SEO Report to WGISS

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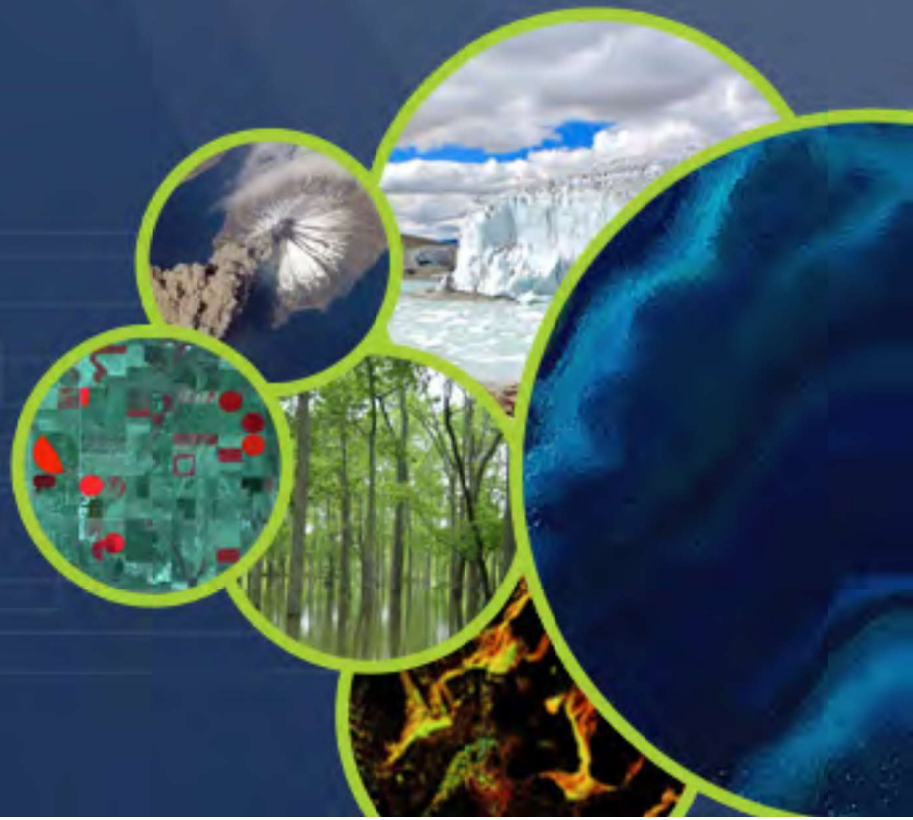
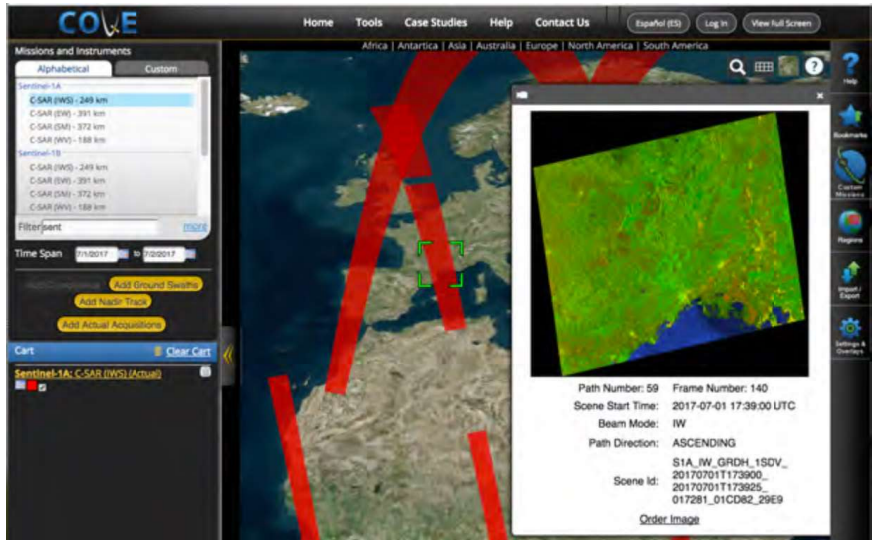
CEOS Systems Engineering Office (SEO)

