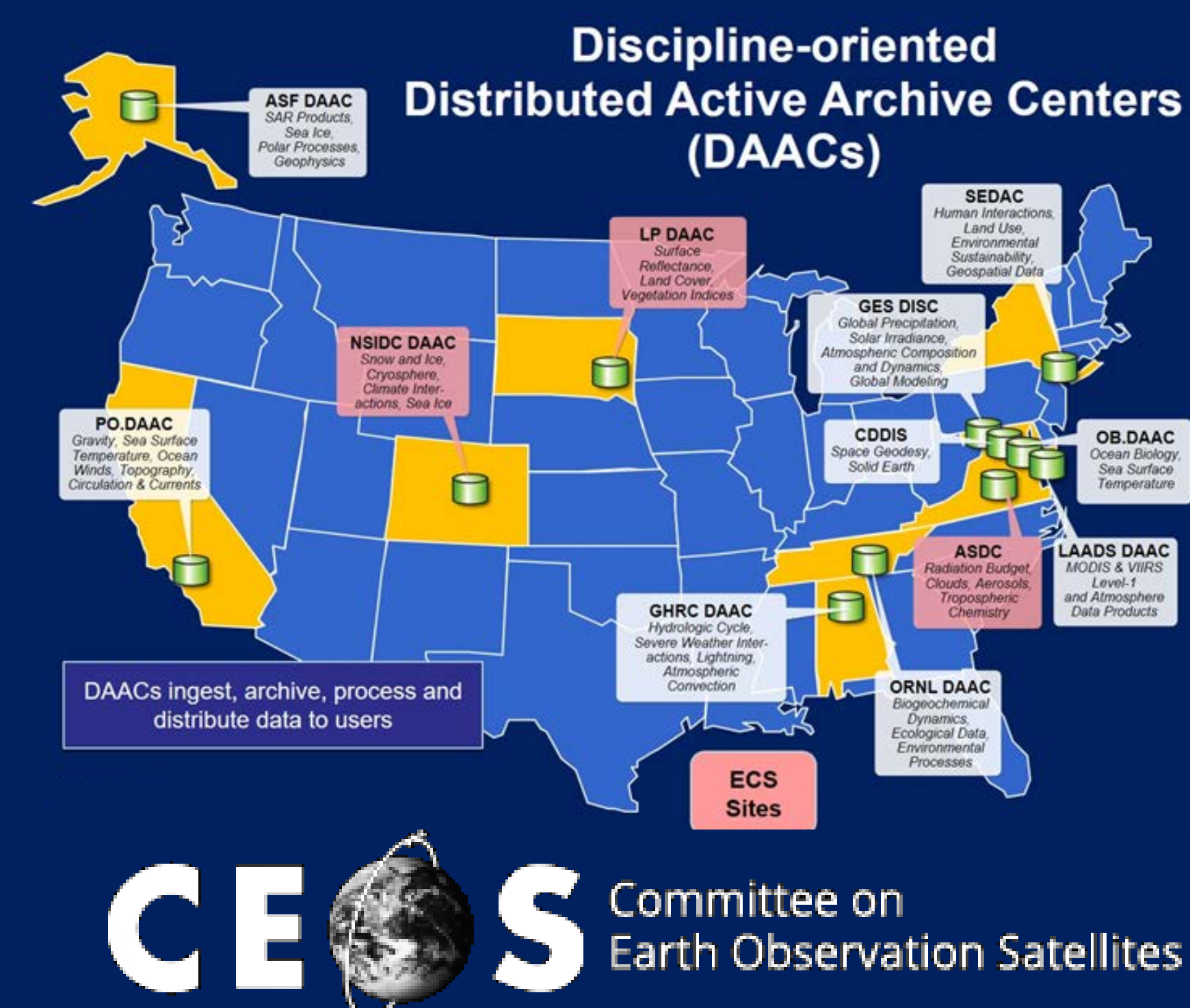


EOSDIS CMR: shifting data discovery & use into a higher gear

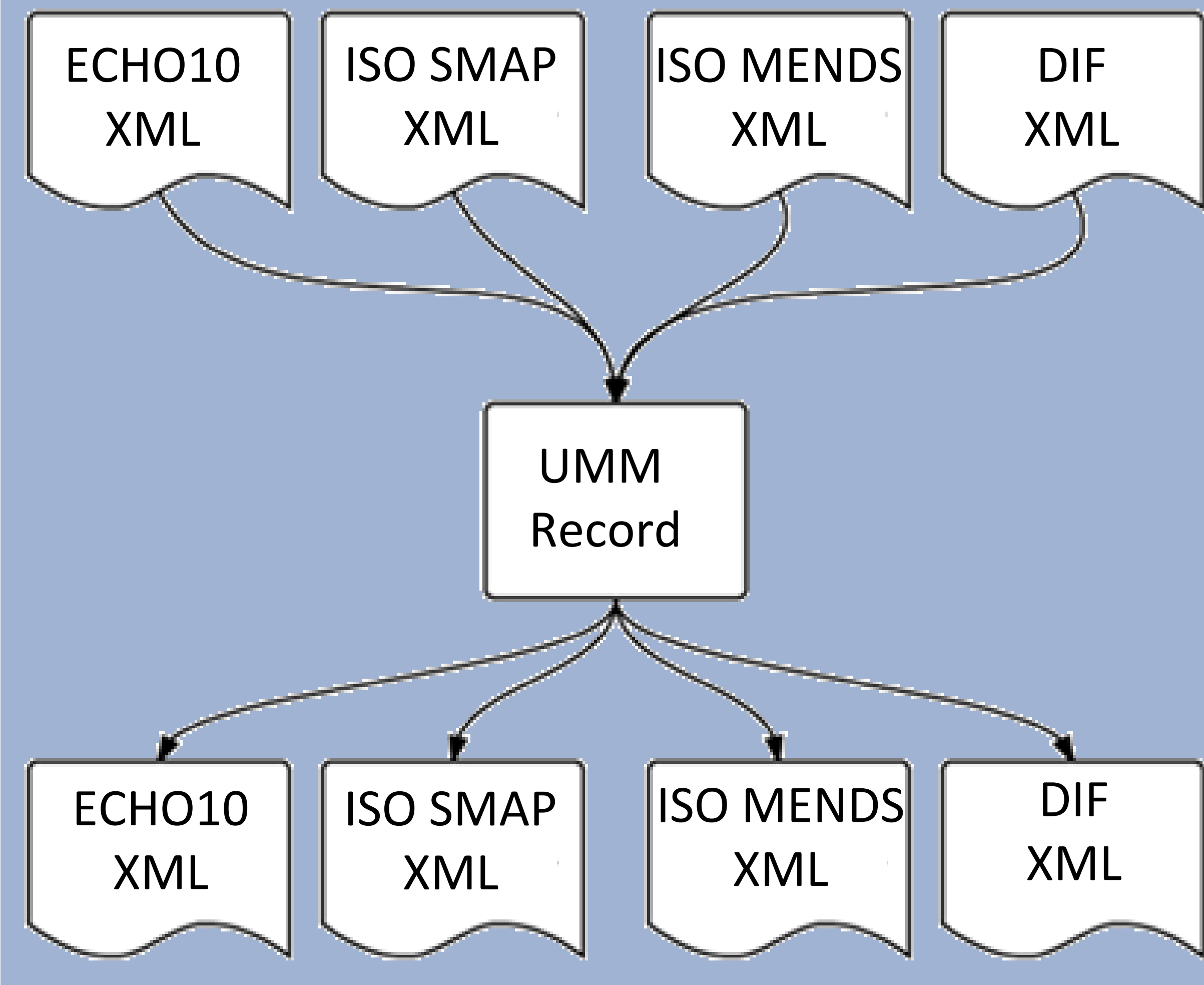
IN31D-0833
Abstract ID 378444
Fall AGU Meeting,
Washington, DC
December 12, 2018

Valerie Dixon (NASA, valerie.dixon@nasa.gov), Douglas Newman (Raytheon, douglas.j.newman@nasa.gov)

The EOSDIS CMR receives data from many sources across the world, in multiple formats...



... and uses its Unified Metadata Model (UMM) as a Rosetta stone to cross-reference critical and common metadata content for exploitation and translation.

