

# Scientific Stewardship of GHRSSST Products at the NOAA National Centers for Environmental Information (NCEI)

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## Introduction

In its role as the US archive for oceanographic, geophysical and meteorological data, the NOAA National Centers for Environmental Information (NCEI) provides scientific data stewardship including near real-time and delayed-mode product distribution, rigorous archive services, custom products, and long-term data stewardship for the NOAA oceanographic satellite products. As such, NCEI provides scientific stewardship of the Group for High Resolution Sea Surface Temperature (GHRSSST) data through maintaining the Long Term Stewardship and Reanalysis Facility (LTSRF) for the GHRSSST Project. NCEI works with NASA's Physical Oceanography Distributed Active Archive Center (PO.DAAC) Global Data Assembly Center (GDAC) to provide stewardship of these valuable datasets.

## NCEI Efforts in Scientific Data Stewardship of the GHRSSST Products

- Coordination of supporting agreements for sustainable archive of the GHRSSST Products.
- Review and creation of the controlled vocabularies in the NCEI Accession Tracking Database (ATDB) applied in the GHRSSST datasets, for instance, platforms, instruments, etc.
- Updating the NCEI automation archiving conventions and mapping tables for the new data sets, supporting timely automation archive of the GHRSSST data into the LTSRF system.
- Reviewing the collection and granule-level metadata and data format compliance, ensuring all the GHRSSST products adhere to ACDD, CF, and GHRSSST Data Specifications.
- Completing annual review of GHRSSST LTSRF and submitting the report to the annual GHRSSST International Science Team Meeting.
- Providing routine public data service for GHRSSST data at NCEI.

## GHRSSST Products Access at NCEI

(<https://www.nodc.noaa.gov/SatelliteData/ghrsst/accessdata.html>)

The screenshot shows the NOAA National Centers for Environmental Information (NCEI) website. The main heading is "LTSRF GHRSSST Long Term Stewardship and Reanalysis Facility". Below this, there is a section titled "Data Access is Here!" with several bullet points providing links and instructions for accessing GHRSSST data via HTTP, FTP, THREDDS, and Geoportal. It also mentions the Ocean Archive System and Live Access Server.

For a simple tutorial on accessing GHRSSST data from the LTSRF or GDAC, try the GHRSSST Data Access Tutorial in PDF (~4 MB) or PPT (~6 MB) formats.

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 · Live Access Server	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
EUR	AMSRE	L2P	2004-12-30	2007-02-26	no	1.5	25 km	Granule Search · LandingPage · Live Access Server	FTP · HTTP · THREDDS	3.0GB · 744 days · 8995 files
	ATS_NR_2P	L2P	2004-12-30	2009-09-29	no	1.5	1 km	Granule Search · LandingPage · Live Access Server	FTP · HTTP · THREDDS	315.4GB · 1643 days · 22303 files
	AVHRR16_G	L2P	2004-12-30	2006-08-14	no	1.5	8.8 km	Granule Search · LandingPage · Live Access Server	FTP · HTTP · THREDDS	0.6GB · 549 days · 7549 files
	AVHRR16_L	L2P	2004-12-30	2005-10-26	no	1.5	2.2 km	Granule Search · LandingPage · Live Access Server	FTP · HTTP · THREDDS	0.1GB · 241 days · 1021 files
	AVHRR17_G	L2P	2004-12-30	2007-02-26	no	1.5	8.8 km	Granule Search · LandingPage · Live Access Server	FTP · HTTP · THREDDS	0.8GB · 708 days · 9756 files

NCEI provides GHRSSST data access through FTP, HTTP, TDS and LAS servers.

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## NCEI Tiers of Scientific Data Stewardship



Most of the NCEI efforts in the GHRSSST project focus on the long term data preservation and basic access while the enhancement of data access, automation data quality assurance and collection of descriptive statistics are part of our future works depending on the user's requirement and availability of funding.

## GHRSSST Dataset Landing Page

The screenshot shows the NOAA National Centers for Environmental Information (NCEI) website for the "GHRSSST Level 3U OSPO dataset v2.61 from VIIRS on NOAA-20 Satellite (GDS v2) (GDS version 2)". It includes a search bar, navigation tabs (Home, Access Data, Submit Data, Public Outreach, About), and a detailed description of the dataset. There are links for "Dataset Citation", "Dataset Identifiers", and "ISO 19115-2 Metadata".

Each GHRSSST dataset has a corresponding NCEI dataset landing page which provides detailed information to the public, including data description, time and location, documentation, access, citation, collection ISO metadata, etc.

## GHRSSST Data Discovery: Collection Level

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

The screenshot shows the NOAA OneStop portal search results for "GHRSSST". It displays a list of filters (Location, Date, Keywords, Data Theme, Instruments, Platforms, Projects, Data Centers) and search results (showing 20 of 109). The results include various GHRSSST datasets such as "GHRSSST Level 4 G1SST Global Foundation Sea", "GHRSSST Level 3U Global Subskin Sea Surface", "GHRSSST Level 4 OSTIA Global Foundation Sea", and "GHRSSST Level 4 GAMSSA Global Foundation".

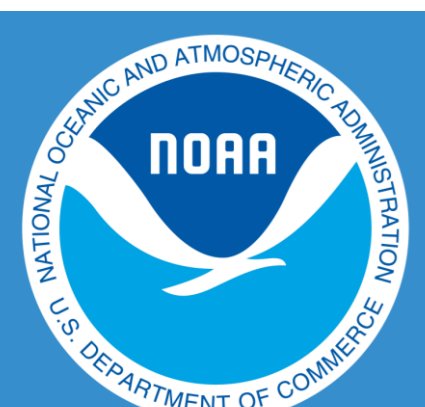
The GHRSSST data sets are searchable on the NOAA OneStop portal. Advanced search options are available by spatial, temporal, or GCMD keywords.

## GHRSSST Data Discovery: Granule Level

<https://data.noaa.gov/onestop/#/collections/granules/OneStopDatasetID>

The screenshot shows the NOAA OneStop portal search results for "GHRSSST Level 4 G1SST Global Foundation Sea Surface Temperature Analysis (GDS version 1)". It displays a map of the search area, a list of search results (showing 20 of 3006), and detailed information for a specific granule, including "Data Access Links", "Time Period", and "Bounding Coordinates".

The GHRSSST granules are also searchable on the OneStop portal. Granule search is available from both the OneStop user interface and the granule search API. More information can be found on the search from the granule API - <https://github.com/cedardevs/onestop/blob/master/docs/usage/search-api-requests.md>



NOAA/NESDIS National Centers for Environmental Information (NCEI)

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