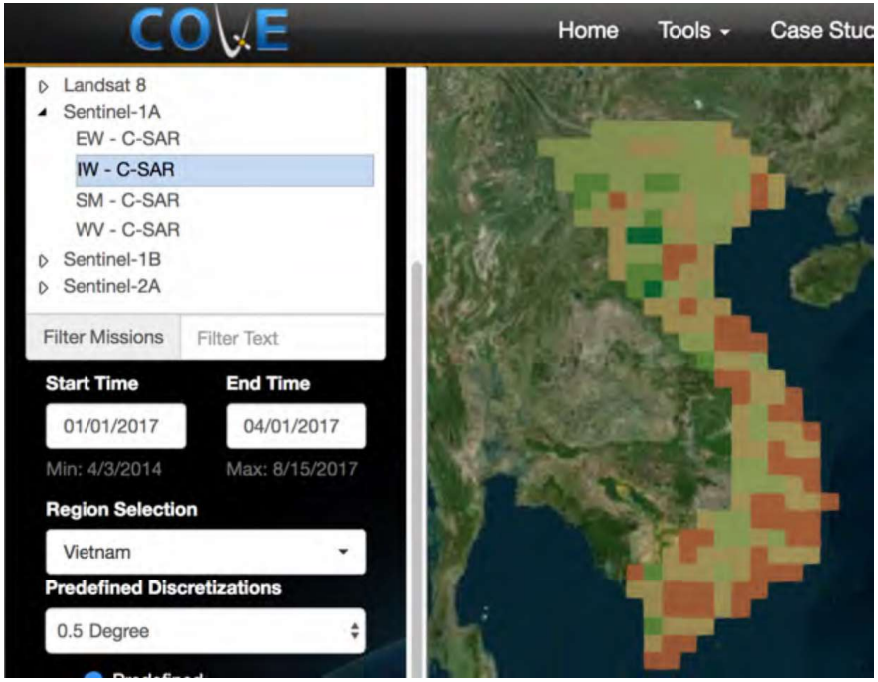
WGISS-44 Meeting
September 28, 2017



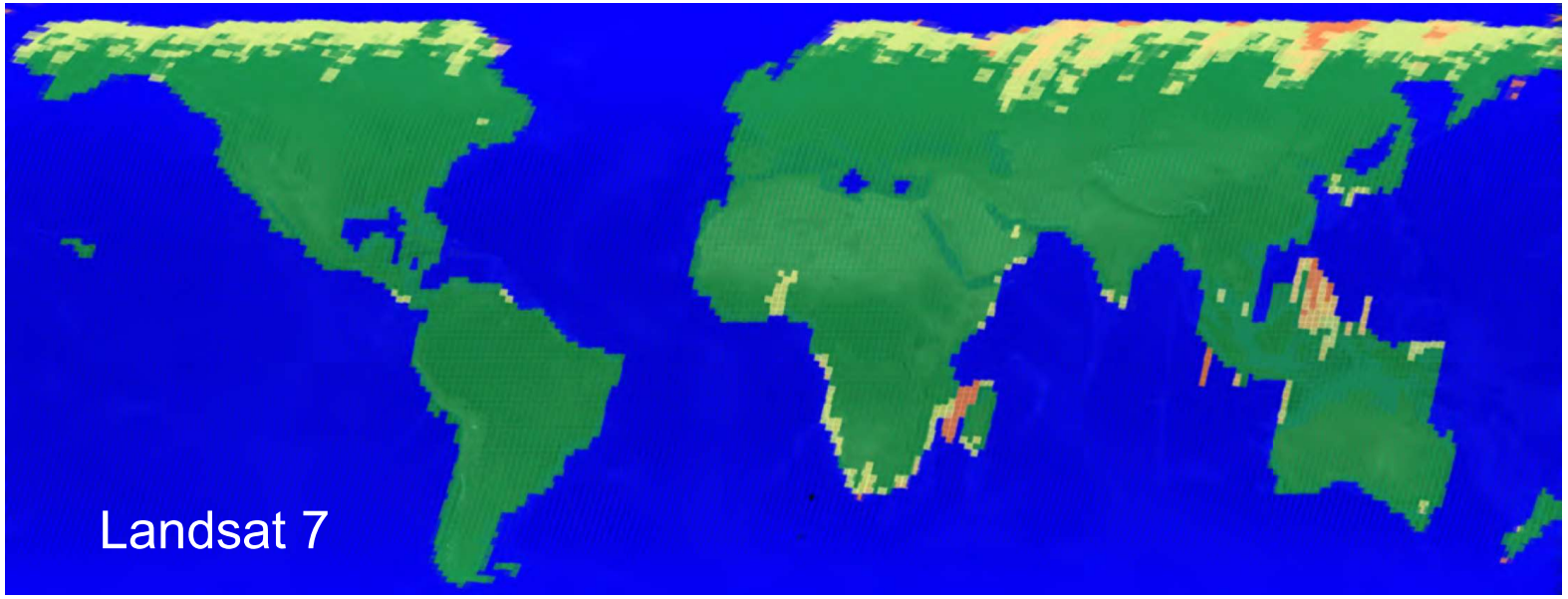
COVE Tool Updates

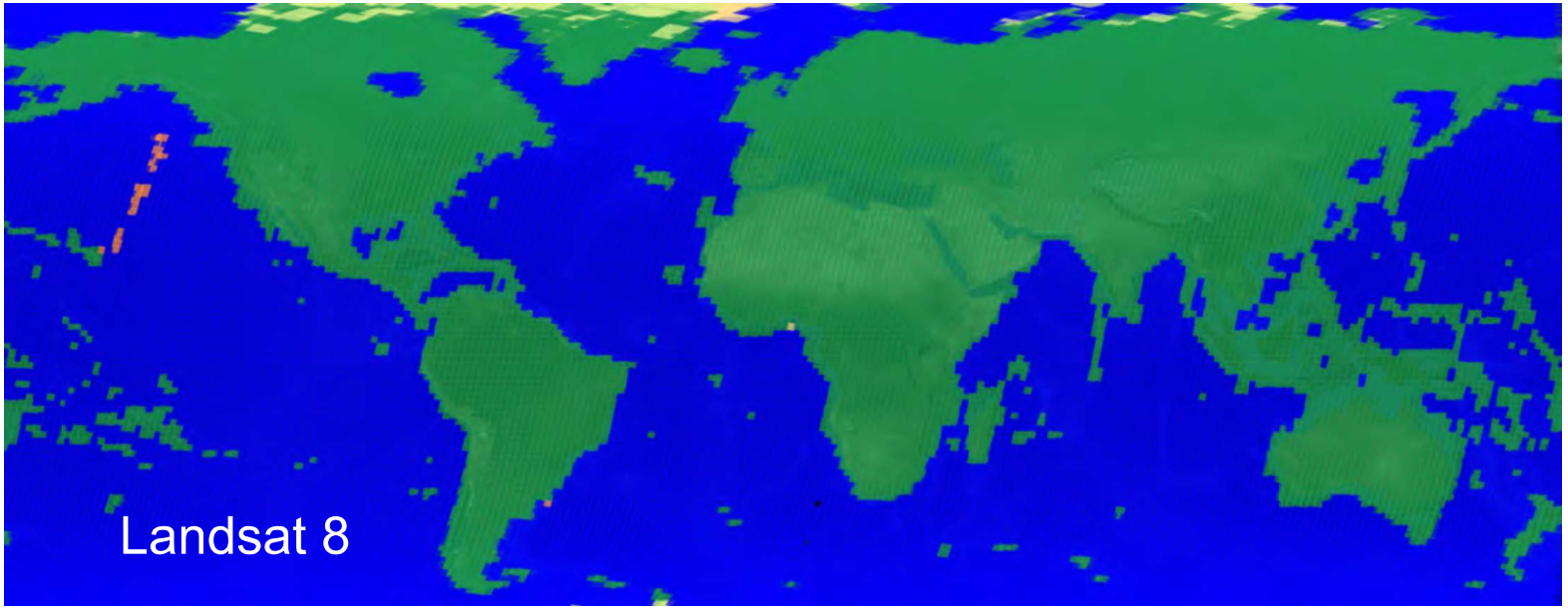
- The CEOS Visualization Environment (**COVE**) is a browser-based suite of tools for searching, analyzing and visualizing actual and potential satellite sensor coverage.
- COVE is FREE and OPEN for anyone to use! There is a large international user base with 3700+ users in 2016.
- COVE includes **131 missions** and is linked to several mission archives to get metadata and browse images for past acquired data: *Landsat, SPOT, Pleaides, Radarsat-2, ALOS-1, TerraSAR-X, Sentinel-1, Sentinel-2, CBERS-4 and ResourceSAT-2.*
- **Coverage Analyzer:** New tool for acquisition reports and links to data ordering. (DEMO to follow)





