



EOSDIS

NASA'S EARTH OBSERVING SYSTEM
DATA AND INFORMATION SYSTEM

State of the SOOS GCMD Portal

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EED2 Team, NASA's Global Change Master Directory
(GCMD)

SOOS Data Management Sub-Committee meeting
Hangzhou, China

Location: May 8, 2018

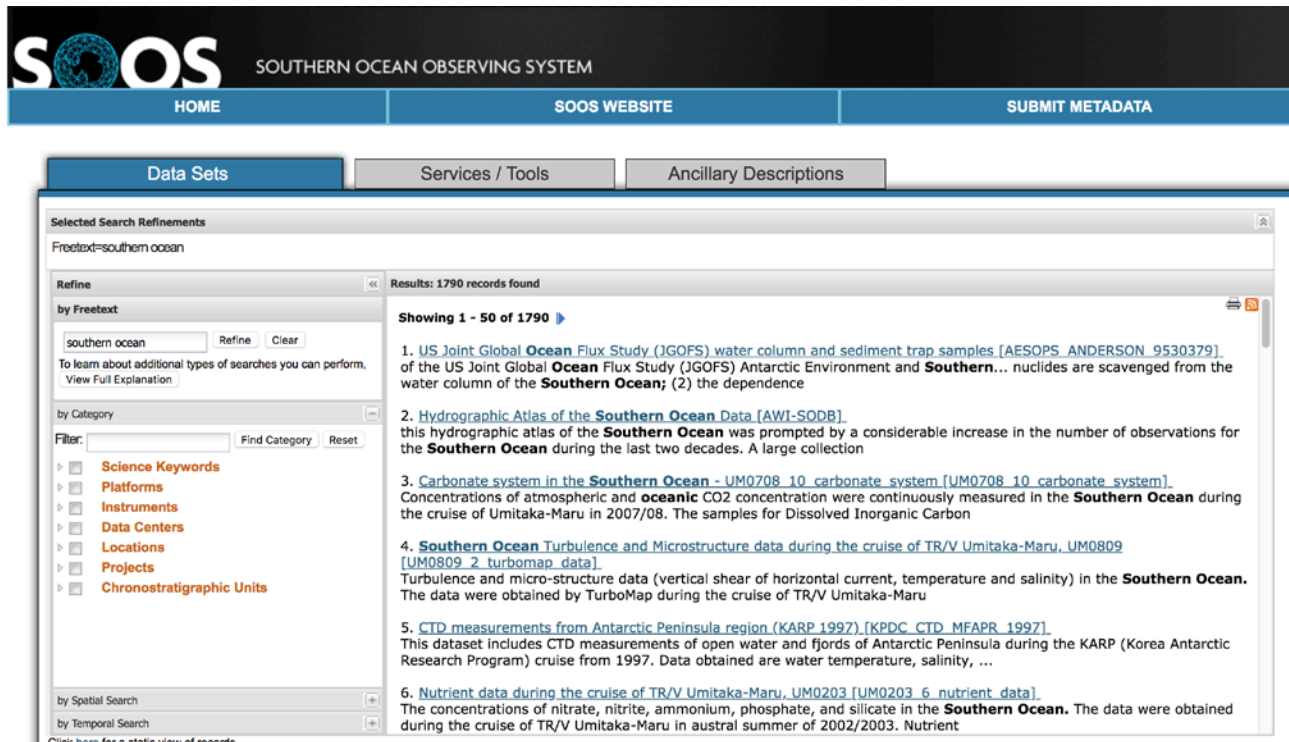
The material is based upon work supported by the National Aeronautics and Space
Administration under Contract Number **NNG15HZ39C**

SOOS PORTAL UPDATE

SOOS Portal Content

Total # records: 4,593 ( 3%)

Total # records w/ Get Data links: 2,980 (68.19%)



SOOS SOUTHERN OCEAN OBSERVING SYSTEM

HOME SOOS WEBSITE SUBMIT METADATA

Data Sets Services / Tools Ancillary Descriptions

Selected Search Refinements
Freetext=southern ocean

Refine Results: 1790 records found

by Freetext
southern ocean Refine Clear
To learn about additional types of searches you can perform, View Full Explanation

by Category
Filter: Find Category Reset

- Science Keywords
- Platforms
- Instruments
- Data Centers
- Locations
- Projects
- Chronostratigraphic Units

