



# G17 LTSRF Update

Presented by Kenneth S. Casey  
on behalf of the LTSRF Team

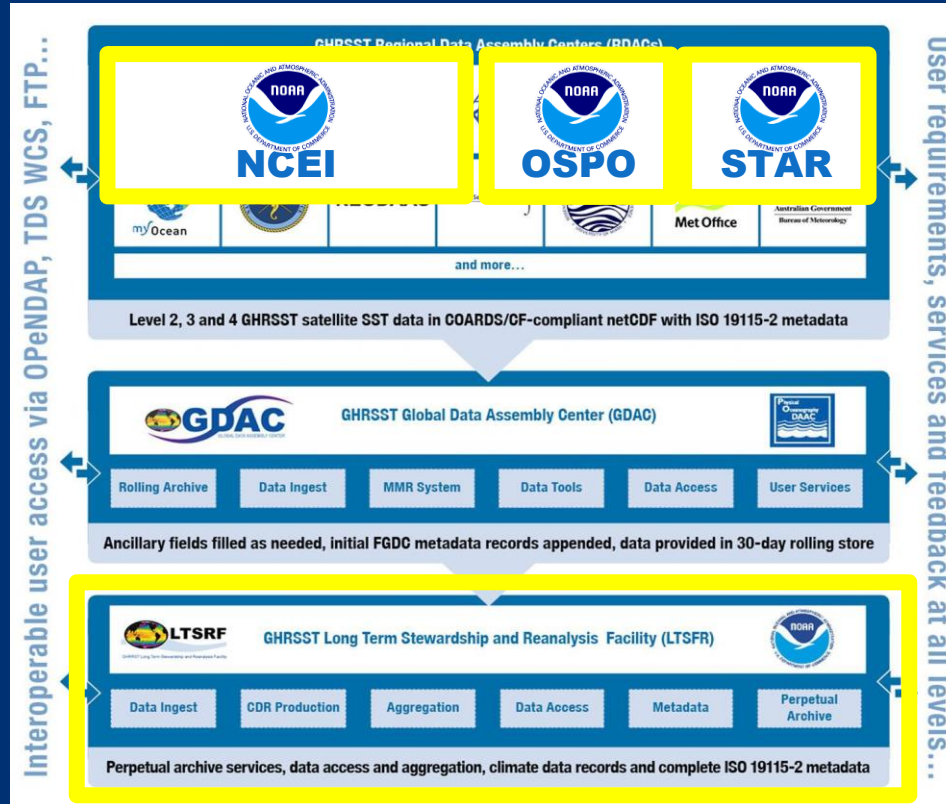


Long Term Stewardship and Reanalysis Facility (LTSRF) at  
NOAA's National Centers for Environmental Information (NCEI)

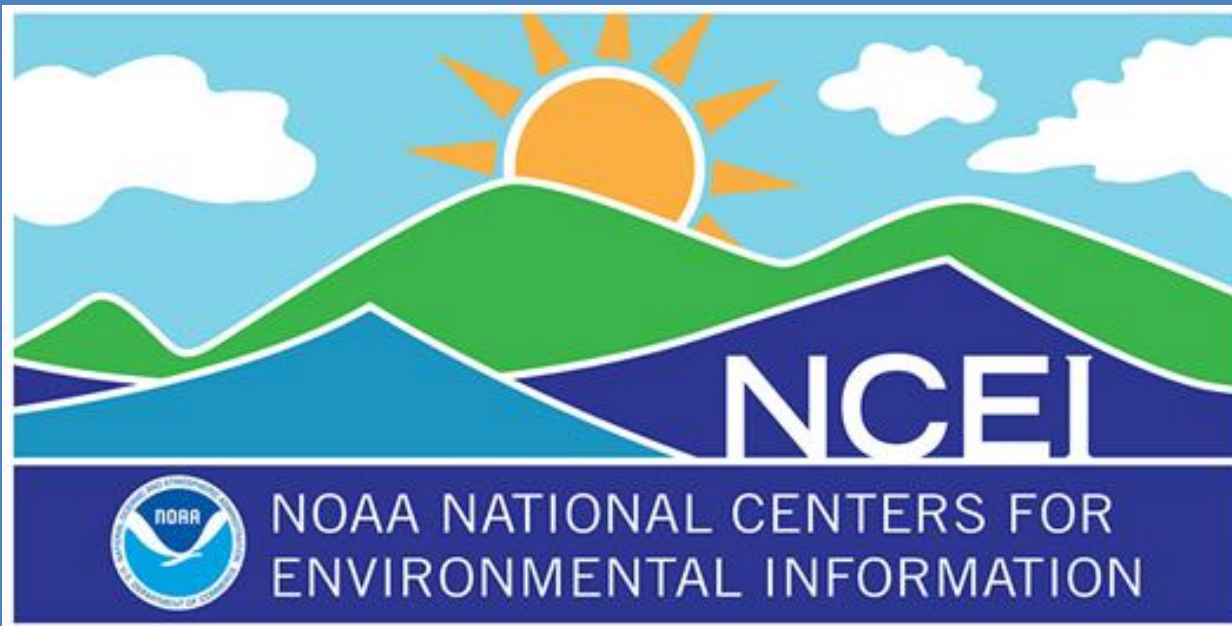
Korak Saha, Ajay Krishnan, Yuanjie Li, John Relph,  
Dexin Zhang, Yongsheng Zhang, Sheekela Baker-Yeboah



