



ECOSTRESS

*ECOsystem Spaceborne Thermal Radiometer
Experiment on Space Station*

ECOSTRESS Science Data Availability
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ECOSTRESS Science Data Products

PGE or <Source>	Product	Dimensions (cross x along x bands)			File Size (MB)	Description
L1B Rad	ECO1BRAD	5400	5632	6	939	Calibrated at-sensor radiances
L1B Geo	ECO1BGEO	5400	5632	1	1609	Geolocation tags, sun angles, and look angles, and calibrated, resampled at-sensor radiances
	ECO1BATT	12	52	1	0.5	Corrected spacecraft ephemeris and attitude data
	ECO1BMAPRAD	7636	7964	6	4224	Map projected calibrated at-sensor radiances and geolocation parameters of each pixel
L2	ECO2LSTE	5,400	5,632	5+W	536	Land surface temperature and emissivity
	ECO2CLD	5,400	5,632	1	67	Cloud mask
L3/4 Preprocessor	ECO3ANCQA	5,400	5,632	24	1609	24*16 bitmasks of L3/L4 ancillary data quality flags
L3/4 PT-JPL	ECO3ETPTJPL	5,400	5,632		671	Evapotranspiration retrieved from L2_LSTE using the PT-JPL Algorithm
	ECO4ESIPTJPL	5,400	5,632		268	Evaporative stress index generated with PT-JPL
	ECO4WUE	5,400	5,632		134	Water use efficiency
<from USDA>	ECO3ETALEXIU	3,000	3,000		99	Evapotranspiration generated by USDA using the ALEXI/DisALEXI Algorithm
	ECO4ESIALEXIU	3,000	3,000		119	Evaporative Stress Index generated by USDA with ALEXI/DisALEXI



LP DAAC hosts the latest build of each product

Note that the orbit gap is due to temporal data gap after MSU-A failure

	Build 0501	Build 0502	Build 0503
ECO1BRAD	Orbits 48-1316		Orbits 2367-current
ECO1BGEO	Orbits 48-1316		Orbits 2367-current
ECO1BATT	Orbits 48-1316		Orbits 2367-current
ECO1BMAPRAD	Orbits 48-1316		Orbits 2367-current
ECO2LSTE		Orbits 48-524	Orbits 525-current
ECO2CLD		Orbits 48-524	Orbits 525-current
ECO3ANCQA			Orbits 48-current
ECO3ETPTJPL			Orbits 48-current
ECO4ESIPTJPL			Orbits 48-current
ECO4WUE			Orbits 48-current

*For L1 products, Build 0501 and 0503 are produced using the same algorithm.

*For L2 products, Build 0502 and 0503 are produced using the same algorithm.



PGE Versions Per Build

	Build 0501	Build 0502	Build 0503
L1B Rad PGE version	5.0	5.0	5.0
L1B Geo PGE version	5.0	5.0	5.0
L2 PGE version		1.1.2	1.1.2
L3/L4 Preprocessor version			v1.2.x
L3/L4 PT-JPL PGE version			v1.0.2
L3/L4 ALEXI PGE version			v1.1.0

*For L1 products, Build 0501, 0502 and 0503 are produced using the same algorithm.

*For L2 products, Build 0502 and 0503 are produced using the same algorithm.



