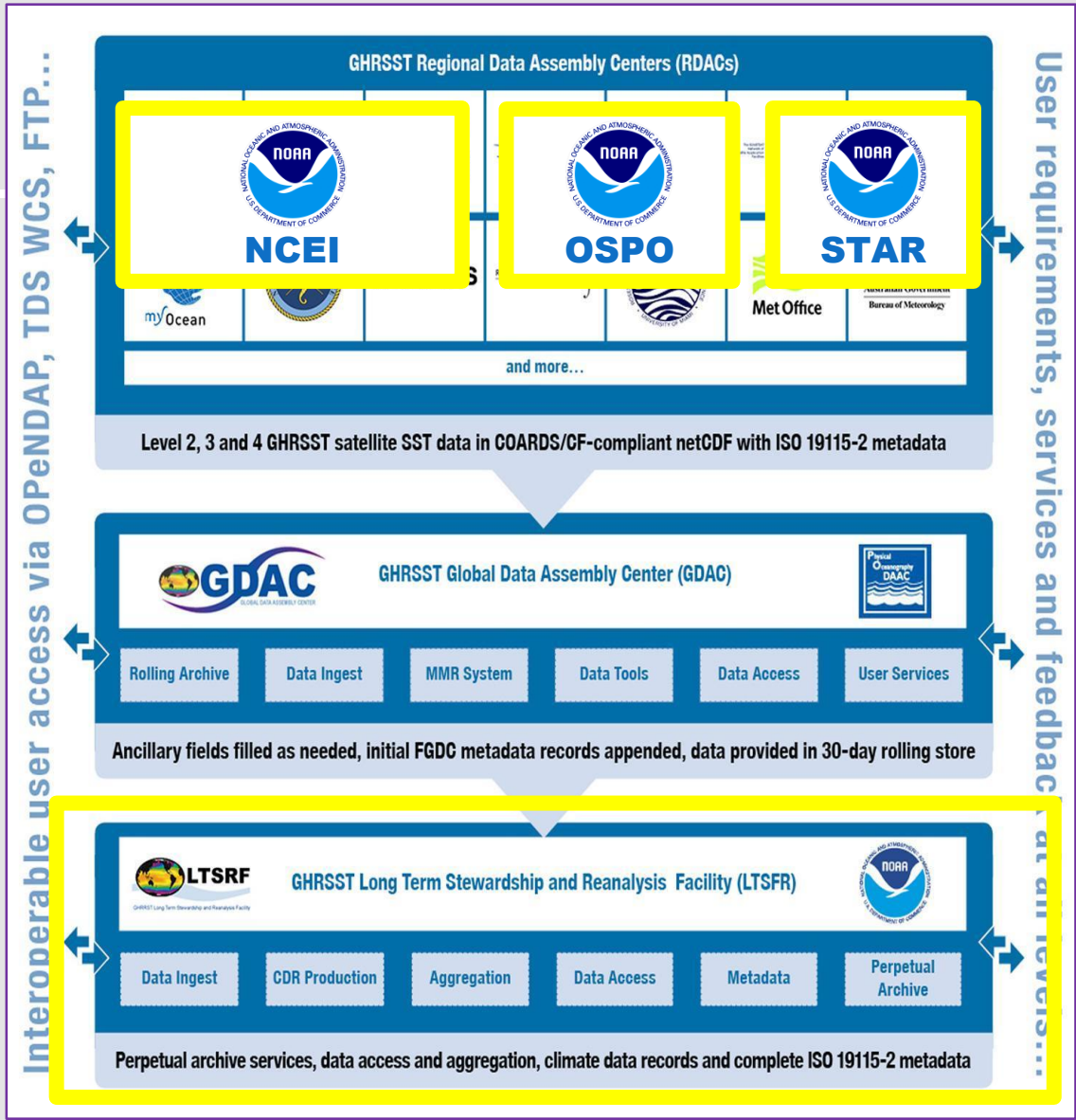
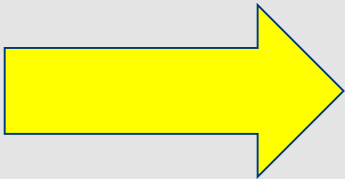
Long Term Stewardship and Reanalysis Facility (LTSRF) at
NOAA's National Centers for Environmental Information (NCEI)

