SEO Report to WGISS

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WGISS-45 Meeting
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COVE Tool Updates
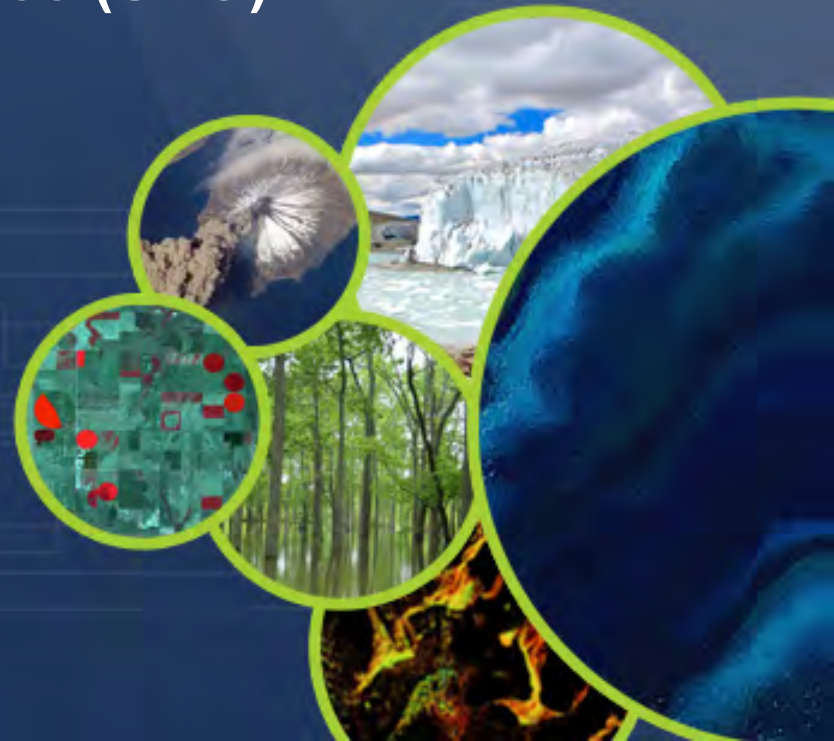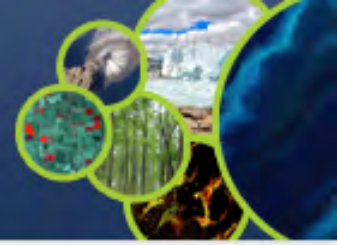
- The CEOS Visualization Environment (**COVE**) is a browser-based suite of tools for searching, analyzing, and visualizing actual and potential satellite sensor coverage.

- COVE is FREE and OPEN for anyone to use! There is a large international user base with 4000+ users in 2017.

- 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 and Data Browser:** New tools for coverage assessments and scene data to support data ordering.

www.ceos-cove.org

Coverage Analyzer

- Support for CBERS-4, Landsat 5/7/8, Sentinel-1A/1B, and Sentinel-2A.

- Output using discretizations for Landsat WRS, Sentinel-2 tiles, and various Lat-Lon degrees (0.10, 0.25, 0.5, 1.0).

- **Example Case:**
Sao Paulo,
28-Dec-2017,
Sentinel-1A,
IWS Mode
- Table Output with scene information
- View Browse image
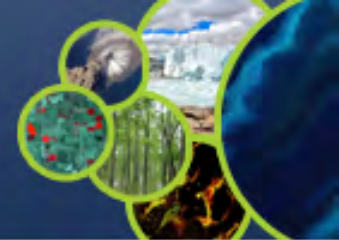- Link to ordering

CBERS-4 over Brazil
2017 coverage (all instruments)