by Spatial Search
by Temporal Search

Showing 1 - 50 of 1790

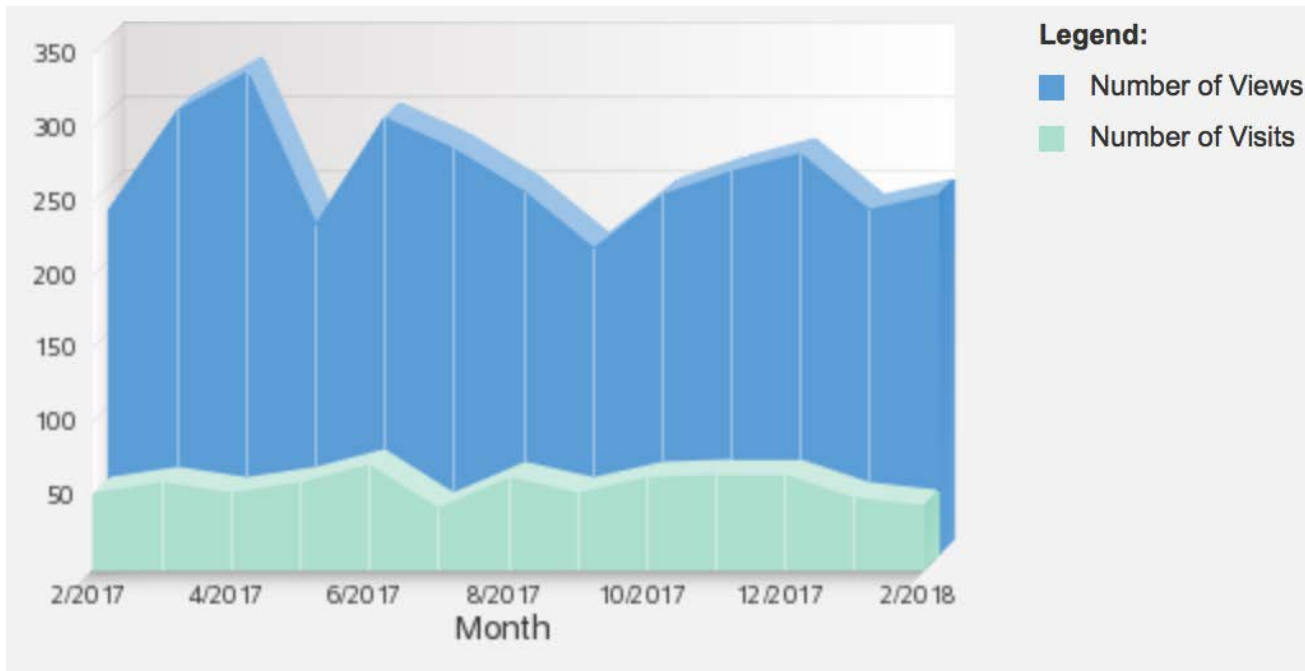
1. [US Joint Global Ocean Flux Study \(JGOFS\) water column and sediment trap samples \[AESOPS_ANDERSON_9530379\]](#)
of the US Joint Global Ocean Flux Study (JGOFS) Antarctic Environment and Southern... nuclides are scavenged from the water column of the Southern Ocean; (2) the dependence
2. [Hydrographic Atlas of the Southern Ocean Data \[AWI-SODB\]](#)
this hydrographic atlas of the Southern Ocean was prompted by a considerable increase in the number of observations for the Southern Ocean during the last two decades. A large collection
3. [Carbonate system in the Southern Ocean - UM0708_10 carbonate system \[UM0708_10 carbonate system\]](#)
Concentrations of atmospheric and oceanic CO2 concentration were continuously measured in the Southern Ocean during the cruise of Umitaka-Maru in 2007/08. The samples for Dissolved Inorganic Carbon
4. [Southern Ocean Turbulence and Microstructure data during the cruise of TR/V Umitaka-Maru, UM0809 \[UM0809_2 turbomap_data\]](#)
Turbulence and micro-structure data (vertical shear of horizontal current, temperature and salinity) in the Southern Ocean. The data were obtained by TurboMap during the cruise of TR/V Umitaka-Maru
5. [CTD measurements from Antarctic Peninsula region \(KARP 1997\) \[KPDC_CTD_MFAPR_1997\]](#)
This dataset includes CTD measurements of open water and fjords of Antarctic Peninsula during the KARP (Korea Antarctic Research Program) cruise from 1997. Data obtained are water temperature, salinity, ...
6. [Nutrient data during the cruise of TR/V Umitaka-Maru, UM0203 \[UM0203_6 nutrient_data\]](#)
The concentrations of nitrate, nitrite, ammonium, phosphate, and silicate in the Southern Ocean. The data were obtained during the cruise of TR/V Umitaka-Maru in austral summer of 2002/2003. Nutrient

Click here for a static view of records.