# NOAA in GHRSSST



# National Centers for Environmental Information





# LTSRF: Long Term Stewardship and Reanalysis Facility

- Continues to archive all GHR SST data via GDAC, plus directly receives NOAA ACSPO SSTs
- Continues to provide enhanced collection and granule level discovery services, plus access:
  - ✓ FTP/HTTP
  - ✓ THREDDS Data Server
  - ✓ OPeNDAP Hyrax Server
  - ✓ Live Access Server
  - ✓ ArcGIS Server





# LTSRF: Key Updates

- New Products since G17
- Dynamic Data Table
- Digital Object Identifiers (DOIs)
- Real-time archive of OSPO  
ACSP0 VIIRS
- CEOS CWIC Integration
- Archive and Access  
Statistics
- On the Horizon/Issues





# LTSRF: New Products Since G16

- [GHRSSST-SEVIRI-SST-OSISAF-L3C-v1.0](#)
- [GHRSSST-Geo-Polar-Blended-OSPO-L4-GLOB-v1.0](#)
- [GHRSSST-Geo-Polar-Blended-Night-OSPO-L4-GLOB-v1.0](#)
- [GHRSSST-REMSS-L4HRInd-GLOB-MWIRCI](#)
- [GHRSSST-VIIRS-NPP-OSPO-L3U-v2.1](#)
- [GHRSSST-AVHRR-SST-METOP-B-NAR-OSISAF-L3C-v1.0](#)

Plus:

[GHRSSST-AVHRR-ORNGE-L4-GLOB](#) in GDS2  
format

Three more from OSISAF soon







# LTSRF: Dynamic Data Table

## 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 stats for all products displayed at bottom
- Improvements made in last year for consistency

GHRSSST Products in the LTSRF									
RDAC	Product	Product Level	Start Date	End Date	GDS Version	Grid / Pixel Resolution	Metadata	Access	Disk Volume · Number of Days · Number of Files
ABOM	GAMSSA_28km GLOB	L4	2008-08-24	2015-05-30	1.5	28 km	<a href="#">Details</a> · <a href="#">Granule Search</a> · <a href="#">Live Access Server</a>	<a href="#">FTP</a> · <a href="#">HTTP</a> · <a href="#">OPeNDAP</a> · <a href="#">THREDDS</a>	2.4GB · 2468 days · 2468 files
	RAMSSA_09km AUS	L4	2008-04-01	2015-05-30	1.5	9 km	<a href="#">Details</a> · <a href="#">Granule Search</a> · <a href="#">Live Access Server</a>	<a href="#">FTP</a> · <a href="#">HTTP</a> · <a href="#">OPeNDAP</a> · <a href="#">THREDDS</a>	4.1GB · 2593 days · 2597 files
CMC	CMC0.2deg GLOB	L4	2013-06-27	2015-05-04	2.0	0.2°	<a href="#">Details</a> · <a href="#">Granule Search</a> · <a href="#">Live Access Server</a>	<a href="#">FTP</a> · <a href="#">HTTP</a> · <a href="#">OPeNDAP</a> · <a href="#">THREDDS</a>	0.9GB · 448 days · 448 files
DMI	DMI_OI GLOB	L4	2013-12-11	2015-04-23	2.0	0.05°	<a href="#">Details</a> · <a href="#">Granule Search</a>	<a href="#">FTP</a> · <a href="#">HTTP</a> · <a href="#">OPeNDAP</a> · <a href="#">THREDDS</a>	20.4GB · 123 days · 136 files
	DMI_OI_NSEABALTIC	L4	2007-06-04	2015-05-31	1.5	3 km	<a href="#">Details</a> · <a href="#">Granule Search</a> · <a href="#">Live Access Server</a>	<a href="#">FTP</a> · <a href="#">HTTP</a> · <a href="#">OPeNDAP</a> · <a href="#">THREDDS</a>	1.5GB · 2887 days · 2887 files
EUR	AMSRE	L2P	2004-12-19	2007-02-26	1.5	25 km	<a href="#">Details</a> · <a href="#">Granule Search</a> · <a href="#">Live Access Server</a>	<a href="#">FTP</a> · <a href="#">HTTP</a> · <a href="#">OPeNDAP</a> · <a href="#">THREDDS</a>	3.0GB · 744 days · 8995 files
	ATS_NR_2P	L2P	2004-12-30	2009-09-29	1.5	1 km	<a href="#">Details</a> · <a href="#">Granule Search</a>	<a href="#">FTP</a> · <a href="#">HTTP</a> · <a href="#">OPeNDAP</a> · <a href="#">THREDDS</a>	315.4GB · 1643 days · 22303 files