Landsat 7/8 – 2017 coverage





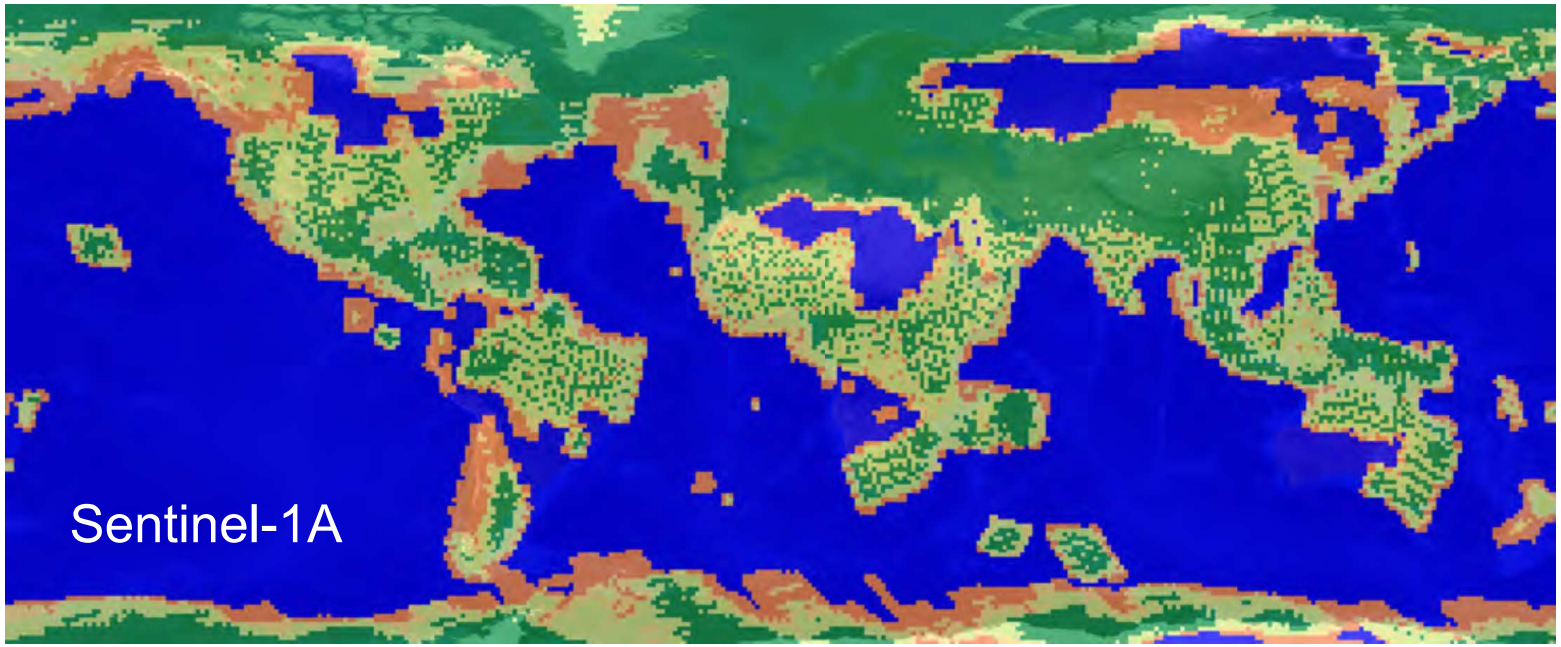
Landsat acquistions for January 1 to July 31, 2017.