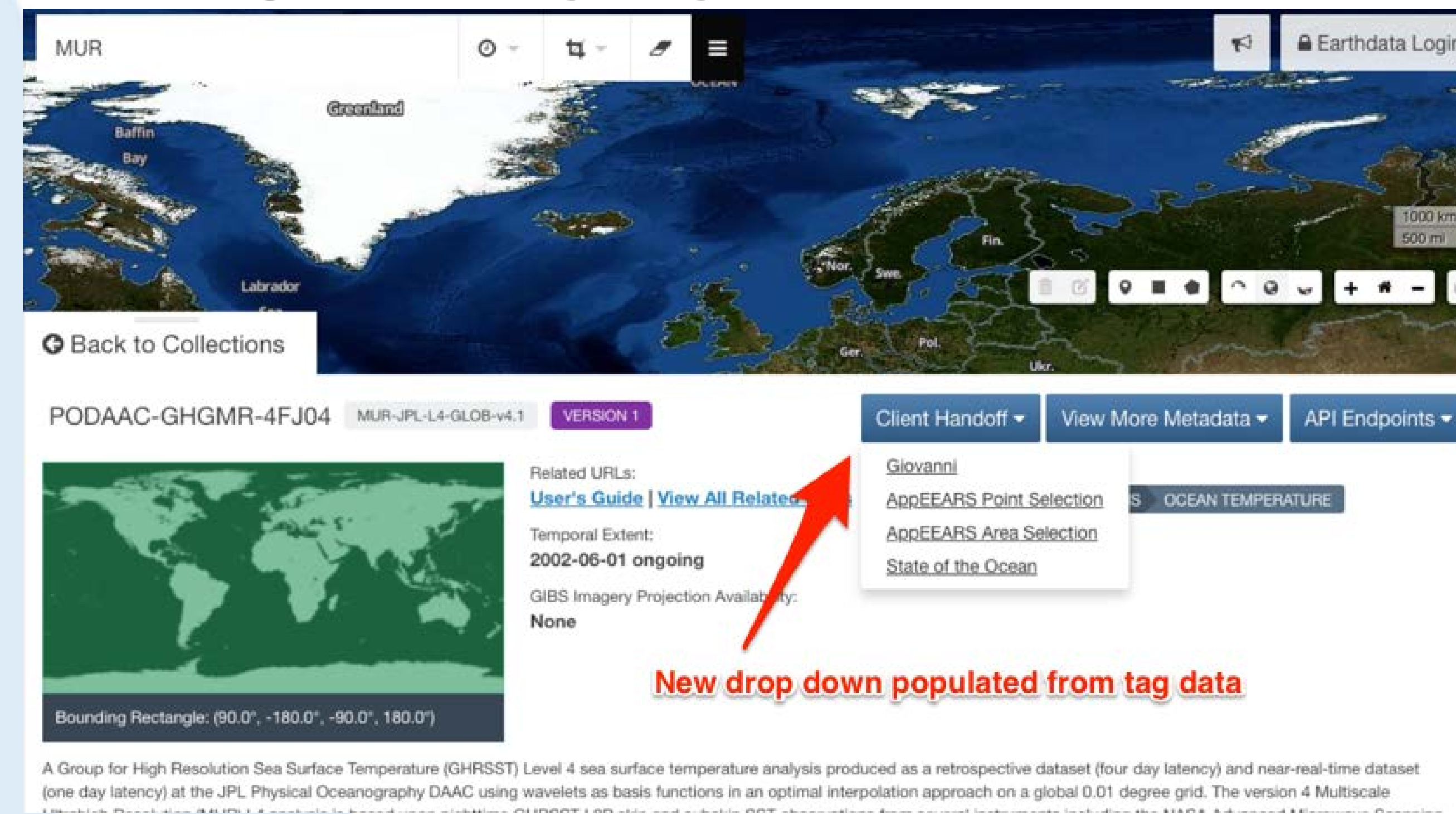


UMM flavors enable different kinds of data search, discovery, and exploitation...