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



# LTSRF: Reminder about DOIs

## Digital Object Identifiers (DOIs)

- Can be minted for your GDS datasets
- Sent out request for authorship lists
- Not required
- Just minted six new OSPO DOIs

The screenshot shows the NOAA National Oceanographic Data Center (NODC) website. The main heading is "GHRSSST Level 2P Global Skin Sea Surface Temperature from the Visible Infrared Imaging Radiometer Suite (VIIRS) on the Suomi NPP satellite created by the NOAA Advanced Clear Sky Processor for Ocean (ACSP0) (GDS version 2)". Below the heading, there is a "Preview graphic" showing a satellite image of the Arctic region. The text describes the Joint Polar Satellite System (JPSS) and the VIIRS sensor. On the right side, there are sections for "Dataset Citation" and "Dataset Identifier(s)", which include the URL [gov.noaa.nodc:GHRSSST-VIIRS\\_NPP-OSPO-L2P-v2.3](http://gov.noaa.nodc:GHRSSST-VIIRS_NPP-OSPO-L2P-v2.3) and the DOI [doi:10.7289/V5PR7SX5](https://doi.org/10.7289/V5PR7SX5). At the bottom, there is a navigation bar with tabs for "Access", "Documentation", "Description", "Coverage", "Keywords", and "Constraints".

<http://dx.doi.org/10.7289/V5PR7SX5>

Washington, D.C.

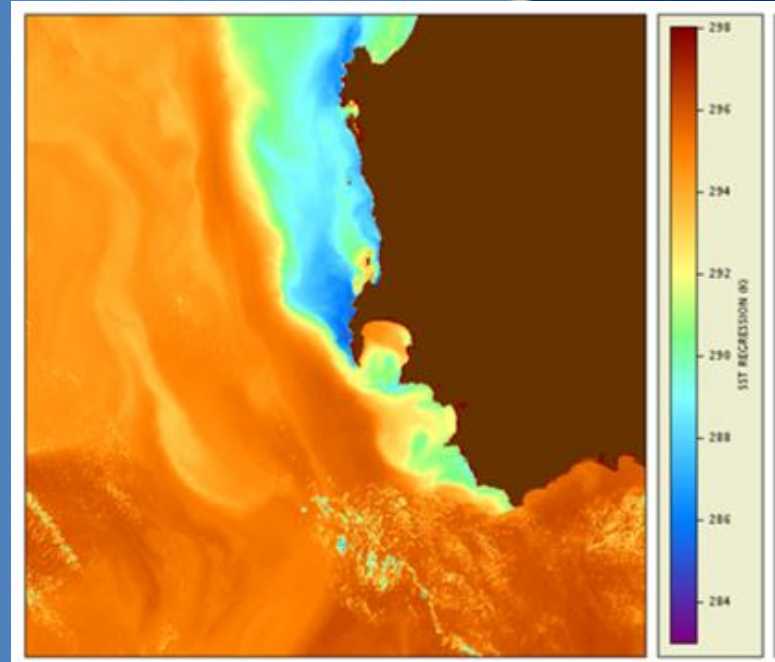




# LTSRF: Real-time Archive of OSPO ACSPO VIIRS

Real-time Archive of OSPO  
ACSPO VIIRS L3U and L2P  
SST ver 2.4

- Archived without 30-day lag to meet NOAA requirements from JPSS Program
- Mechanism established last year, put into operations this year for direct ingest of GHRSSST data by LTSRF