SOOS Portal Usage

Last 12 Months (Feb 2017 - Feb 2018)

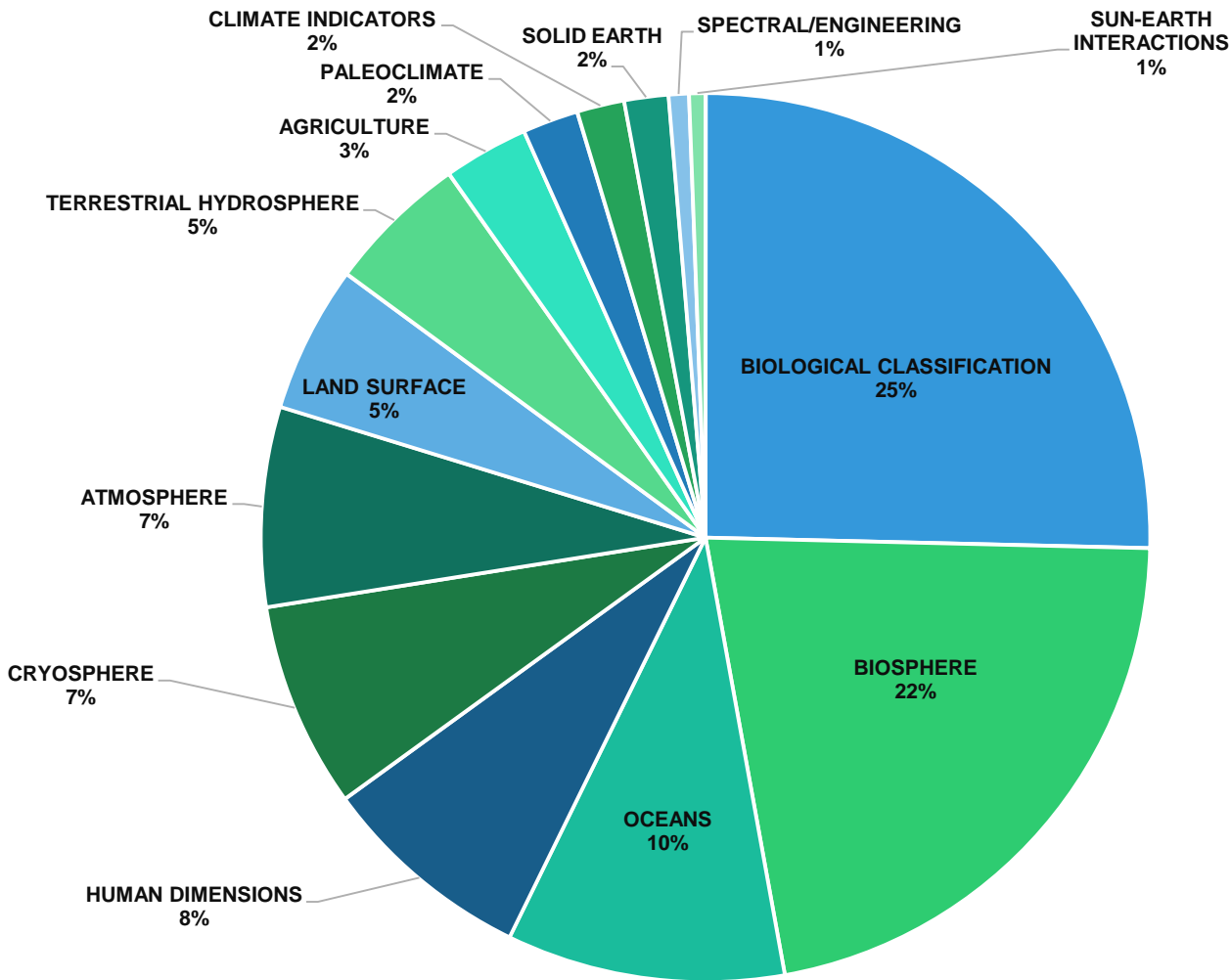
Total Views: 3,344 (-15%)
Total Visits: 763 (-11%)