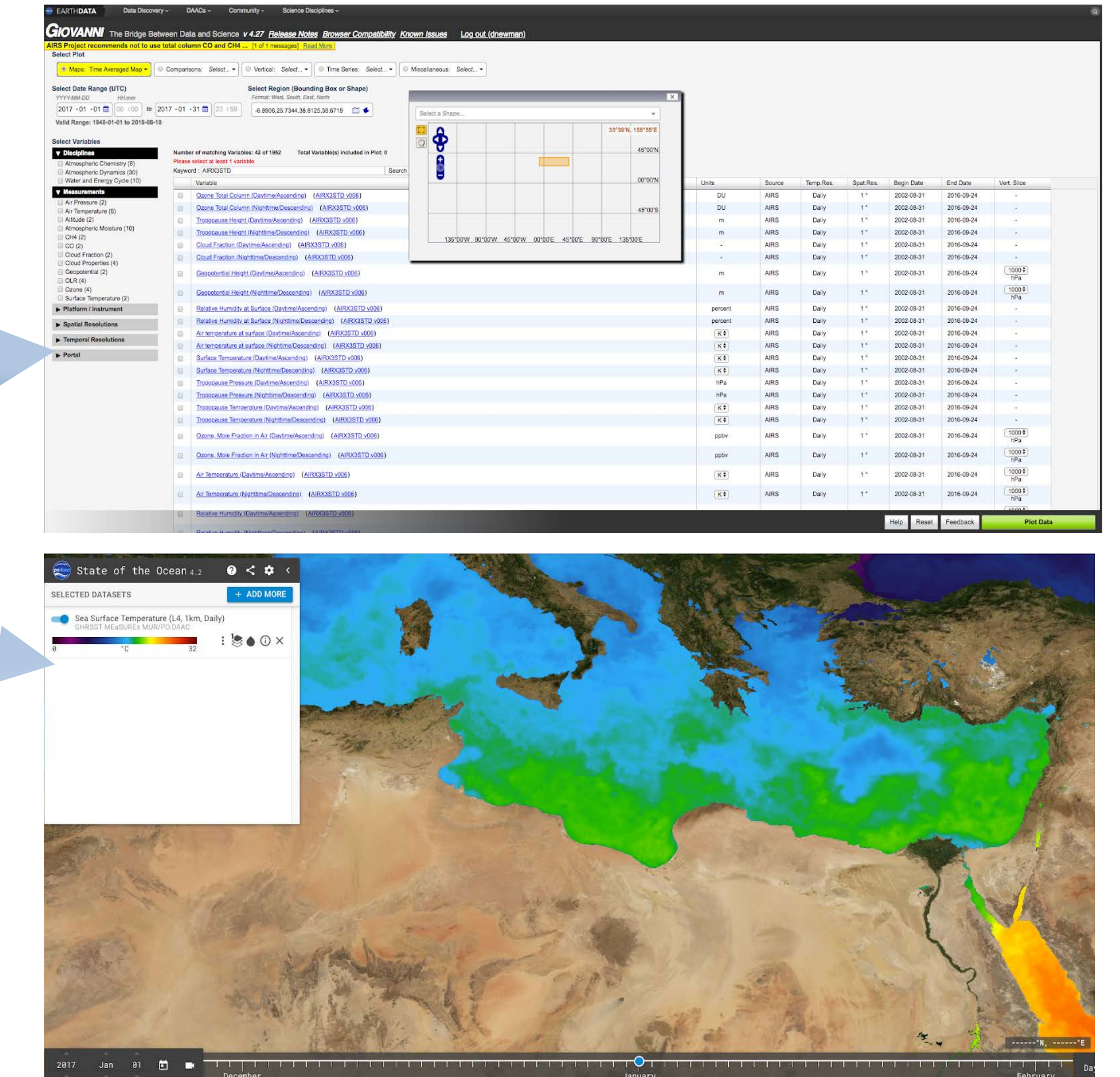
- UMM-Collections (UMM-C)
- UMM-Granules (UMM-G)
- UMM-Variables (UMM-Var)
- UMM-Services (UMM-S)

... like Smart Handoff, the capability to transfer dataset details between different applications for seamless transitions:

From general-purpose Earthdata Search...



...to more specialized data extraction tools like Giovanni:



...or visualization tools like State Of The Ocean:

```
{
  "@context": "http://schema.org",
  "@type": "WebSite",
  "url": "http://example.com/",
  "potentialAction": {
    "@type": "SearchAction",
    "target": "http://example.com/search?q={query}",
    "query-input": "name=q required maxLength=100"
  }
}
```

A 'smart handoff' can be represented in the UMM-S via a schema.org Search Action entity, available to any service that can leverage the Collection context.

Using schema.org, as opposed to other mechanisms like OpenSearch, allows for general search engine tie-ins.

...like data-adjacent processing and metadata-driven features such as End-to-End Services:

Because both CMR and the data reside in NASA's cloud, very large datasets can be processed in-situ, allowing the user to download just the data they want:

