EOSDIS

NASA'S EARTH OBSERVING SYSTEM
DATA AND INFORMATION SYSTEM

Earthdata Search: The Relevance of Relevance

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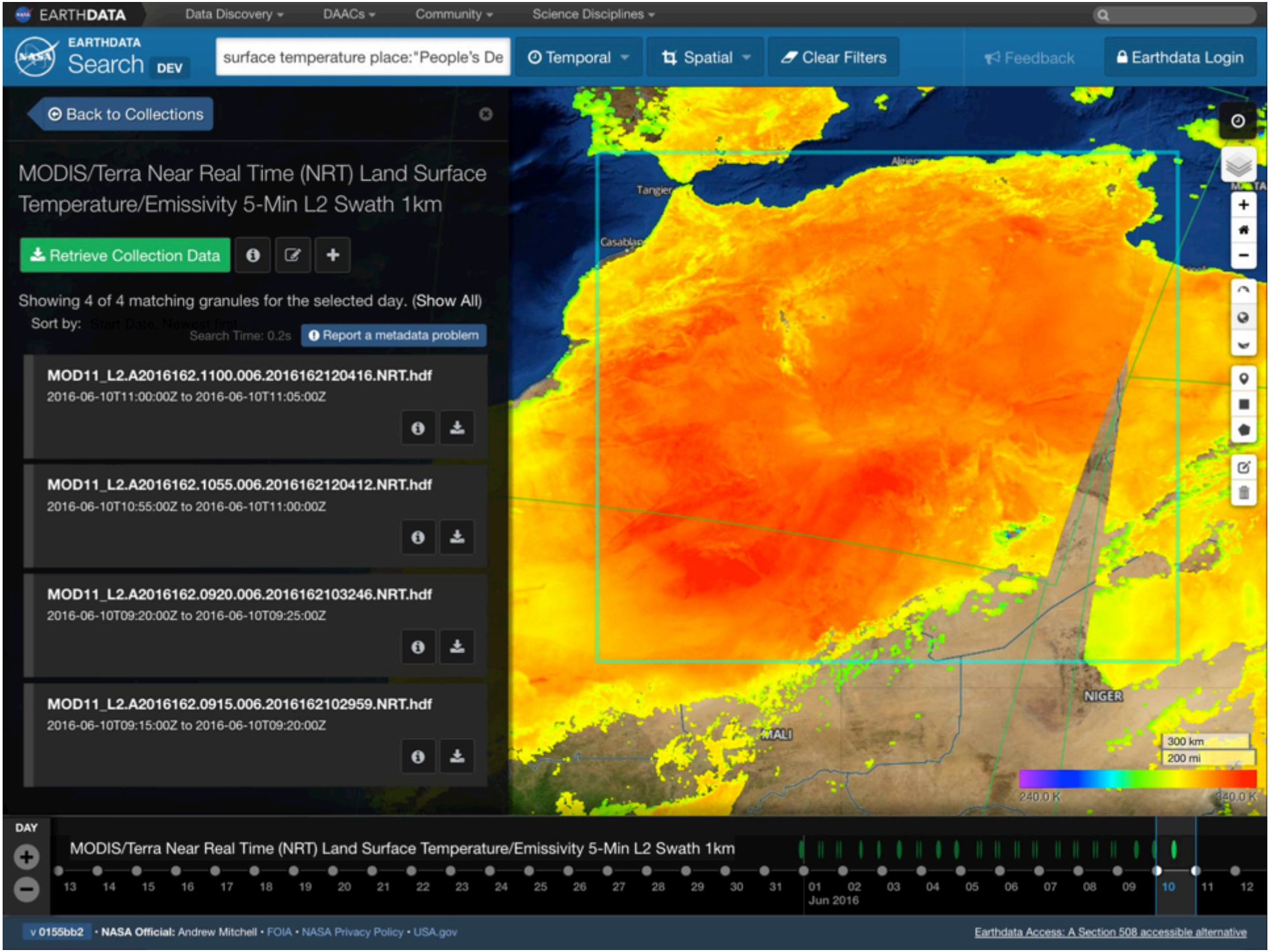
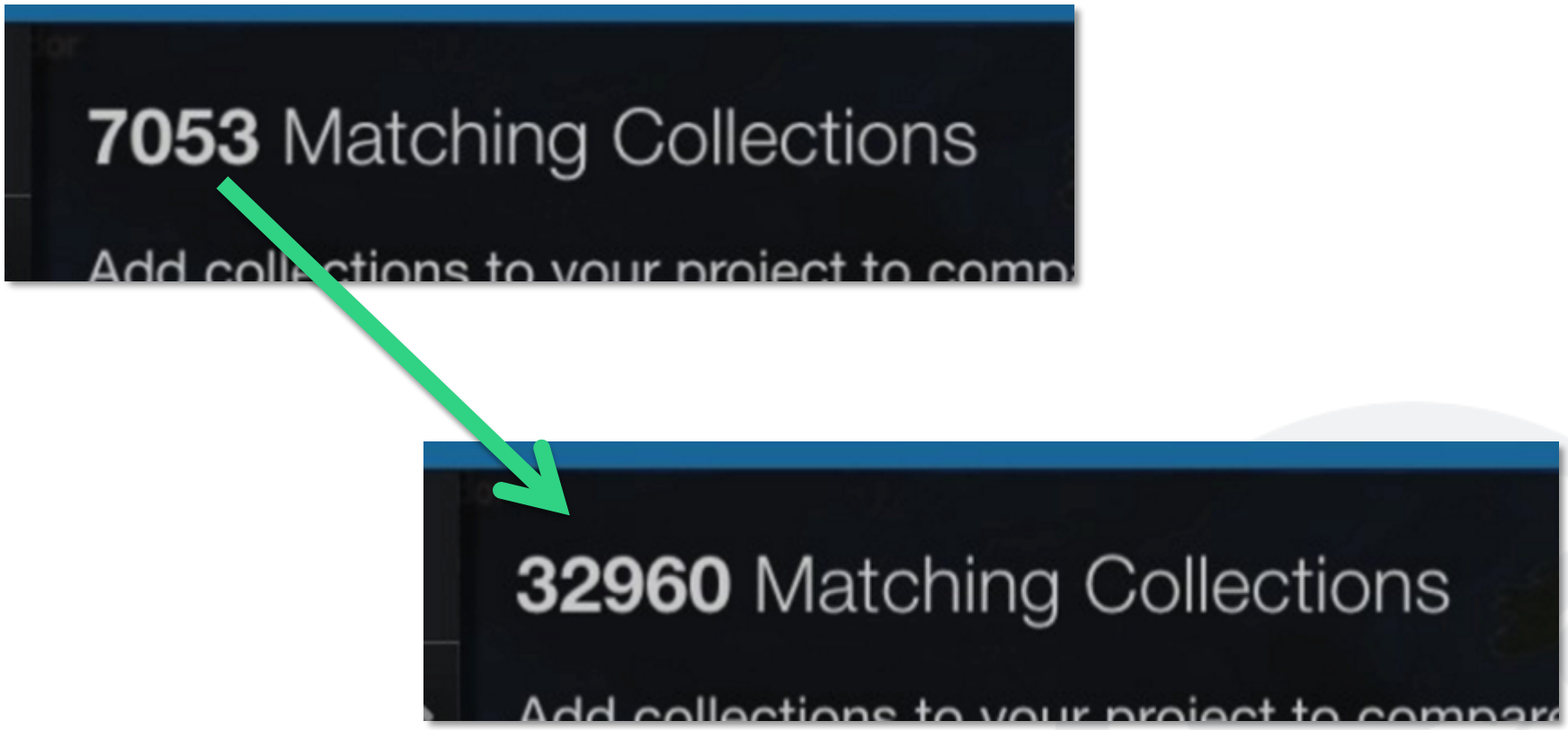
EED Program