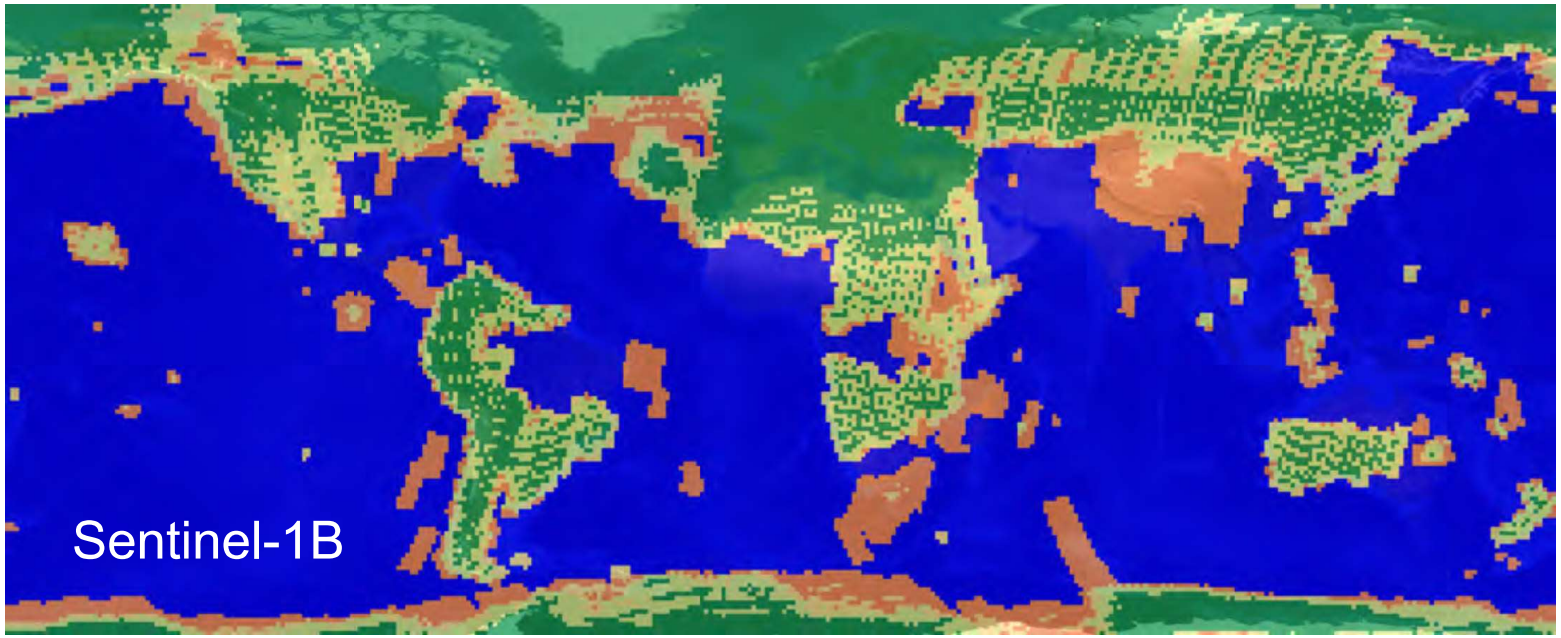
These products are now available from the new COVE **Coverage Analyzer** tool.