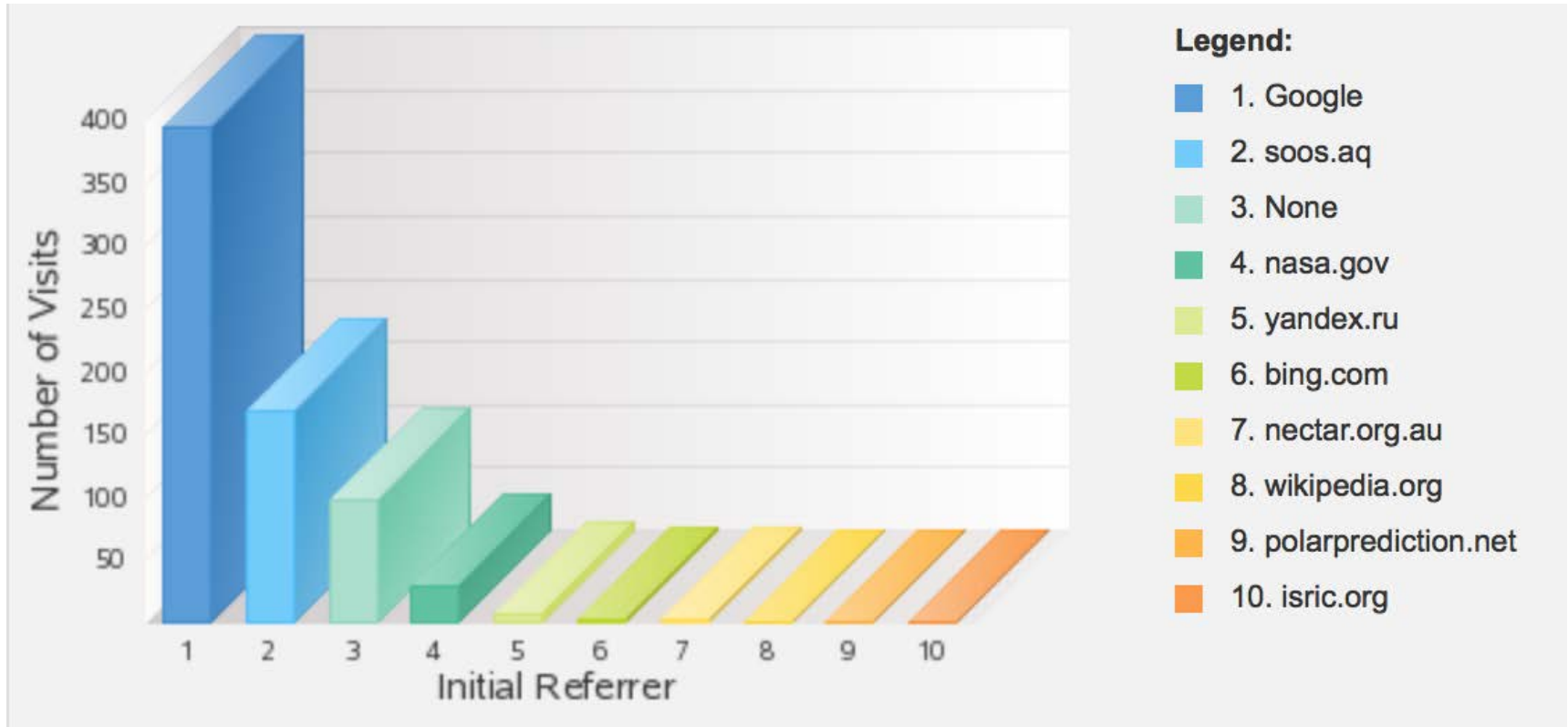
Previous year (Feb 2016 - Feb 2017)