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


EARTHDATA
Data Discovery
DAACs
Community
Science Disciplines
EARTHDATA Search DEV
surface temperature place:"People's De
Temporal
Spatial
Clear Filters
Feedback
Earthdata Login
Back to Collections
MODIS/Terra Near Real Time (NRT) Land Surface Temperature/Emissivity 5-Min L2 Swath 1km
Retrieve Collection Data
Showing 4 of 4 matching granules for the selected day. (Show All)
Sort by: Start Date, Newest first
Search Time: 0.2s
Report a metadata problem
MOD11_L2.A2016162.1100.006.2016162120416.NRT.hdf
2016-06-10T11:00:00Z to 2016-06-10T11:05:00Z
MOD11_L2.A2016162.1055.006.2016162120412.NRT.hdf
2016-06-10T10:55:00Z to 2016-06-10T11:00:00Z
MOD11_L2.A2016162.0920.006.2016162103246.NRT.hdf
2016-06-10T09:20:00Z to 2016-06-10T09:25:00Z
MOD11_L2.A2016162.0915.006.2016162102959.NRT.hdf
2016-06-10T09:15:00Z to 2016-06-10T09:20:00Z
Tangier
Casablanca
Alger
NIGER
MALI
300 km
200 mi
240.0 K
340.0 K
DAY
MODIS/Terra Near Real Time (NRT) Land Surface Temperature/Emissivity 5-Min L2 Swath 1km
13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 01 02 03 04 05 06 07 08 09 10 11 12
Jun 2016
v 0155bb2 • NASA Official: Andrew Mitchell • FOIA • NASA Privacy Policy • USA.gov
Earthdata Access: A Section 508 accessible alternative

Late 2015: Our catalog grew



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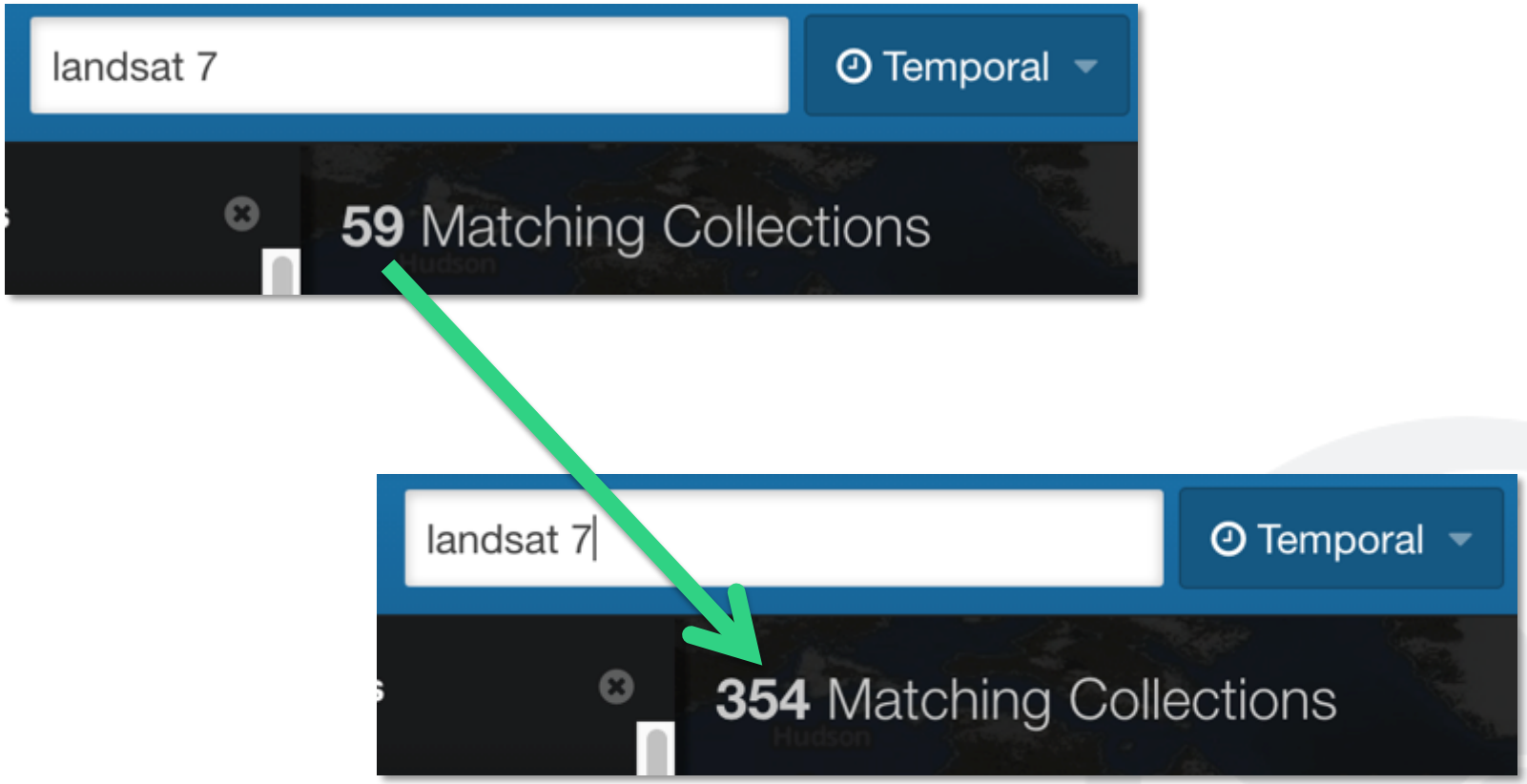
… as did our relevancy needs