Yongsheng Zhang, John Relph, Yuanjie Li, Korak Saha, Xuepeng Zhao and Huai-min Zhang

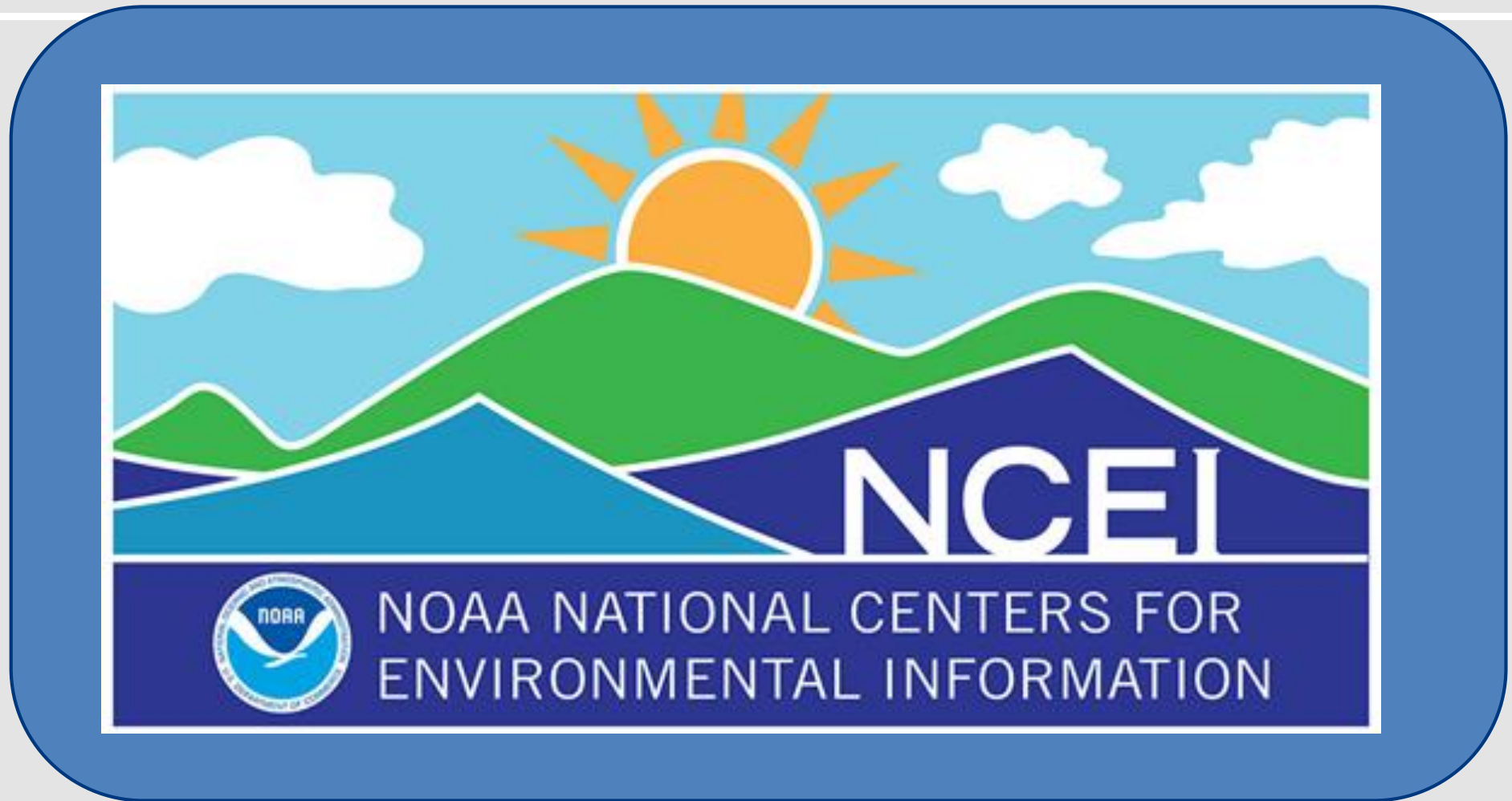
June 3-8, 2019



As a Reminder...