ECOSTRESS coverage - spatial

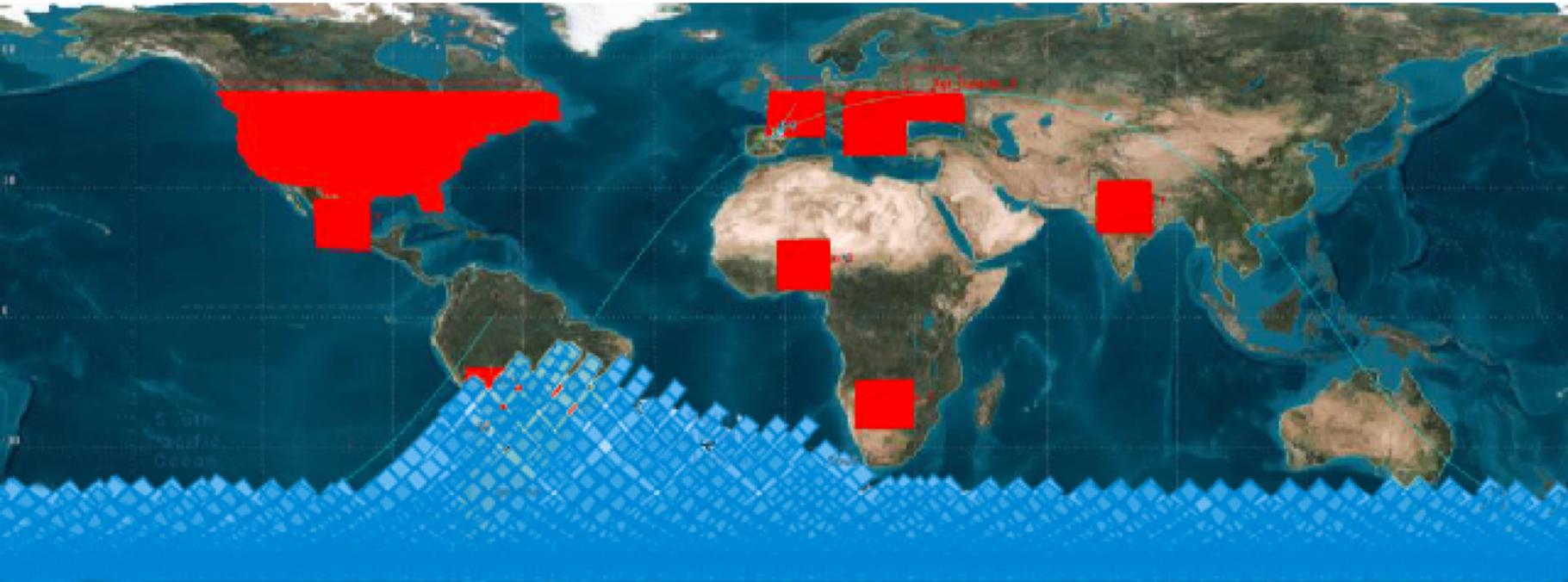


Spatial Coverage Summary

- ECOSTRESS has priority regions over CONUS and key biomes
- Due to an increase in expected bandwidth, ECOSTRESS has acquired data over many areas not in the priority regions
- In the early stages of processing, all data was processed, delivered to the DAAC, and made available to early adopters
- As data volumes increased, the limited resources needed to be focused on priority regions only.
 - LP DAAC makes the most recent version of all products available, which is only over priority areas.
- Going forward, the data outside the priority areas may be made available given sufficient resources. However, this is not guaranteed at the present time.
- There may have been some confusion regarding data availability and coverage.
 - Because of the nature of our cost-capped mission, we have limited flexibility and capacity to acquire / process / deliver data.
 - We need your help expressing your interest in our data products in your region.



Proposed Targets (not including flux/validation sites)