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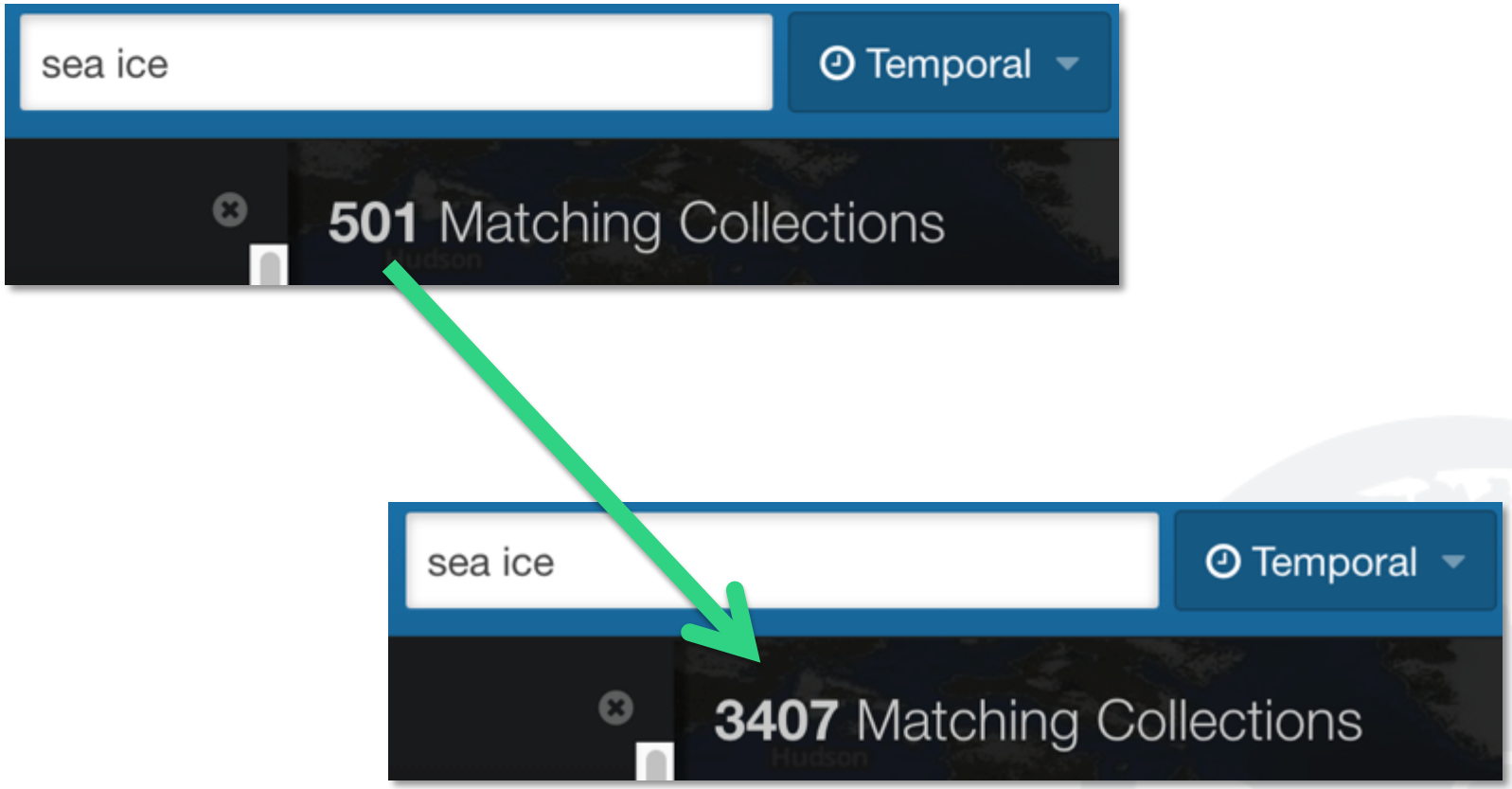
… as did our relevancy needs



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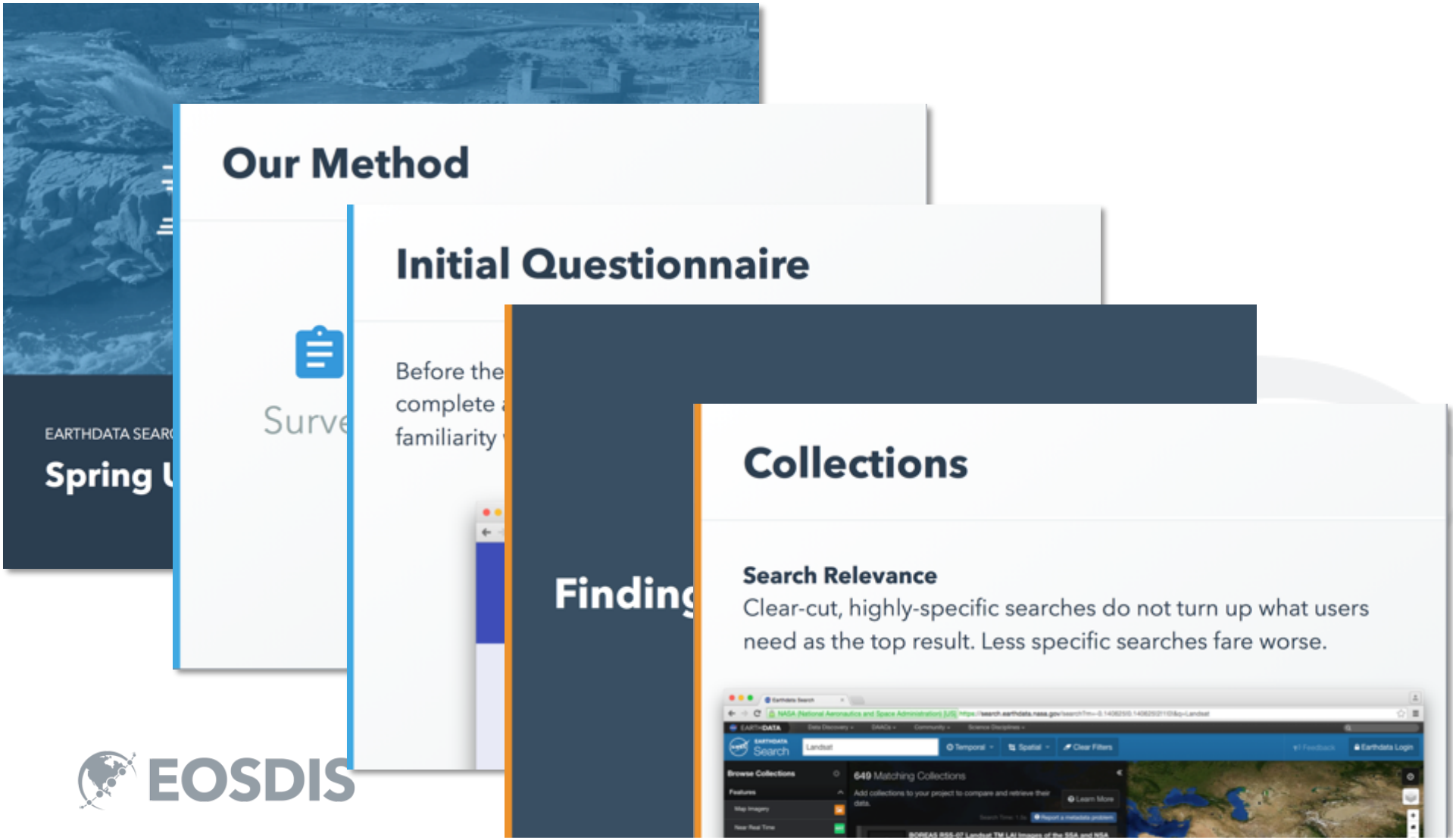
Users echoed the need for better relevance