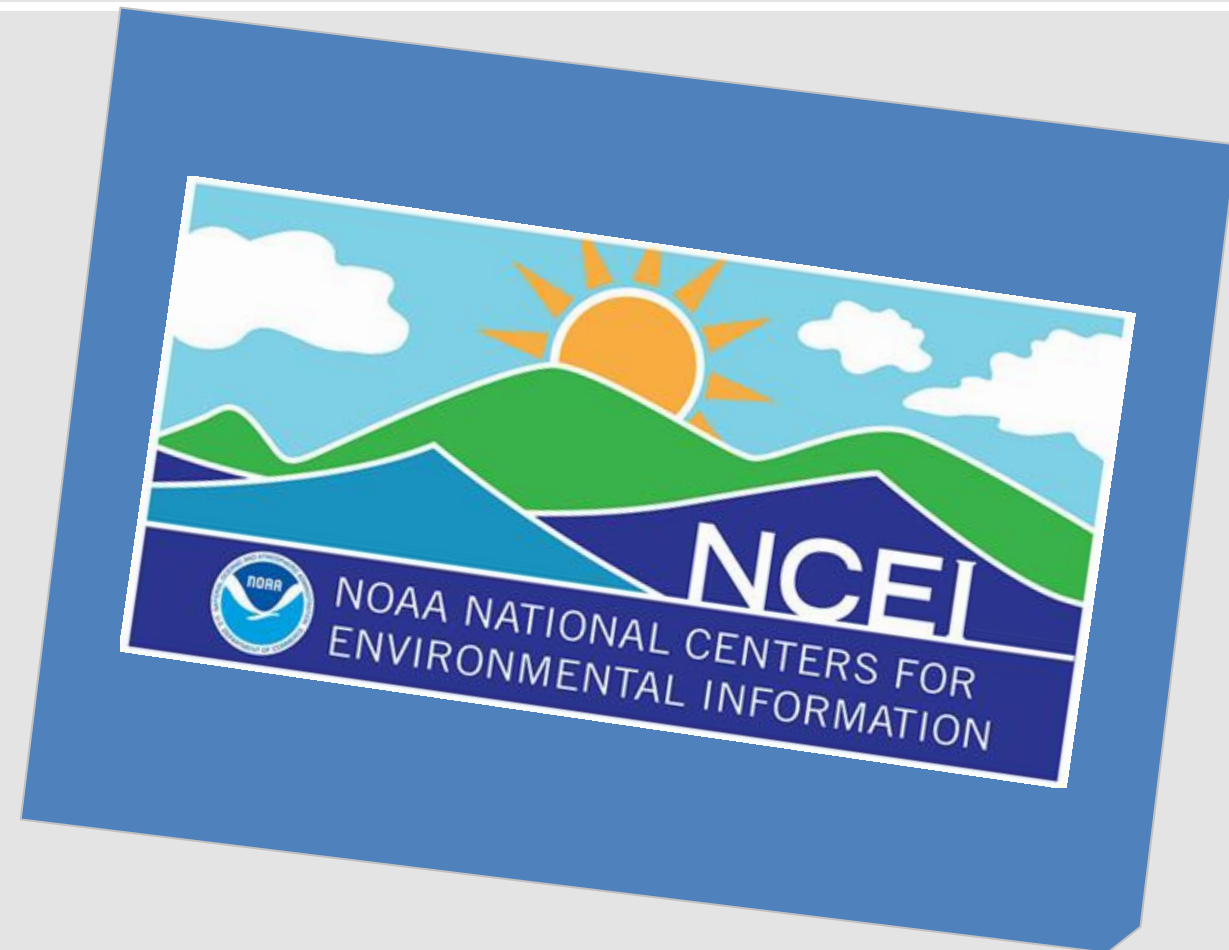


National Centers for Environmental Information



LTSRF: Long Term Stewardship and Reanalysis Facility

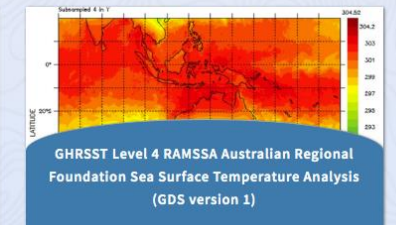
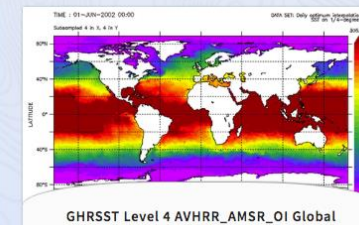
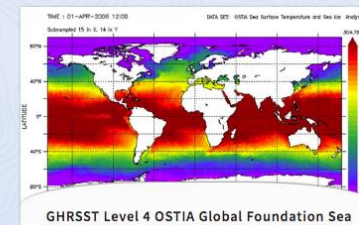
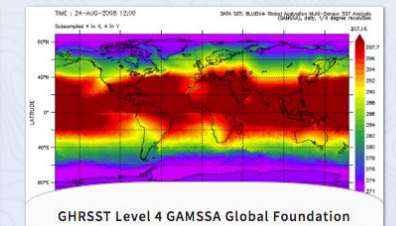
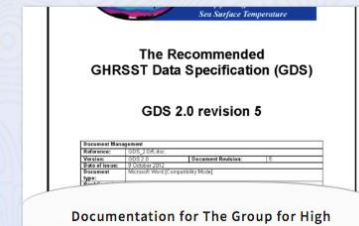
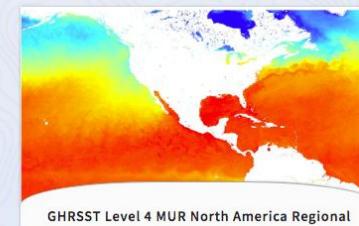
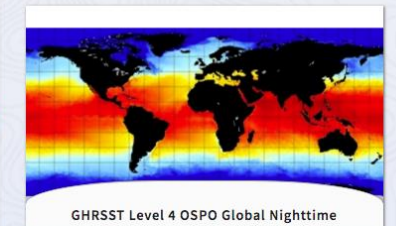
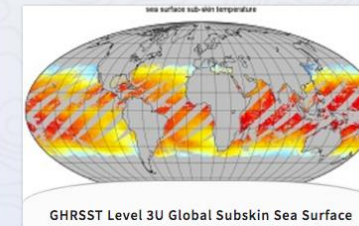
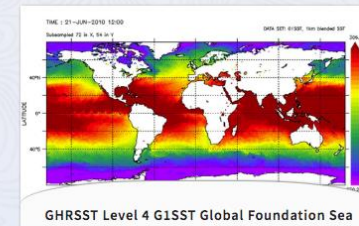
- Archives all GHR SST data via GDAC, plus directly receives NOAA ACSPO SSTs
- Provides enhanced collection and granule level discovery services, plus access:
 - FTP/HTTPS
 - THREDDS Data Server (TDS)
 - OPeNDAP Hyrax Server (a new version will be installed soon)
 - Live Access Server (LAS)
 - ArcGIS Server



LTSRF: Key Updates to Cover

- New Products since G19