Image counts use a non-overlapping WRS scheme

Color	# Images
	0 - 0
	1 - 3
	4 - 6
	7 - 9
	10 - 12
	13 - 14

Sentinel-1A/B - 2017 coverage





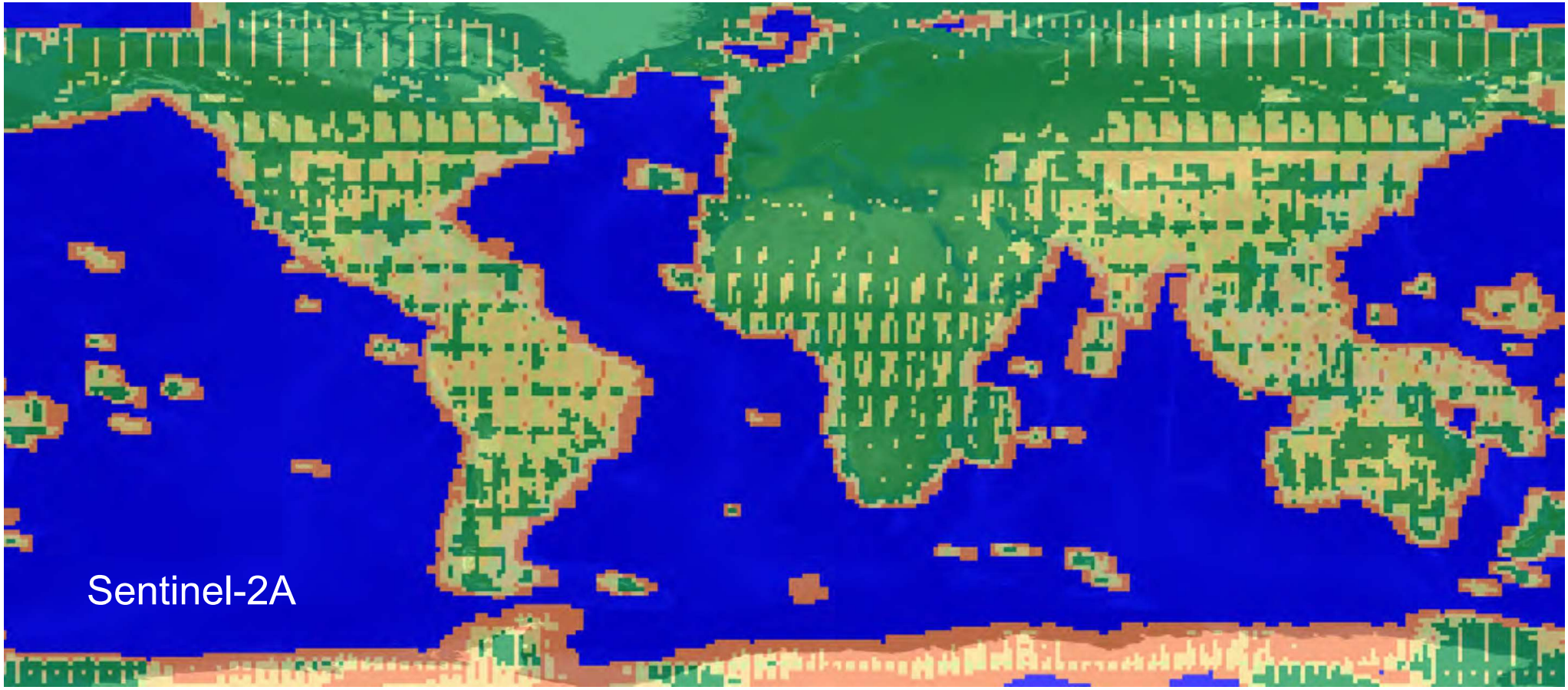
Sentinel-1 GRD acquistions for January 1 to July 31, 2017.

These products are now available from the new COVE **Coverage Analyzer** tool.

Image counts are based on a 1-deg grid where there can be siginficant scene overlap.