If users can't find the collections they need, none of our other work matters

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Earthdata Search

METADATA AND DISCOVERABILITY

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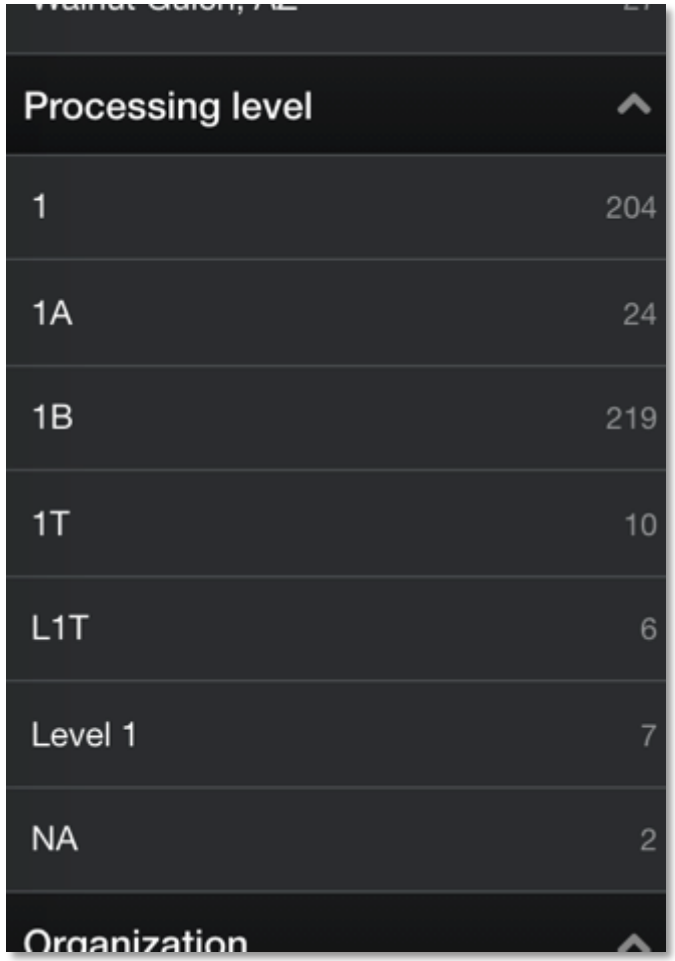
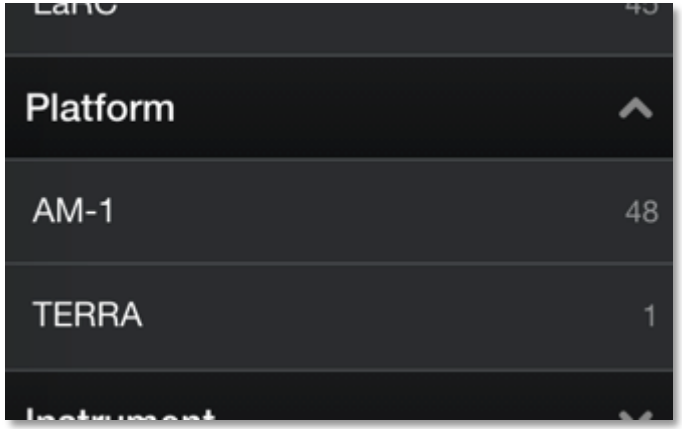
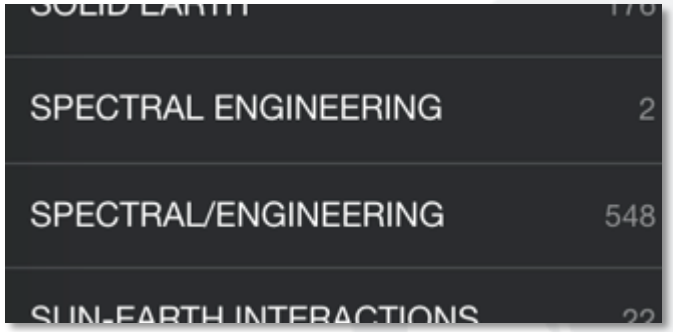
Metadata isn't always consistent







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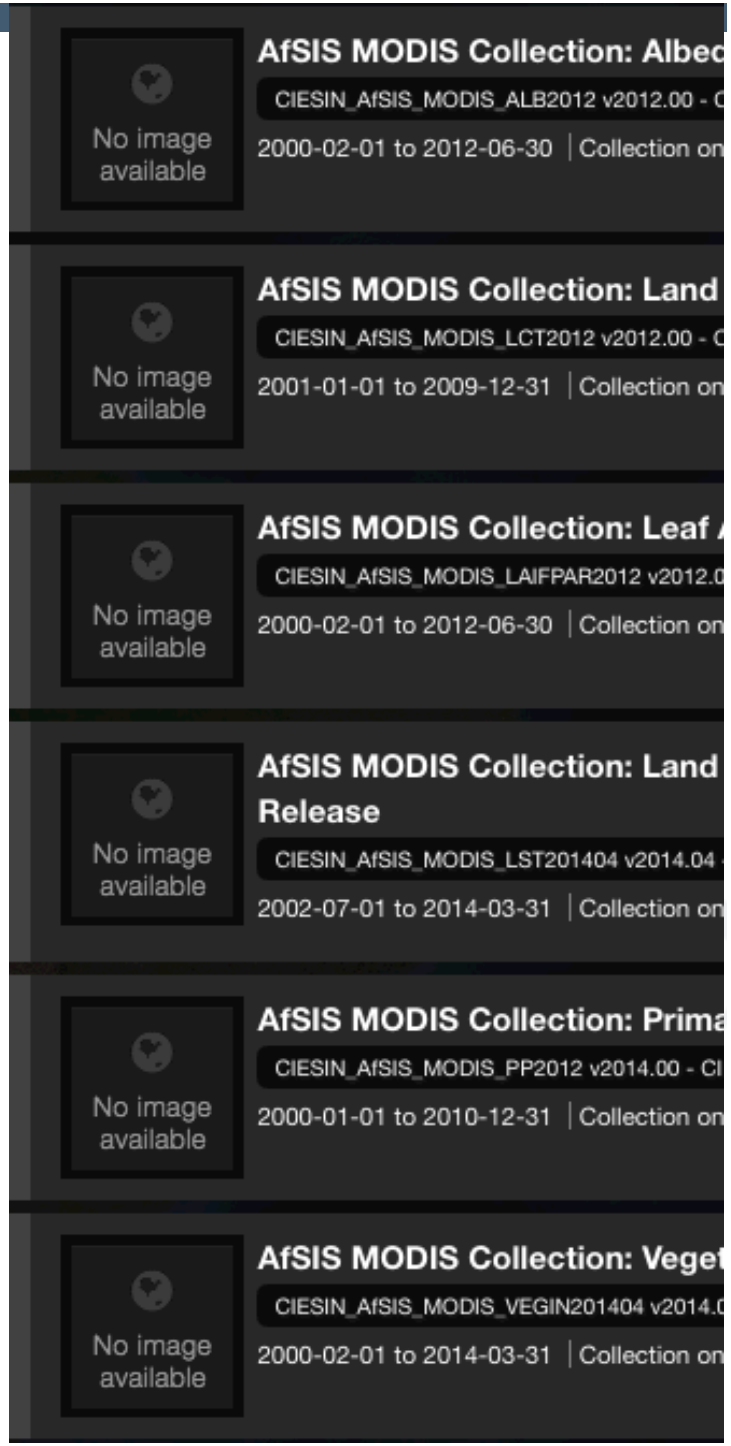
Sometimes it is too consistent