Total Views: 3,954
Total Visits: 858

SOOS Portal Content by Science Topic

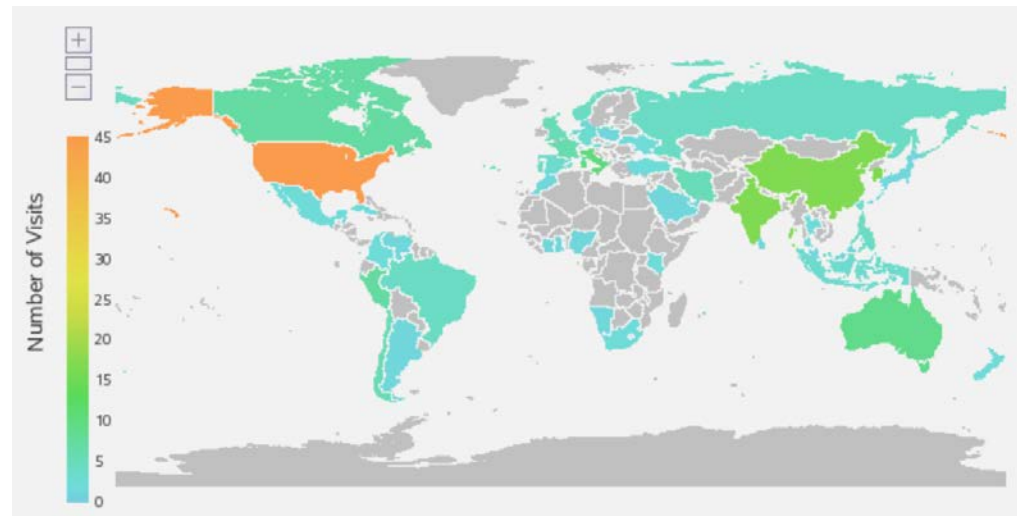
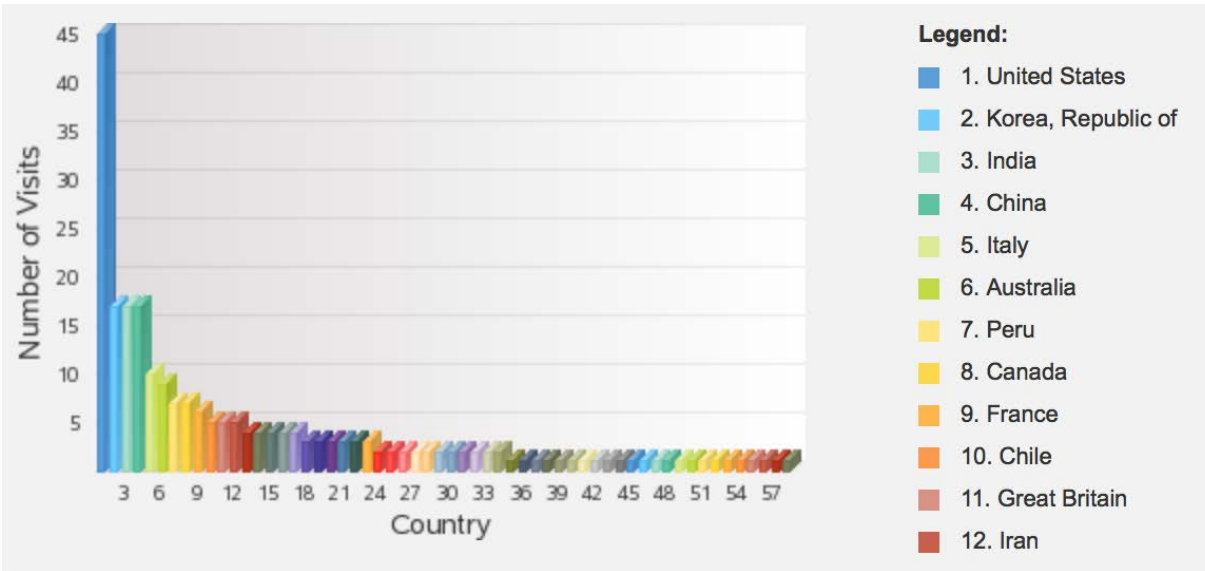