Color	# Images
	0 - 0
	1 - 15
	16 - 25
	26 - 50
	51 - 75
	76 - 348

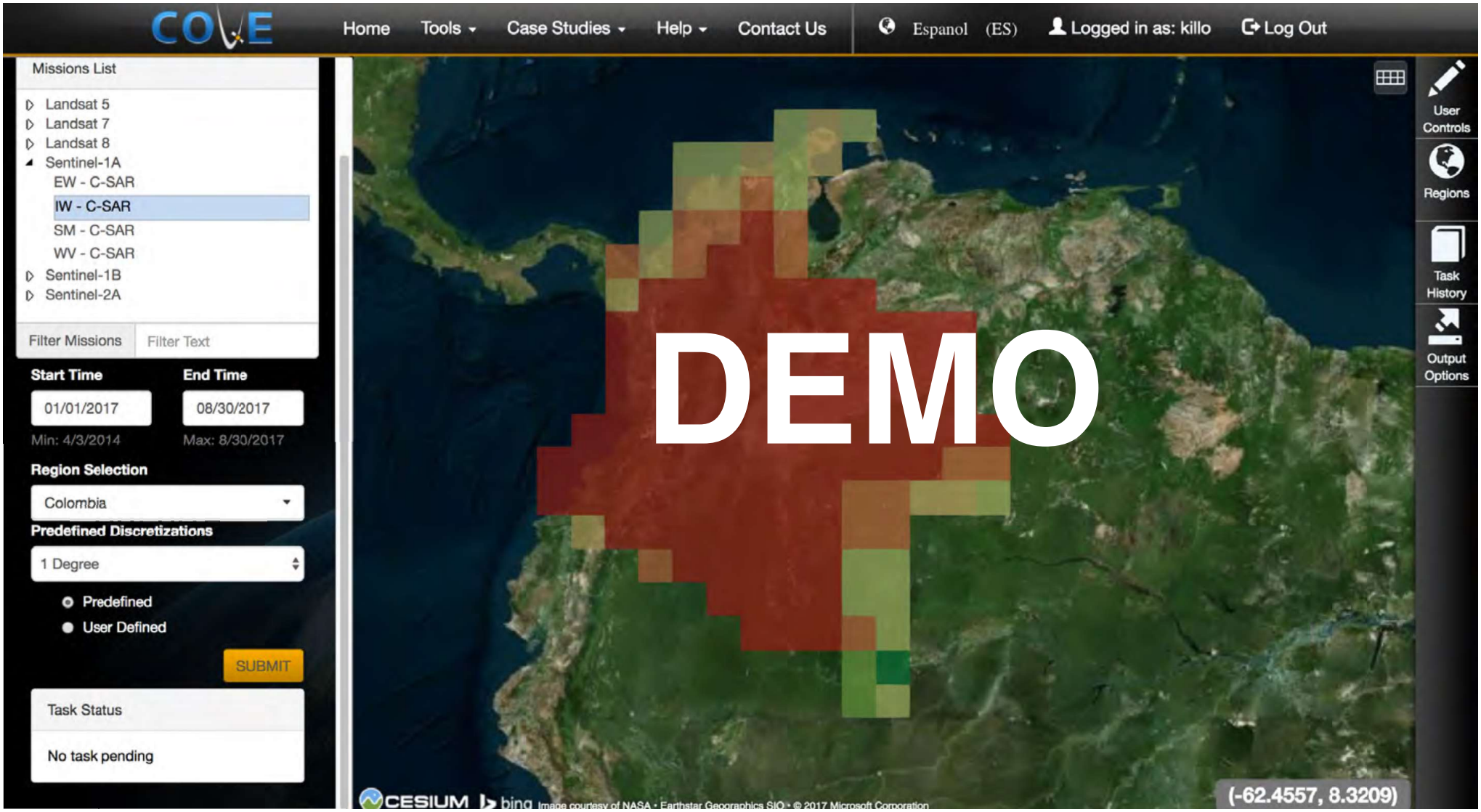
Sentinel-2A - 2017 coverage



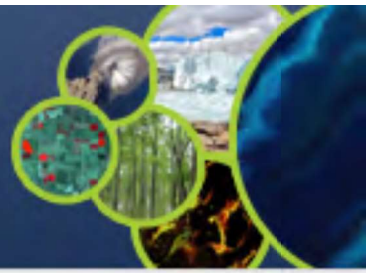
Sentinel-2A acquistions for January 1 to July 31, 2017. These products are now available from the new COVE **Coverage Analyzer** tool. Image counts are based on a 1-deg grid where there can be siginficant scene overlap.