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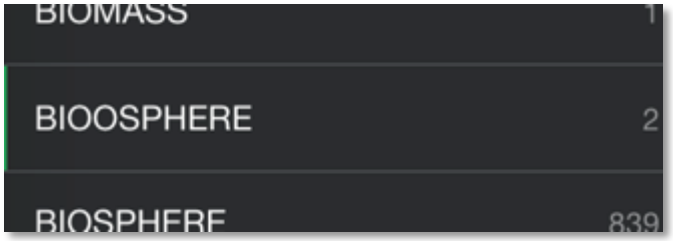
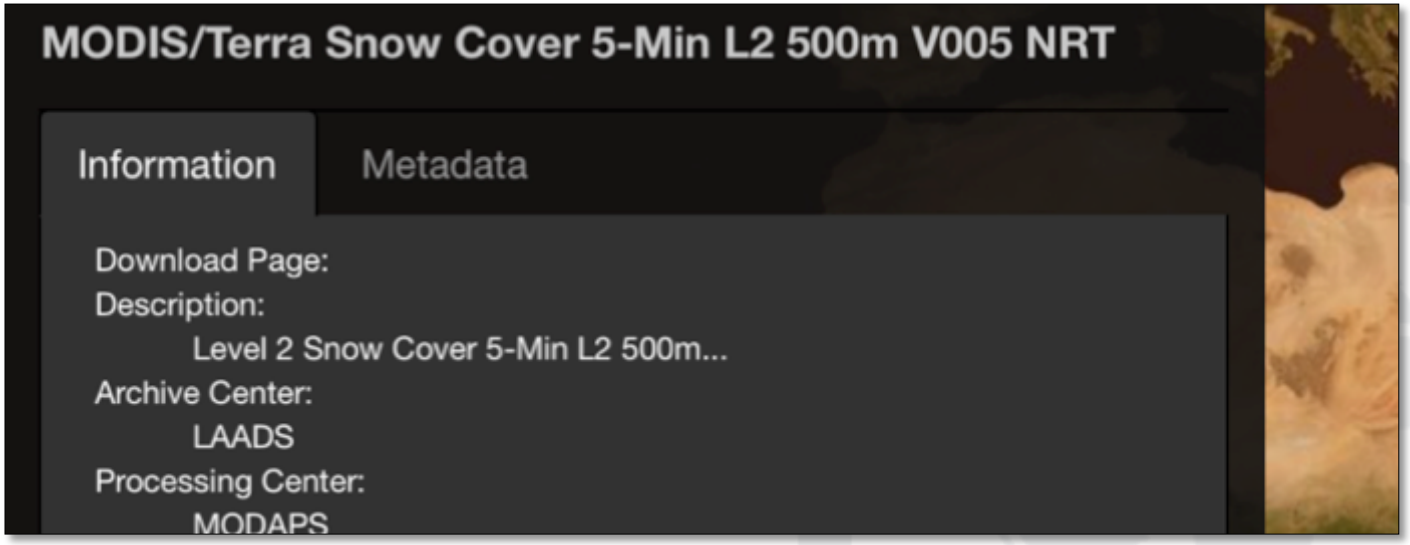
Sometimes it's incomplete or contains errors





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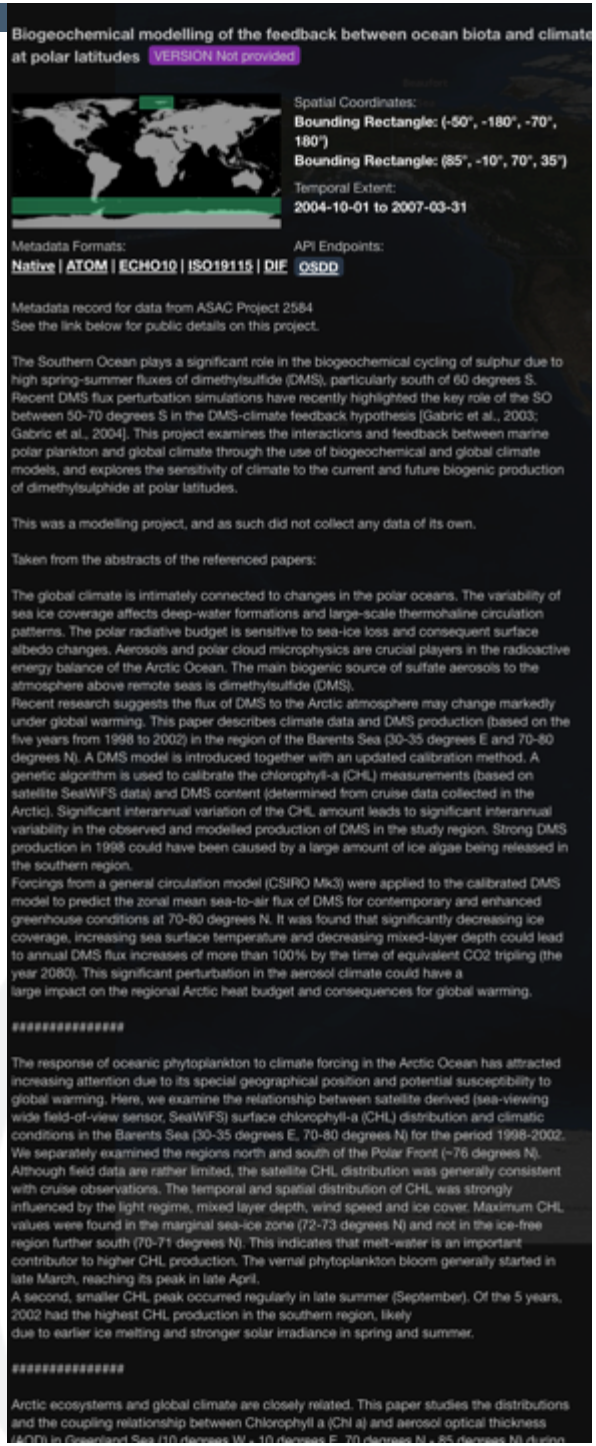
Sometimes it is too complete



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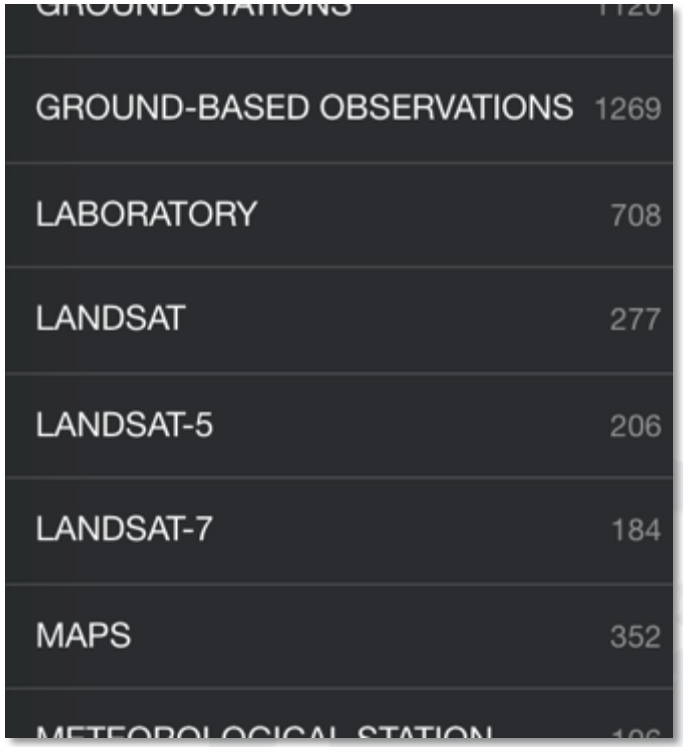
Facet relevancy matters, too



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Providing relevant refinement options and meaningful distinctions between results is as important as result order

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Earthdata Search

HOW DO WE IMPROVE RELEVANCY?