SOOS Portal Top Referrers February 2017– February 2018



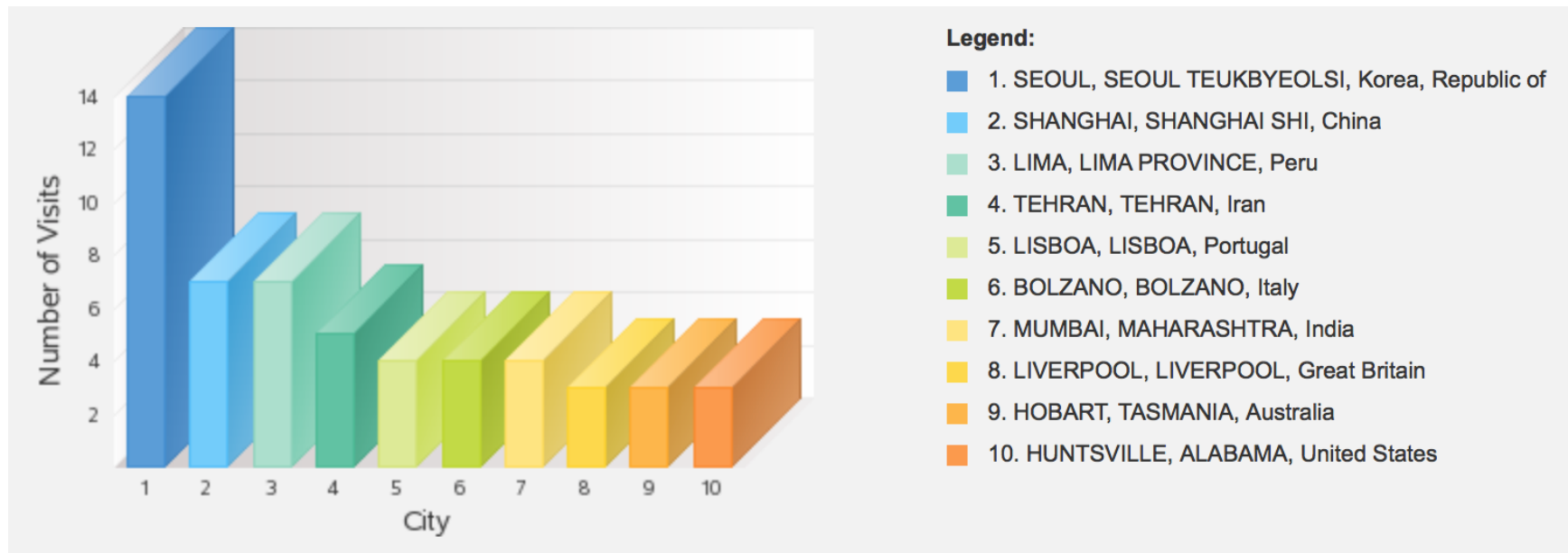
Portal Visits by Country

February 2017 – February 2018



Portal Visits by City

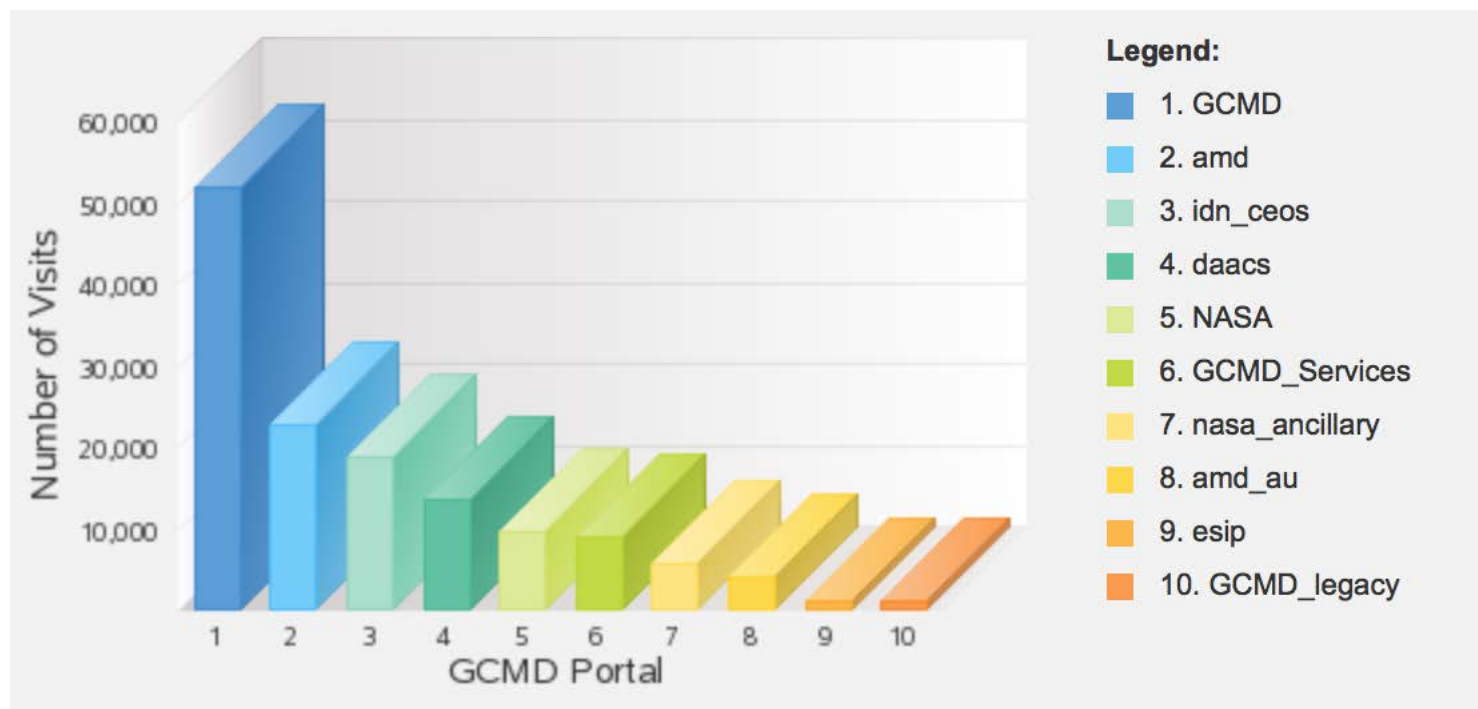
February 2017 – February 2018



Top GCMD Portals

February 2017 – February 2018

SOOS Portal is #12 by number of visits/portal



GCMD STATUS

- DIF-9 to DIF-10 Transition
- GCMD Keyword Update
- DIF-10.3

Why Transition From DIF-9 to DIF-10?