- Dynamic Data Table
- CEOS CWIC Integration
- GHRSSST OneStop
- Archive and Access Statistics
- Issues for Discussion
- Future Challenge

Search Results (showing 20 of 109)



Snapshot of example GHRSSST products in the NCEI LTSRF Archive

LTSRF: New Products Since G19

- GOES16-OSISAF-L3C-v1.0
- K10_SST-NAVO-L4-GLOB-v01
- VIIRS_N20-OSPO-L2P-v2.60
- VIIRS_N20-OSPO-L2P-v2.61
- VIIRS_N20-OSPO-L3U-v2.60
- VIIRS_N20-OSPO-L3U-v2.61
- VIIRS_NPP-OSPO-L2P-v2.60
- VIIRS_NPP-OSPO-L2P-v2.61
- VIIRS_NPP-OSPO-L3U-v2.60
- VIIRS_NPP-OSPO-L3U-v2.61

LTSRF: Dynamic Data Table

Continual Updates to Dynamic Data Table

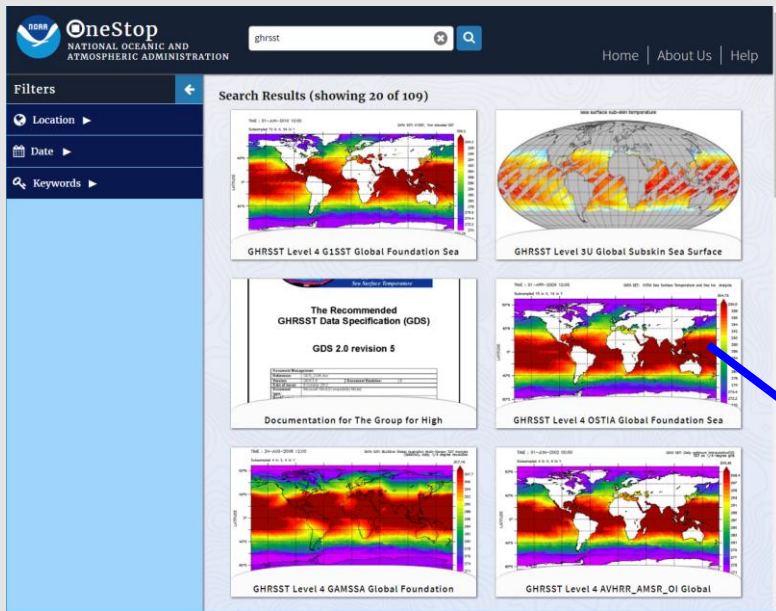
- Built automatically and dynamically from metadata and archive metrics
- Includes key summary information for each product
- Includes data access and metadata links
- Summary states for all products displayed at bottom