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Immediate easy wins

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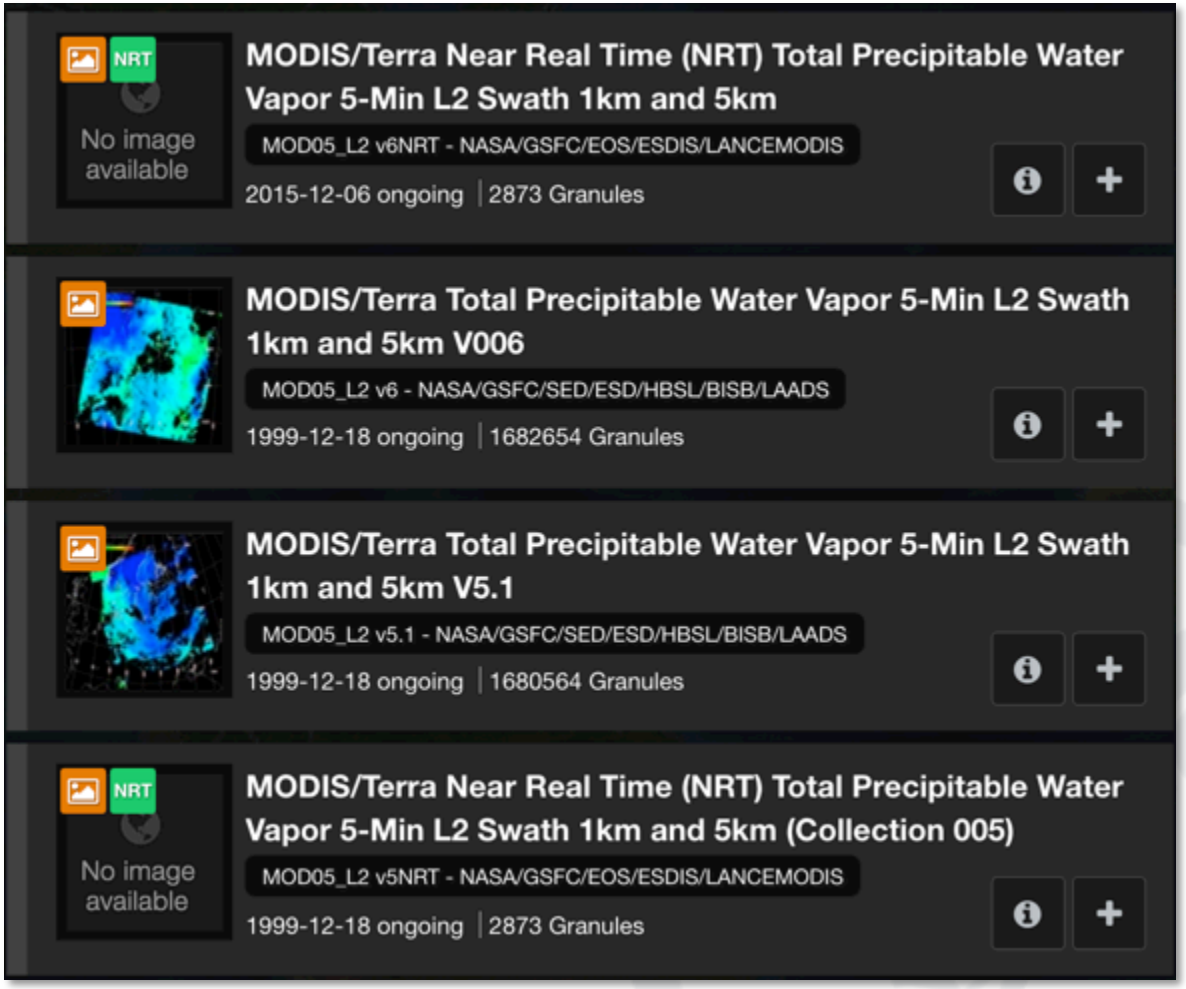
Sort order: Newer versions first

Version 6 Near-Realtime

Version 6

Version 5.1

Version 5 Near-Realtime



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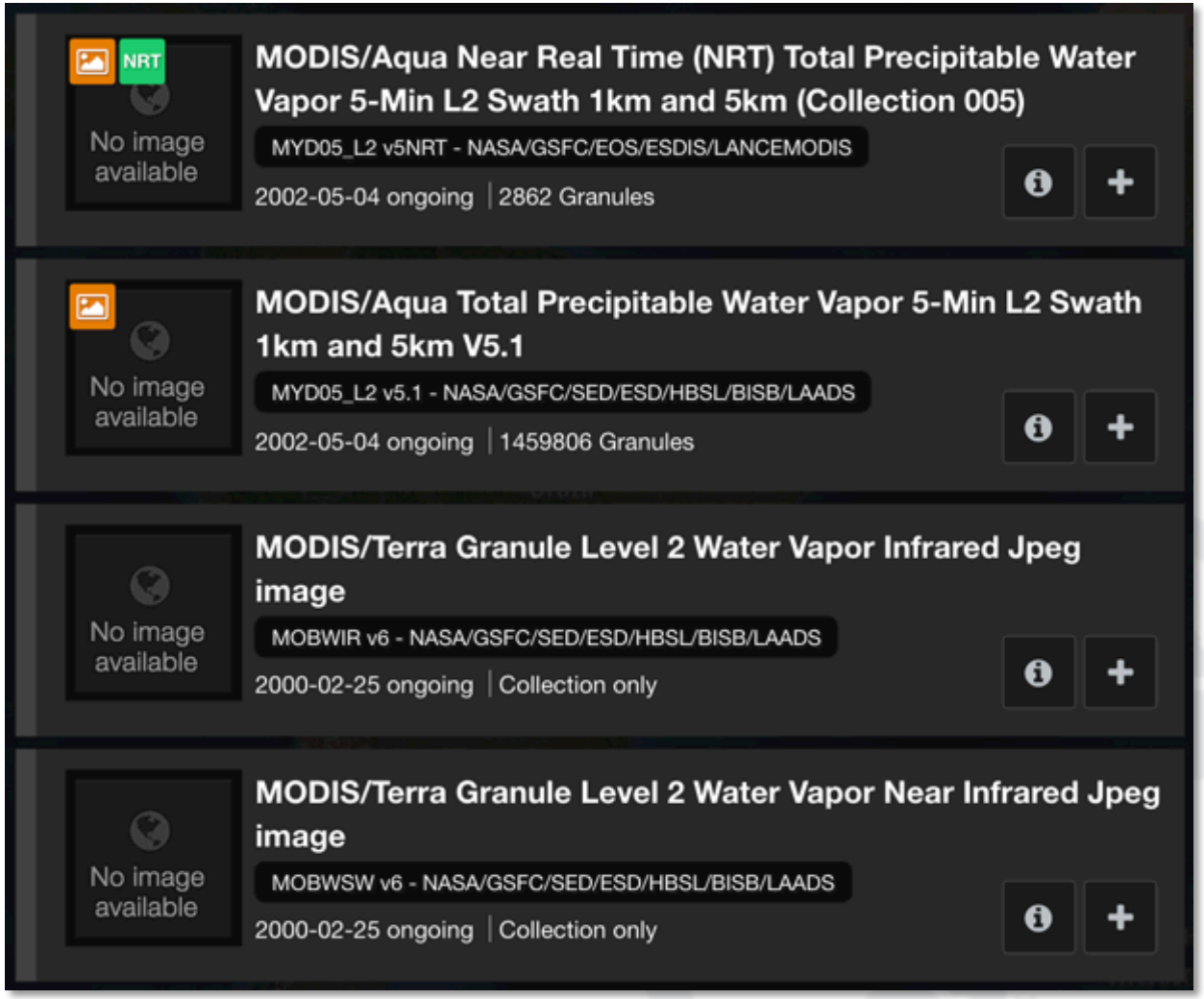
Sort order: Collections with granules first

2,862 Granules

1,459,806 Granules

Collection only

Collection only



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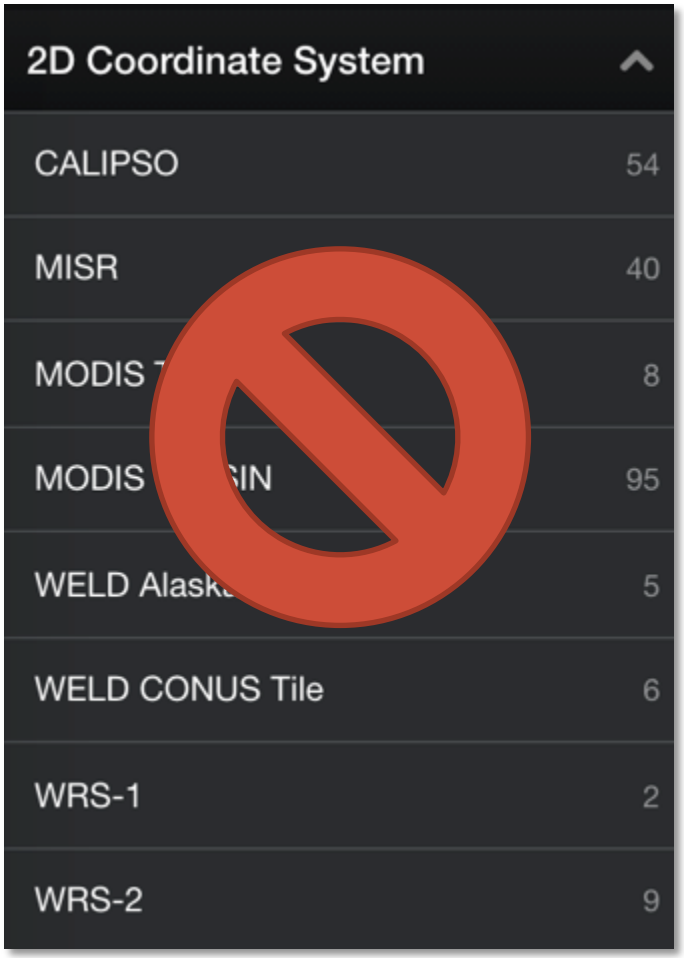
Remove Less Useful Choices



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Gather Metrics for Improvement


```
{"event": "search",
 "data":{"page_size":"20","free_text":"sea ice","page_num":"1”}}

{"event": "filter",
 "data”:{"echo_collection_id":"C1000001538-PROV”,"page_size":"20","page_num":"1”}}

{"event": "search",
 "data":{"page_size":"20","free_text”:"modis sea ice","page_num":"1”}}

{"event": "search",
 "data":{"page_size":"20","free_text”:"mod29","page_num":"1”}}

{"event": "filter",
 "data":{"echo_collection_id":"C1000001160-NSIDC_ECS", "page_size":"20","page_num":"1”}}

{"event": "access",
 "data":{"collections":["C1000001160-NSIDC_ECS"]}}
```


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Broader Discoverability Improvements

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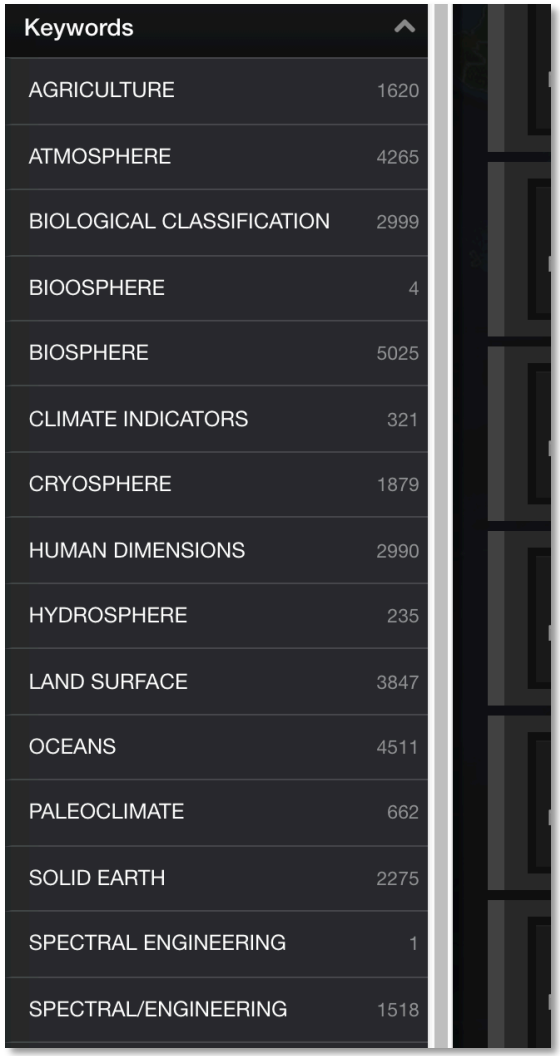
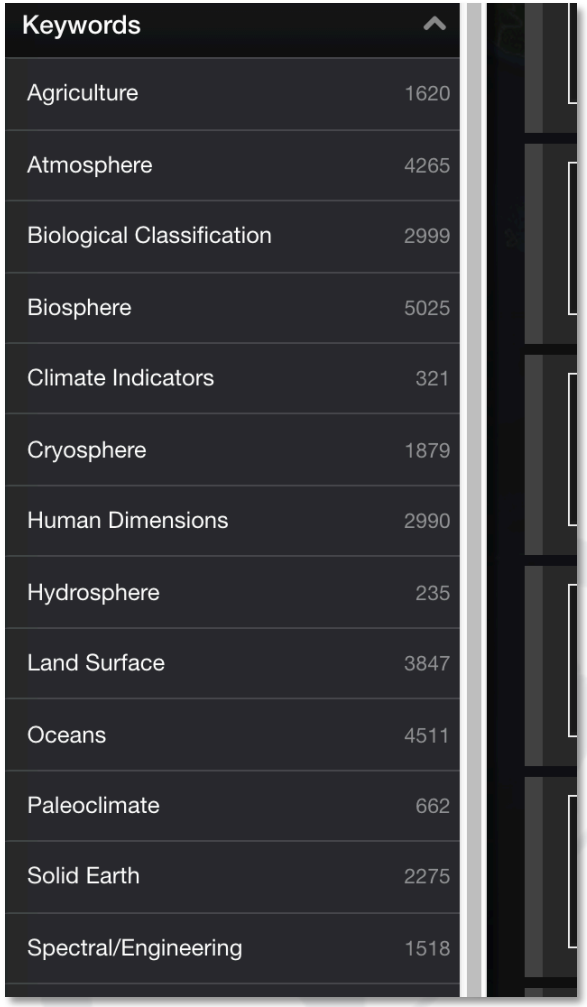
“Humanized” Facets