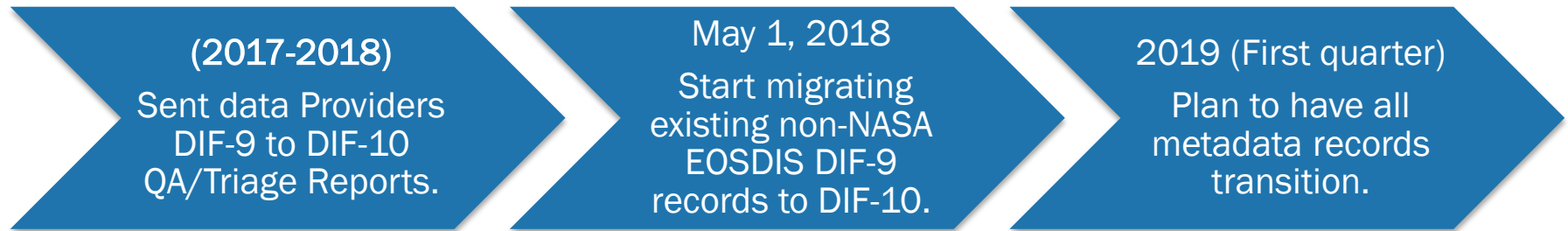
- DIF-10 offers improvements to the DIF including:
 - New fields (Ex: Product_Level_ID)
 - Clarified fields (Ex: Parameters changed to Science_Keywords)
 - Restructured fields (Ex: Hierarchical representation of Platforms/Instrument).
- These changes serve to bring the DIF in compliance with NASA's Unified Metadata Model (UMM) and integrate features requested by the IDN community.

DIF9 – DIF10 Mapping (Required Fields)

DIF-9 Fields	DIF-10 Fields
<i>Data Center/Organization</i>	<i>Organization</i>
Data Set Progress	Data Set Progress
<i>Entry_ID</i>	<i>Entry_ID (Shortname)</i>
<i>Data_Set_Citation/Version</i>	<i>Entry_ID (Version)</i>
Entry_Title	Entry_Title
ISO Topic Category	ISO Topic Category
<i>Source/Sensor</i>	<i>Platform/Instrument</i>
Project	Project
Related URL	Related URL
Science Keywords	Science Keywords
Spatial Coverage	Spatial Coverage
Summary	Summary
Temporal Coverage	Temporal Coverage
<i>None</i>	<i>Product Level ID</i>

RED fields indicate changes between DIF-9 and DIF-10

DIF-9 to DIF-10 Transition Schedule



- Providers need to submit new metadata in DIF-10 or any format compatible with NASA's Common Metadata Repository (CMR).
 - Compatible formats: DIF-10, NASA ISO (MENDs), and UMM-JSON.
- docBUILDER supports DIF-10 format.

GCMD KEYWORD UPDATE

Keyword Version 8.6 Release

Related URL

- Added: 32
- Deleted: 4
- Modified: 17

Water Quality/Water Chemistry

- Added: 33
- Deleted: 0
- Modified: 24

If you are interested in becoming a keyword reviewer, please contact the ESO at eso-staff@lists.nasa.gov.

Keyword Version 8.6 Release

Table: List of Changes to Keywords (Release Version 8.6)
67 keywords were added; 53 keywords were modified; 18 keywords were deleted
The rationale for the changes include: User Requests, Align With Common Terminology, User Search Behavior, Keyword Gap Analysis, New Variables Needed to Describe Data Sets, New Categories of Variables Needed to Distinguish Variables
For Science Keywords Under (Terrestrial Hydrosphere > Water Quality/Water Chemistry):
Add New Keywords: Contaminants, Gases, Isotopes, Solids, Water Characteristics, Water Quality Indexes, Pathogen, Disinfectants, Pesticides, Harmful Algal Blooms (HABs), Arsenic, Barium, Calcium, Chromium, Copper, Iron, Magnesium, Potassium, Selenium, Titanium, Lead, Sewage Overflows, Dissolved Nitrogen, Hydrocarbons, Inorganic Matter, Organic Matter, Nitrogen, Sediments, Water Color, Biochemical Oxygen Demand (BOD), Saline Concentration, Water Hardness, Water Odor, Hydrocarbons, Inorganic Matter, Nitrogen Compounds, Eutrophication, Organic Matter, Phosphorous Compounds, Global Drinking Water Quality Index, National Sanitation Foundation Water Quality Index, Trophic State Index
Replace Keywords: "Acid Deposition" with "Acid Rain"; "Phosphorous Compounds" with "Phosphorous"; "Dissolved Solids" with "Total Dissolved Solids"; "Water Potability" with "Potability"; "Benthic Index" with "Index of Biotic Integrity"
Move Keywords from Variable Level 1 to Variable Level 2: Petroleum Hydrocarbons, Inorganic Matter, Organic Matter, Acid Deposition, Carcinogens, Dissolved Gases, Dissolved Carbon Dioxide, Dissolved Oxygen, Radioisotopes, Stable Isotopes, Nitrogen Compounds, Phosphorous Compounds, Dissolved Solids, Suspended Solids, Chlorophyll Concentrations, Alkalinity, Conductivity, Light Transmission, pH, Turbidity, Water Ion Concentrations, Water Potability, Water Temperature, Water Trace Elements, Benthic Index
For Related URL Keywords:
Add New Keywords: Use Service API, GoTo Web Tool, USGS EarthExplorer, NOMADS, AppEEARS, Portal, Direct Download, Data Collection Bundle, Tabular Data Stream (TDS), Web Map Tile Service (WMTS), Instrument/Sensor Calibration Documentation, Case Study, Data Quality, Deliverables Checklist, Processing History, Production History, Product Quality Assessment, Product Usage, Read-Me, Data Recipe, Requirements and Design, Science Data Product Software Documentation, Science Data Product Validation, User Feedback Page, Data Citation Policy
Replace Keywords: "Software Package" with "Download Software"; "View Data Set Landing Page" with "Data Set Landing Page"; "View Extended Metadata" with "Extended Metadata"; "View Professional Home Page" with "Professional Home Page"; "View Project Home Page" with "Project Home Page"; "Data List" with "Virtual Collection"; "On-Line Archive" with "Data Tree"; "GDS" with "GrADS Data Server (GDS)"; "Get Web Coverage Service (WCS)" with "Web Coverage Service (WCS)"; "Workflow (Service Chain)" with "Service Chaining"; "Get Web Feature Service (WFS)" with "Web Feature Service (WFS)"; "Get Web Map Service (WMS)" with "Web Map Service (WMS)"; "Access Mobile App" with "Mobile App"; "SSW" with "Simple Subset Wizard (SSW)"; "Access Map Viewer" with "Map Viewer"; "LAS" with "Live Access Server (LAS)"; "View Micro Article" with "Micro Article"
Move Keywords from Different Type: OPENDAP Data, GrADS Data Server (GDS), Web Coverage Service (WCS), THREDDS Data, Map Service, Service Chaining, Web Feature Service, Web Map Service, OpenSearch, Mobile App, Simple Subset Wizard (SSW), Subsetter, Map Viewer, Live Access Server
Delete Keywords: Get Service, View Images, Alternate Access, KML, ECHO, EDG, OPENDAP Data (DODS), REVERB, DIF, THREDDS Catalog, THREDDS Directory, OPENDAP Directory (DODS), Access Web Service, Web Map for Time Series, SERF, Browse Sample, Data Contact, Data Center