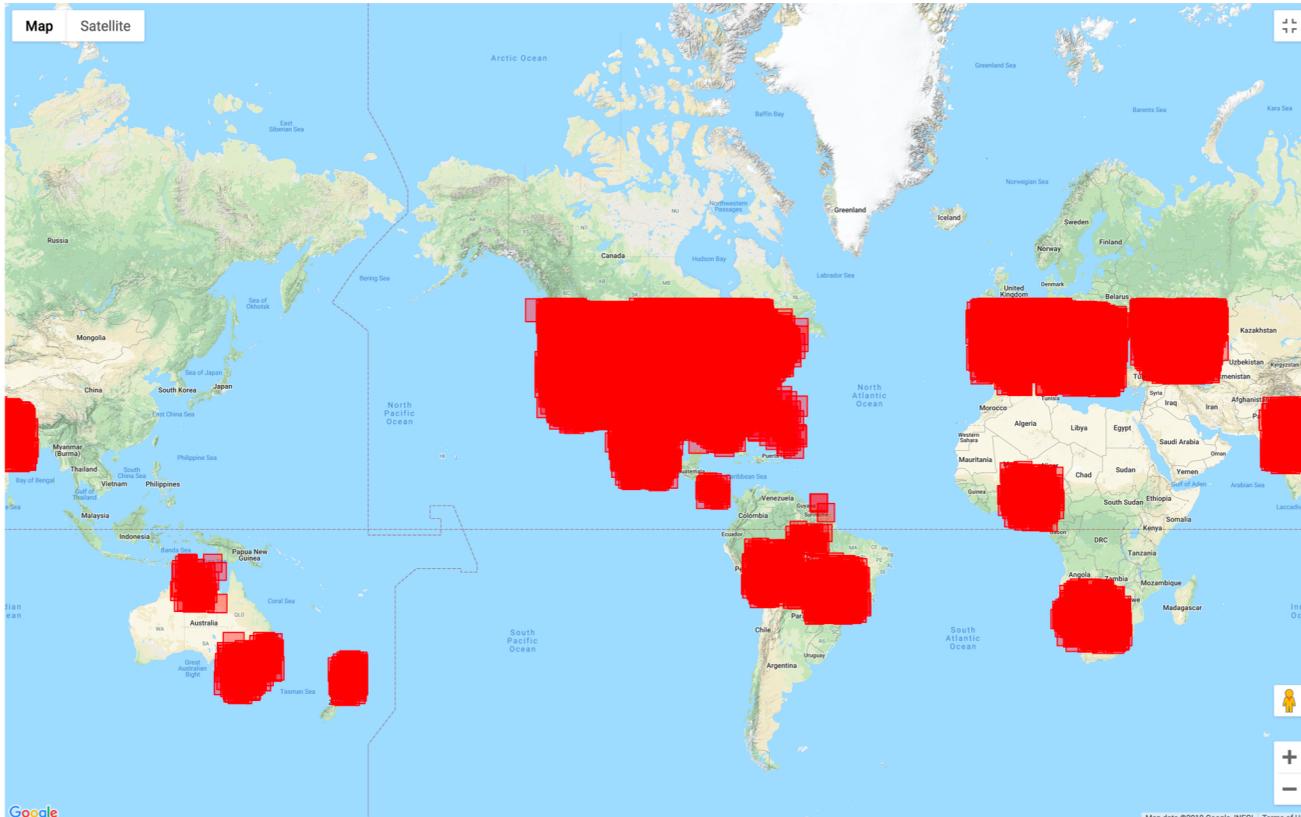


 Proposed Targets

 Stay-out areas due to high radiation

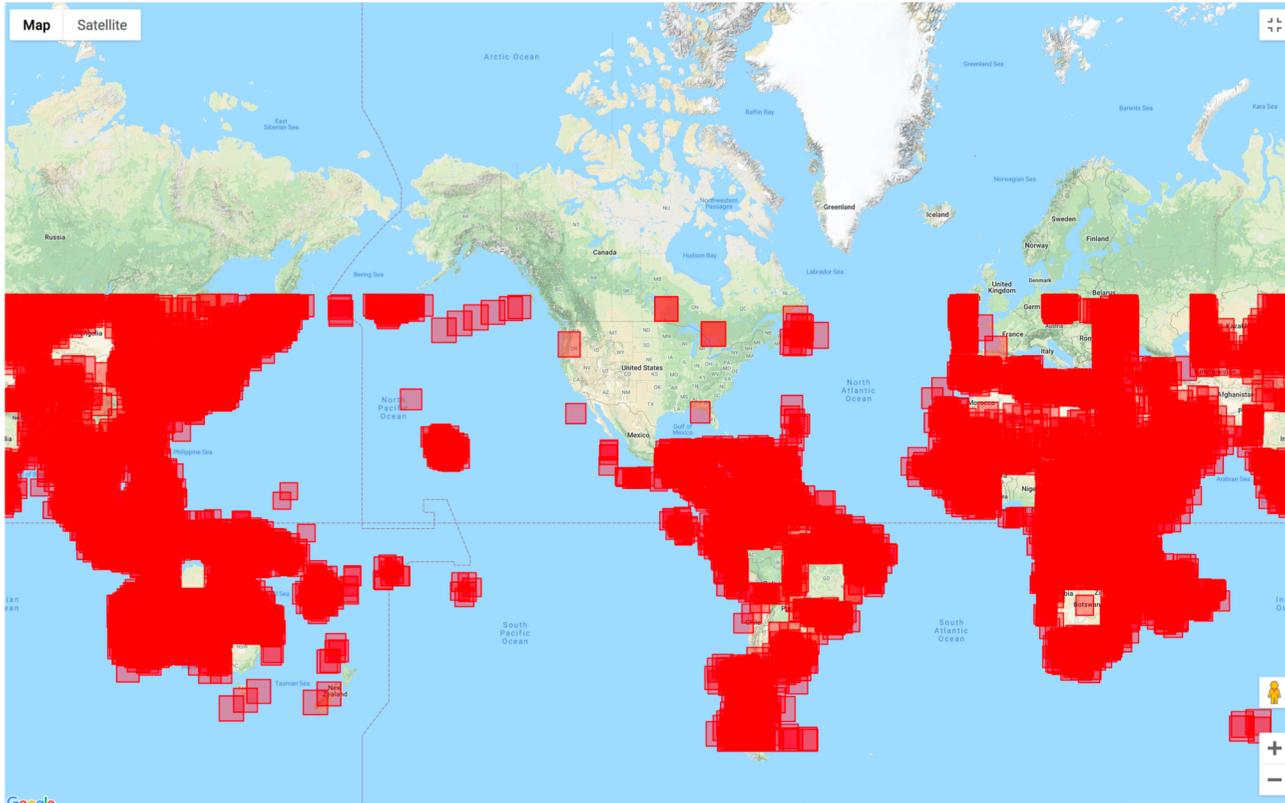


Data delivered to the DAAC (including validation sites)