Color	# Images
	0 - 0
	1 - 50
	51 - 100
	101 - 125
	126 - 150
	151 - 4326

COVE Coverage Analyzer



WGISS Actions for SEO



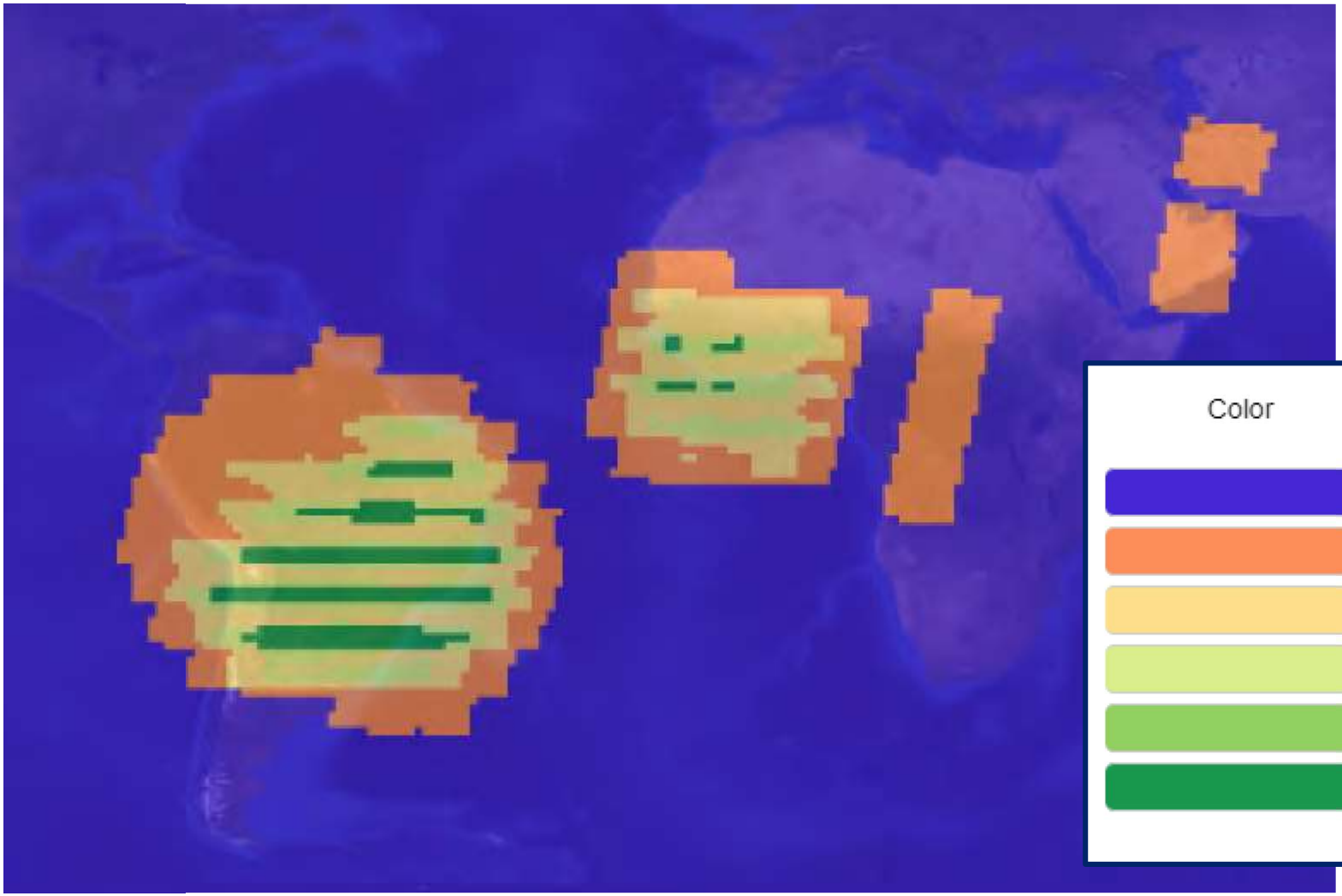
Action: SEO to summarize how COVE connects to current archives, and summarize metadata.

We have created a document that lists the missions and instruments for which we collect metadata and the specific pieces of data we acquire. We have been waiting to resolve an issue with DLR before finalizing the document. A copy has been sent to WGISS to close this action.

Action: SEO to demonstrate the success of connecting COVE to CBERS-4 and ResourcesSat-2.

We have added CBERS-4 and Resourcesat-2 to COVE. They are available for actual acquisitions display and in the Coverage Analyzer/Data Browser. CBERS-4 only has scene IDs and polygon boundaries … very simple metadata.

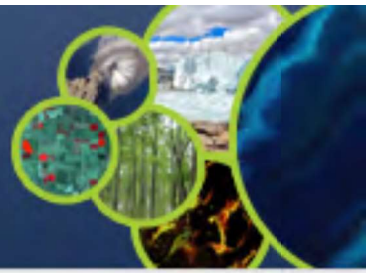
2017 CBERS-4 Summary



Data from the China CBERS-4 archive is not shown. Only data from the INPE archive is reported here.

Jan-1 to July-31, 2017 acquisitions from **WFI-2 instrument** (VIS and NIR, 73m, 5 day revisit). Though not shown here, the coverage for the IRSCam (SWIR and TIR, 40-80m, 26 day revisit), MUXCam (VIS, 20m, 26 day revisit) and PanMUX (PAN and MS, 5-10m, 26 day revisit) instruments is similar.

Proposed WGISS Support



- Continue support to maintain and expand the connections from mission archives to the **COVE tool**.
- Develop an approach for **on-demand Data Cube creation** using cloud-based (e.g. AWS), mirror site (e.g. USGS, ASF), or other data sites (e.g. Copernicus Services) for discovery, processing, and ingesting of Data Cubes to support global users.
- Help the SEO evaluate **WCS/WMS approaches** for web-based Data Cube connections using OGC standards. We are considering custom solutions and a GeoServer option.
- Help the SEO evaluate **file format options** for enhanced compression (storage) and processing functions to support Data Cubes.