GHRST Products in the LTSRF										
RDAC	Product	Product Level	Start Date	End Date	Currently Active	GDS Version	Grid / Pixel Resolution	Metadata	Access	Disk Volume - Number of Days - Number of Files
ABOM	GAMSSA_28km GLOB	L4	2008-08-24	2018-09-09	no	1.5	28 km	Granule Search · LandingPage · Live Access Server	FTP · HTTP · THREDDS	3.5GB · 3649 days · 3649 files
	RAMSSA_09km AUS	L4	2008-04-01	2018-09-09	no	1.5	9 km	Granule Search · LandingPage · Live Access Server	FTP · HTTP · THREDDS	5.9GB · 3774 days · 3778 files
CMC	CMC0.1deg GLOB	L4	2016-11-10	2018-11-13	no	2.0	0.1°	Granule Search · LandingPage	FTP · HTTP · THREDDS	3.6GB · 496 days · 496 files
	CMC0.2deg GLOB	L4	1991-09-01	2017-03-17	no	2.0	0.2°	Granule Search · LandingPage · Live Access Server	FTP · HTTP · THREDDS	19.2GB · 9329 days · 9329 files
DMI	DMI_OI GLOB	L4	2013-12-11	2018-11-14	no	2.0	0.05°	Granule Search · LandingPage · Live Access Server	FTP · HTTP · THREDDS	146.8GB · 977 days · 977 files
	DMI_OI NSEABALTIC	L4	2007-06-04	2016-03-04	no	1.5	3 km	Granule Search · LandingPage · Live Access Server	FTP · HTTP · THREDDS	1.6GB · 3161 days · 3161 files

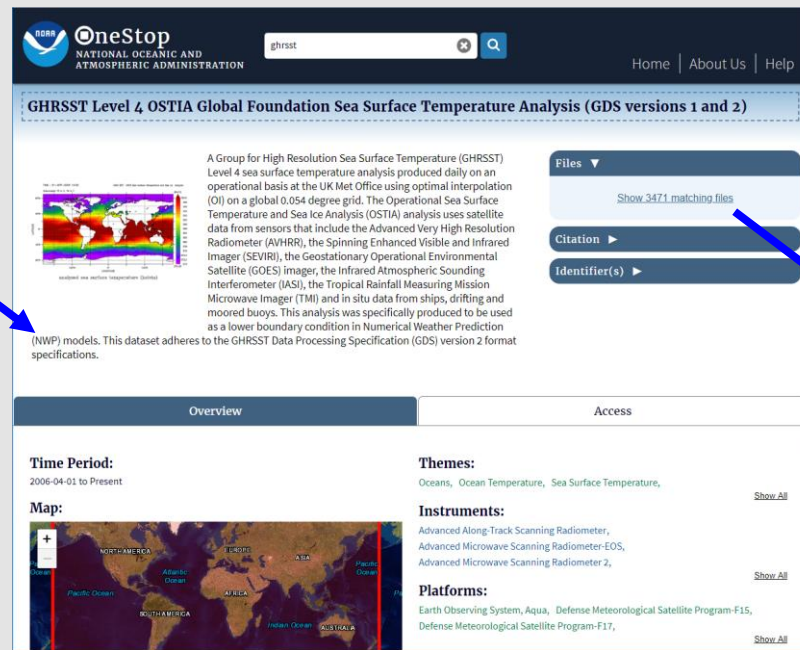
<https://ghrsst.nodc.noaa.gov/accessdata.html>