Data Browser
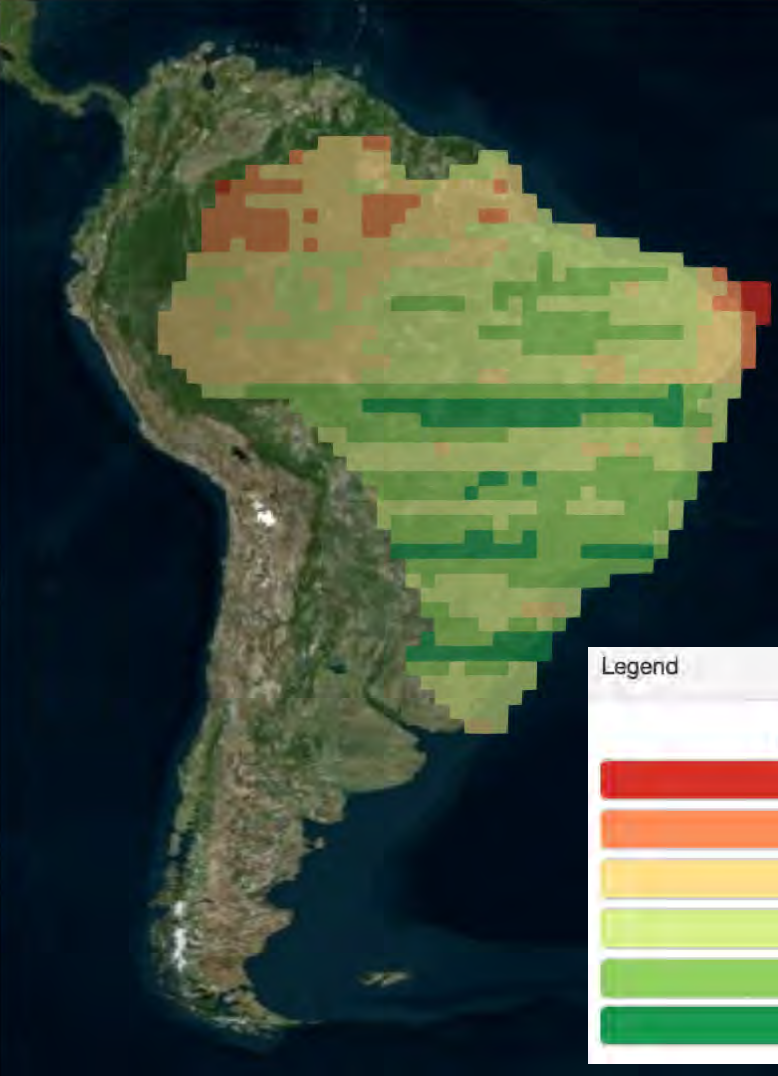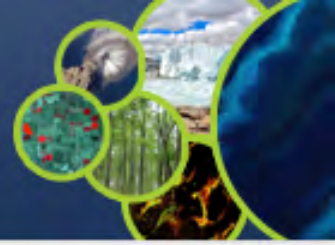
- Support for CBERS-4, Landsat 5/7/8, Sentinel-1A/1B, and Sentinel-2A ... similar to Coverage Analyzer

- Filtering for cloud cover threshold (optical missions)

- **Example Case:**
  Japan, Nov 2017
  Sentinel-2A, <50% cloudy
  - Table Output with scene information and browse images
  - Links to view the acquisition details, zoom into footprint on the map, and order the scene

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Query Results

Show entries   Showing 1 to 25 of 183 entries

25 ▾   Click to view full table

Acquisition Data For 2376952

Scene ID	**Cloud Cover Full** 33.7377
2376952	**Granule Name** L1C_T54SVF_A012369_20171104T013555
Date	**Scene Center Latitude** 36.5506074
Nov. 4, 2017	**Scene Center Longitude** 140.4956272
Mission name	**Scene Start Time** 2017-11-04T01:35:55.431Z
Sentinel-2A	**Scene Stop Time** 2017-11-04T01:38:16.134Z
Order URL	**Sun Azimuth** 166.521757716926
Order URL	**Sun Elevation** 52.9863210483174
Browse URL	
Browse URL	

The CEOS Data Cube "Road to 20"

4   Operational

11   Under Development

28   Under Review or Expressed Interest

43 total countries in the 16 months!

Data Cube Plans

- New Open Data Cube deployments: Vietnam, U.K., Uganda and the Africa Regional Data Cube

- Progress collaborations with Google and Amazon

- This week ... Swiss Data Cube Hackathon

- IGARSS Conference in Valencia, Spain (July 2018) … dedicated paper session and training course

- New technical additions: Jupyter (Python) Notebooks, Web-based User Interface tools

- New user applications and algorithms: Land Classification, Water Quality, NDVI Trend

WGISS-SEO Collaborations
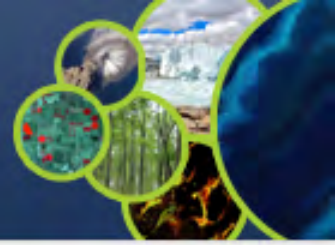
- Maintain and expand the connections from satellite mission archives to the **COVE tool**.

- Investigate approaches for **on-demand Data Cube creation** using cloud-based (e.g. AWS), mirror sites (e.g. USGS, ASF), or other data sites (e.g. Copernicus Services) for discovery, processing, and ingesting of Data Cubes to support global users.

  WGISS-44-08 Action: Rob Woodcock and Yonsook Enloe to further discuss the possibility to create a Python client to allow ingest of WGISS connected data assets into the CEOS Data Cube.