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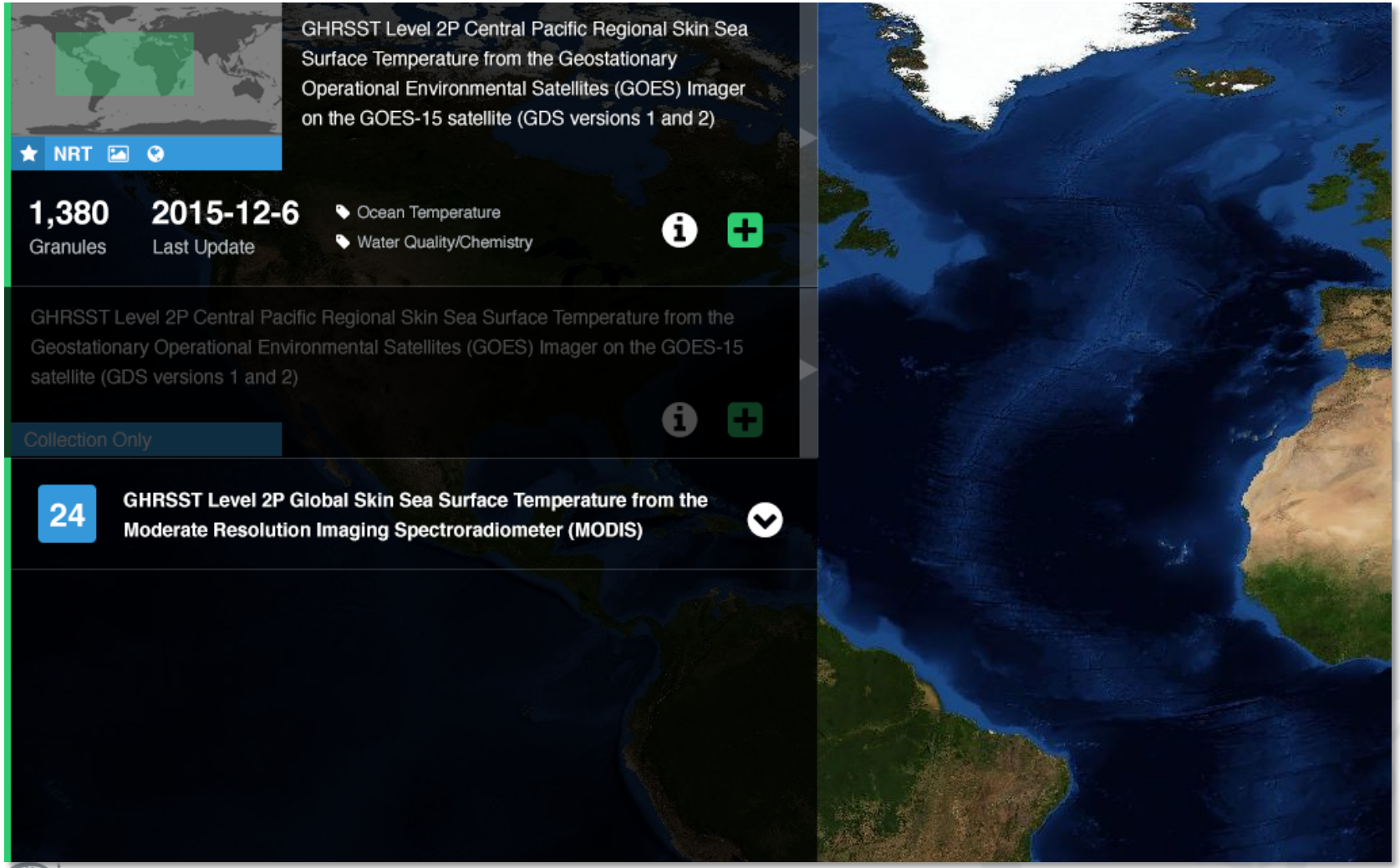
Surface more distinguishing information in collection results



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Use Learned Relevancy

```
{"event": "search",
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 "data”:{"echo_collection_id":"C1000001538-PROV”,"page_size":"20","page_num":"1”}}

{"event": "search",
 "data":{"page_size":"20","free_text”:"modis sea ice","page_num":"1”}}

{"event": "search",
 "data":{"page_size":"20","free_text”:"mod29","page_num":"1”}}

{"event": "filter",
 "data":{"echo_collection_id":"C1000001160-NSIDC_ECS", "page_size":"20","page_num":"1”}}

{"event": "access",
 "data":{"collections":["C1000001160-NSIDC_ECS"]}}
```

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Domain-Specific Relevancy

- Temporal Overlap
- Spatial Overlap
- User intent / fitness for use
- User experience level

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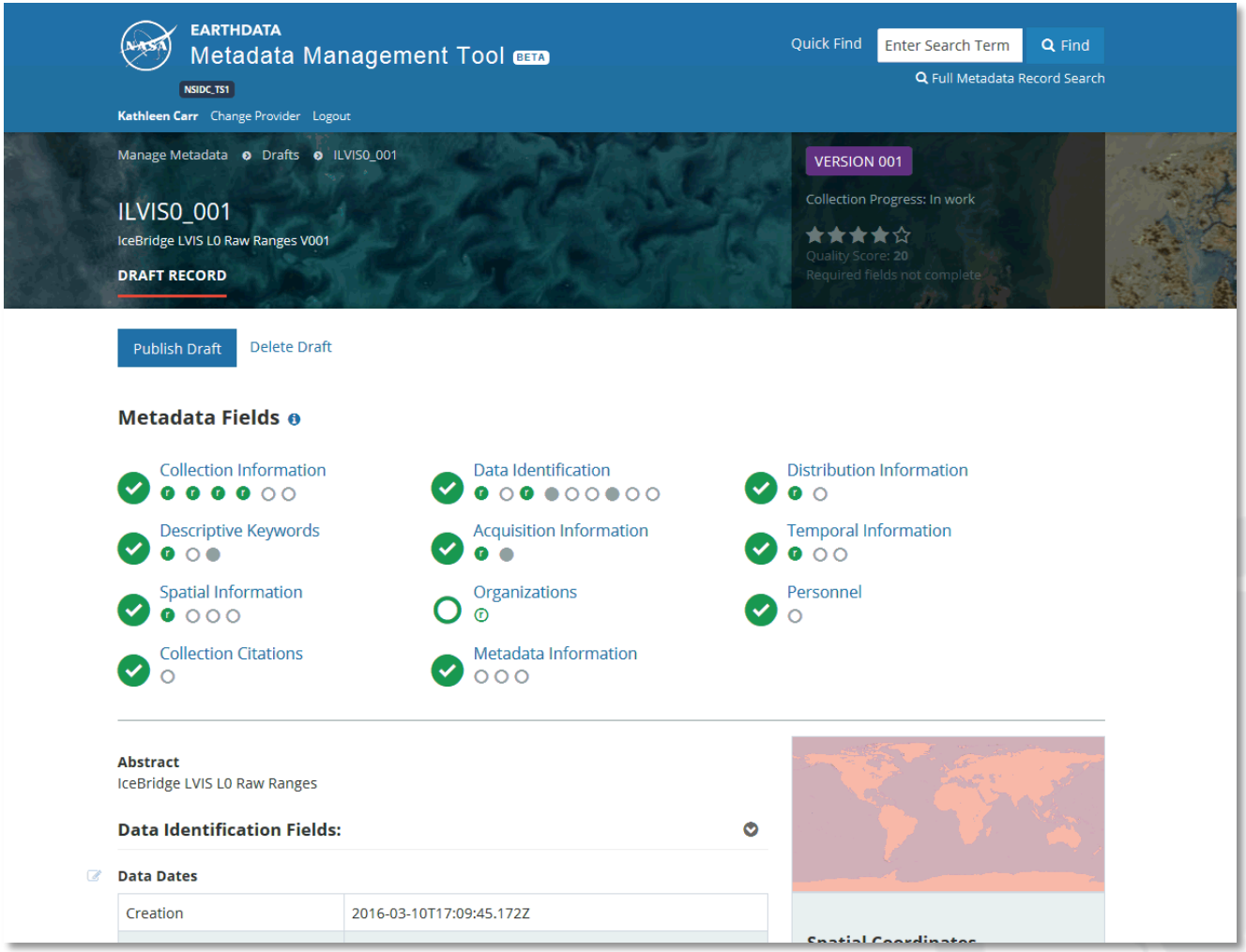
Keep Improving Metadata



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Did it help?

An ESIP 2017 Talk

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QUESTIONS?

Thank You!

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

Raytheon

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