LTSRF: GHRSSST Search at NOAA OneStop

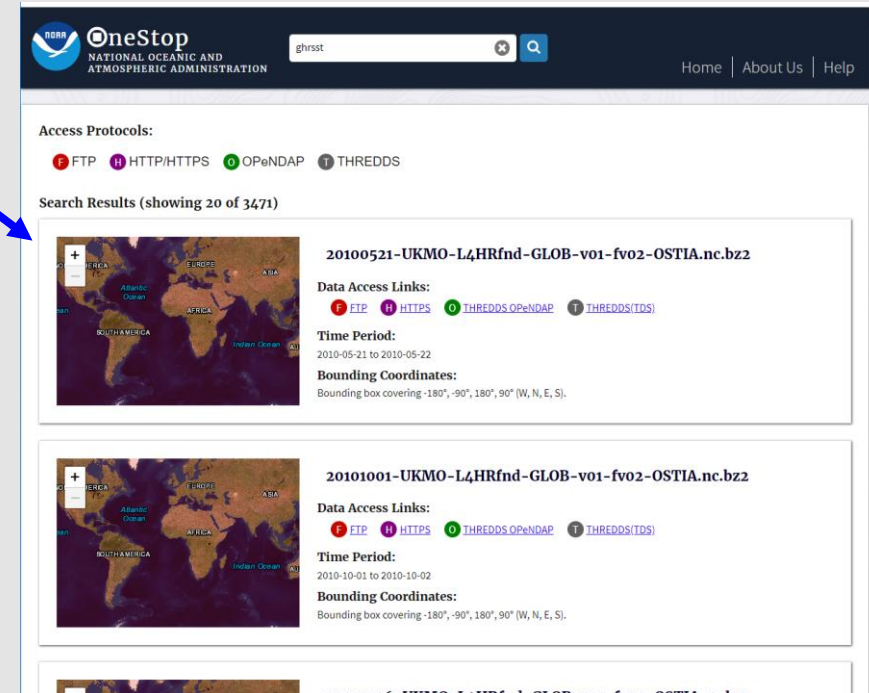
<https://data.noaa.gov/onestop/#/collections?q=GHRSSST>



Find the GHRSSST Collections...



Examine the details for one...



List and interact with the granules...



LTSRF: CEOS CWIC Integration

CEOS CWIC Integration

- Established the test connection to the OneStop granule search API
- Granule inventories 90 out of 98 GHRSSST data sets are discoverable
- Over 4 million granules indexed, on way to 7 million

CEOS Committee on Earth Observation Satellites

CEOS WGISS Integrated Catalog (CWIC)
Version 2 - Test page
CWIC DEV instance

Last updated: 2016-10-04

◆ GetRecords - Test Examples

CWIC GetRecords Options

Catalog ID: NOAAONES
Dataset ID: GHRSSST Level 4 ODYSSEA North-Western E...
Maximum Record: 1
Spatial: West 13, North 3, 60
Temporal: Start 2008-01-22T00:00:00Z, End 2019-05-22
Request: brief summary full
Profile: Core ISO
build the CWIC Open Search query examples

◆ GetRecordById - Test Examples (NOAA/CLASS dataset records are not supported!)