# LTSRF: CEOS CWIC Integration Update

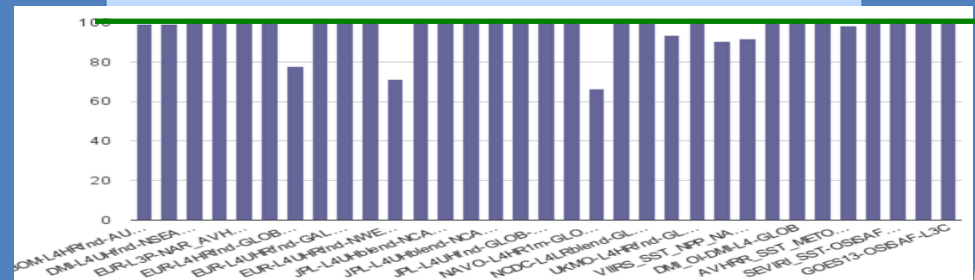
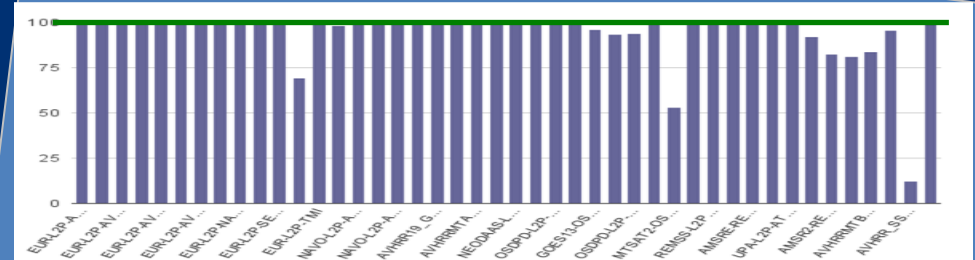
## CEOS CWIC Integration Update

- Connection to CEOS WGISS Integrated Catalog (CWIC) maintained
- Granule inventories for discovery nearly 100%
- New [granule Geoportal](#) deployed!

Shopping cart

Improved REST APIs

L2P



L3/L4

100%

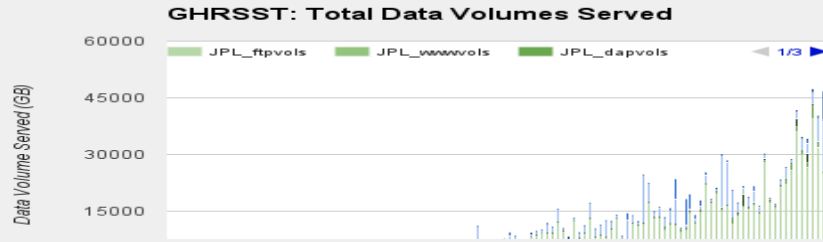


# LTSRF: Archive and Access Statistics + GDAC

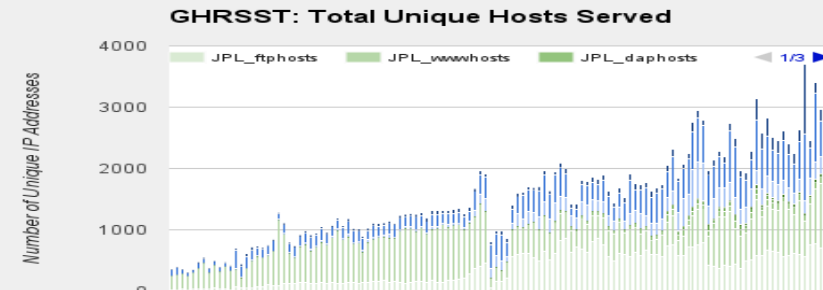
Archive and Access Statistics  
January 2006 – June 2016

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

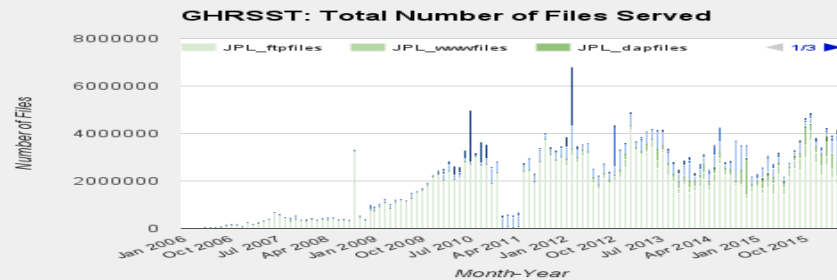
10+ Years of Service!



Volume



Hosts



Files



# LTSRF: Daily Archive and Access Statistics

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016*
<b>Files served per day</b>	85	1130	1734	3413	21,956	14,896	28,807	20,056	21,196	12,979	23,195
<b>GB served per day</b>	0.2	1.8	3.9	18.8	66.3	115	73	145	156	68	297
<b>Users served per day</b>	3	7	8	8	11	19	19	24	36	38	37

\* Estimated based on Jan-April 2016



# LTSRF: Total Archive Holdings

## Archive and Access Statistics

	2008	2009	2010	2011	2012	2013	2014	2015	2016*
<b>Products</b>	22	26	27	40	59	60	62	77	81
<b># of AIPs</b>	39k	50k	60k	68k	92k	105k	112k	132k	144k
<b>Files</b>	0.68M	0.99M	1.35M	1.66M	2.46M	3.29M	3.97M	4.89M	5.64M
<b>Volume (TB)</b>	13	20	28	34	57	69	81	99	109

\* As of 27 May 2016

# LTSRF: On the Horizon/Issues

## On the Horizon/Issues

- Not yet known when URLs will change to new NCEI name, but long lead times and re-directs will be enabled
- Future Regional/Global Task Sharing Framework ideas