Keyword Version 8.7 Proposed Topics (2019)

Cryosphere

Earth Science Services/
Web Services

Keyword Landing Page

- ✓ Access the GCMD Keywords
- ✓ Submit a Keyword Request
- ✓ See the Keyword Release Announcements
- ✓ Review the Keyword Governance Document

The screenshot shows the 'Global Change Master Directory (GCMD) Keywords' landing page. At the top, there is a search bar with the text 'Search datasets, news, articles, and information'. Below the search bar, the page title is 'Global Change Master Directory (GCMD) Keywords'. The page is divided into several sections:

- GCMD Keyword Links (Earthdata Wiki):** This section includes links for 'Access the GCMD Keywords', 'Submit a Keyword Request', 'Keyword Release Announcements', and 'Keyword Community Forum'.
- More Resources:** This section lists various resources such as 'Global Change Master Directory (GCMD)', 'Common Metadata Repository (CMR)', 'ESDIS Standards Office (ESO)', 'Keyword Governance and Community Guide Document', and 'GCMD Keyword Viewer (Alpha)'.
- Global Change Master Directory (GCMD) Keywords:** This section provides an overview of the GCMD Keywords, stating they are a hierarchical set of controlled Earth Science vocabularies. It lists categories such as Earth Science, Earth Science Services, Data Centers, Projects, Instruments/Sensors, Platforms/Sources, Locations, Horizontal Data Resolution, Vertical Data Resolution, Temporal Data Resolution, URL Content Types, and Chronostratigraphic Units.
- GCMD Keyword Community Forum:** This section describes the forum as a place for keyword users and metadata providers to discuss topics related to the GCMD Keywords. It includes a small image of the forum interface.
- More Information About the Keywords:** This section contains three links: 'GCMD Keyword Structure', 'Community Use of GCMD Keywords', and 'GCMD Keyword Governance and Community Guide Document'.

<https://earthdata.nasa.gov/about/gcmd/global-change-master-directory-gcmd-keywords>

DIF-10 XML SCHEMA CHANGES

DIF-10.3 Updates (Spring 2018)

- Existing fields now required:
 - Data_Set_Progress and Product_Level_ID
- Add new sub-fields for :
 - Distribution: Average_Granule_Size and Total_Collection_Size
 - Access_Constraints: Description, Access_Control, Access_Control_Description
 - Use_Constraints: Description, License_Text, License_URL
- Made optional:
 - Metadata Dates: Data_Creation and Data_Last_Revision
 - Related_URL
- Allow:
 - “not applicable” in Dataset_Citation/Persistent_Identifier when value does not exist.

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Raytheon