CWIC GetRecordById Options

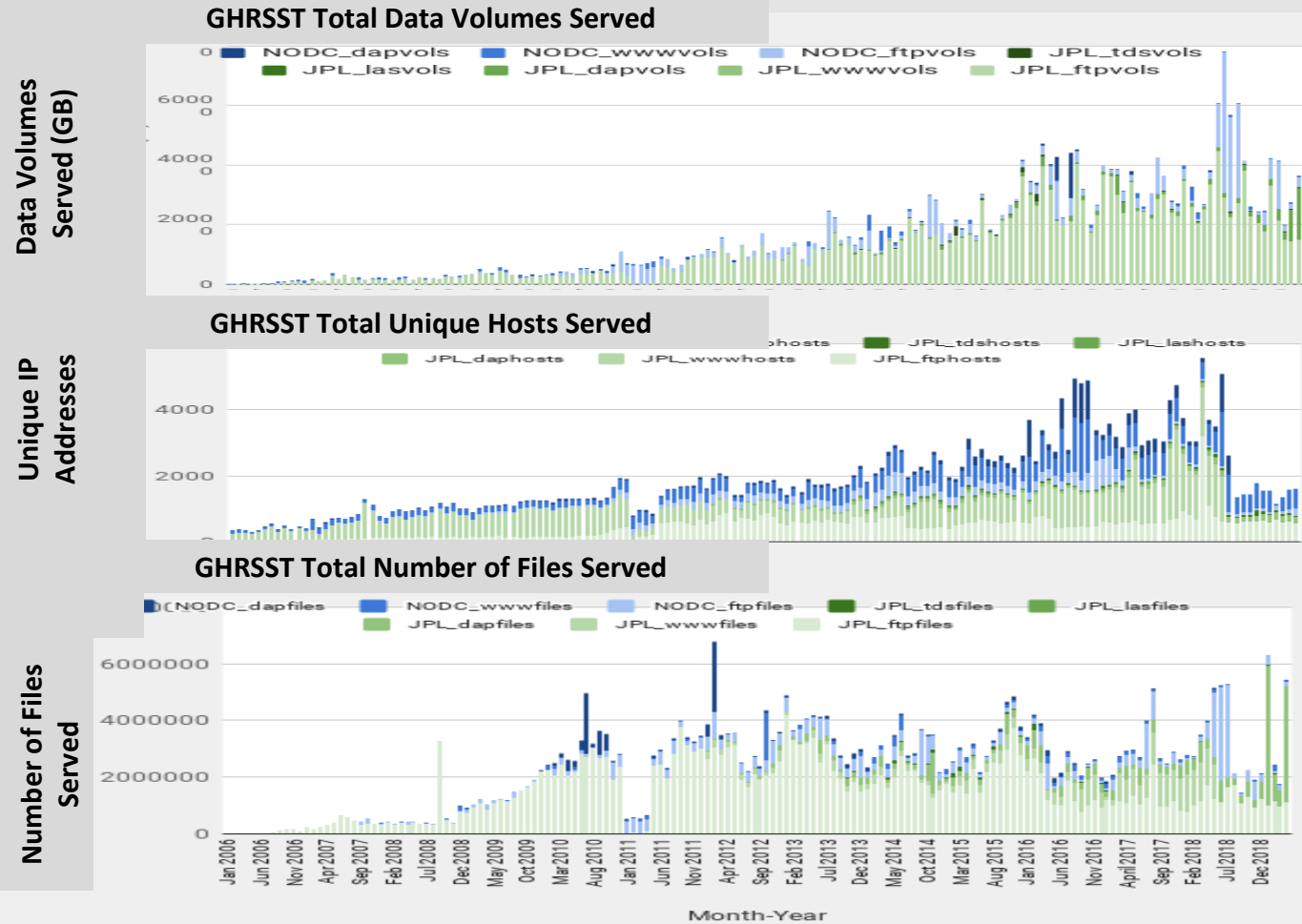
Record ID:
Request: brief summary full
Profile: Core ISO
Click to build the CWIC GetRecordById open query links

LTSRF: Monthly Access Statistics + GDAC

Archive and Access Statistics: (January 2006 – April 2019)

- Volume Accessed/Month
- # Hosts Served/Month
- # Files Accessed/Month

13+ Years of Service!



LTSRF: Daily Access Statistics

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019*
Files served per day	85	1130	1734	3413	21,956	14,896	28,807	20,056	21,196	12,979	15,020	18,041	32,850	9612
GB served per day	0.2	1.8	3.9	18.8	66.3	115	73	145	156	122	202	153	407	204
Users served per day	3	7	8	8	11	19	19	24	36	38	63	39	33	19

* Estimated based on January 1 - April 30, 2019

* Statistics only cover ftp and http access since July 1, 2018

LTSRF: Total Archive Holdings

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019*
Products	22	26	27	40	59	60	62	77	81	89	97	99
# of AIPs (K)	39	50	60	68	92	105	112	132	148	158	169	174
Files (M)	0.68	0.99	1.35	1.66	2.46	3.29	3.97	4.89	5.89	6.44	6.67	7.21
Volume (TB)	13	20	28	34	57	69	81	99	124	139	154	161

* As of May 20, 2019

LTSRF: On the Horizon . . .

Issues to Discuss . . .

- Rearchitecting archival and access processes to align with evolving NCEI enterprise data management
- Differences between JPL PO.DAAC and NCEI dataset organization practices

Key Challenge for the Future . . .

- Implementing updates to meet the future Regional/Global Task Sharing Framework requirements