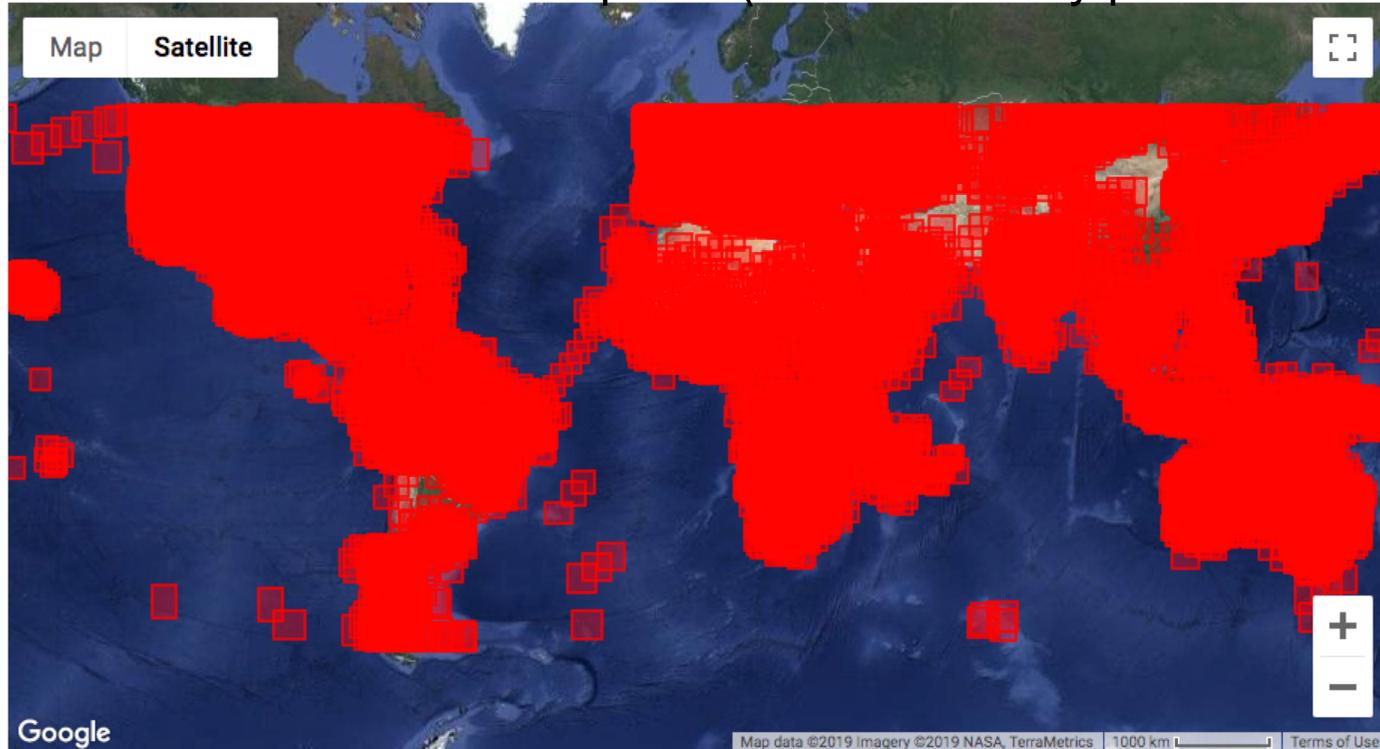
Data acquired but not necessarily processed or delivered





GMAP tool (ECOSTRESS website)

This tool shows all data acquired (not necessarily processed or delivered)





ECOSTRESS coverage - temporal

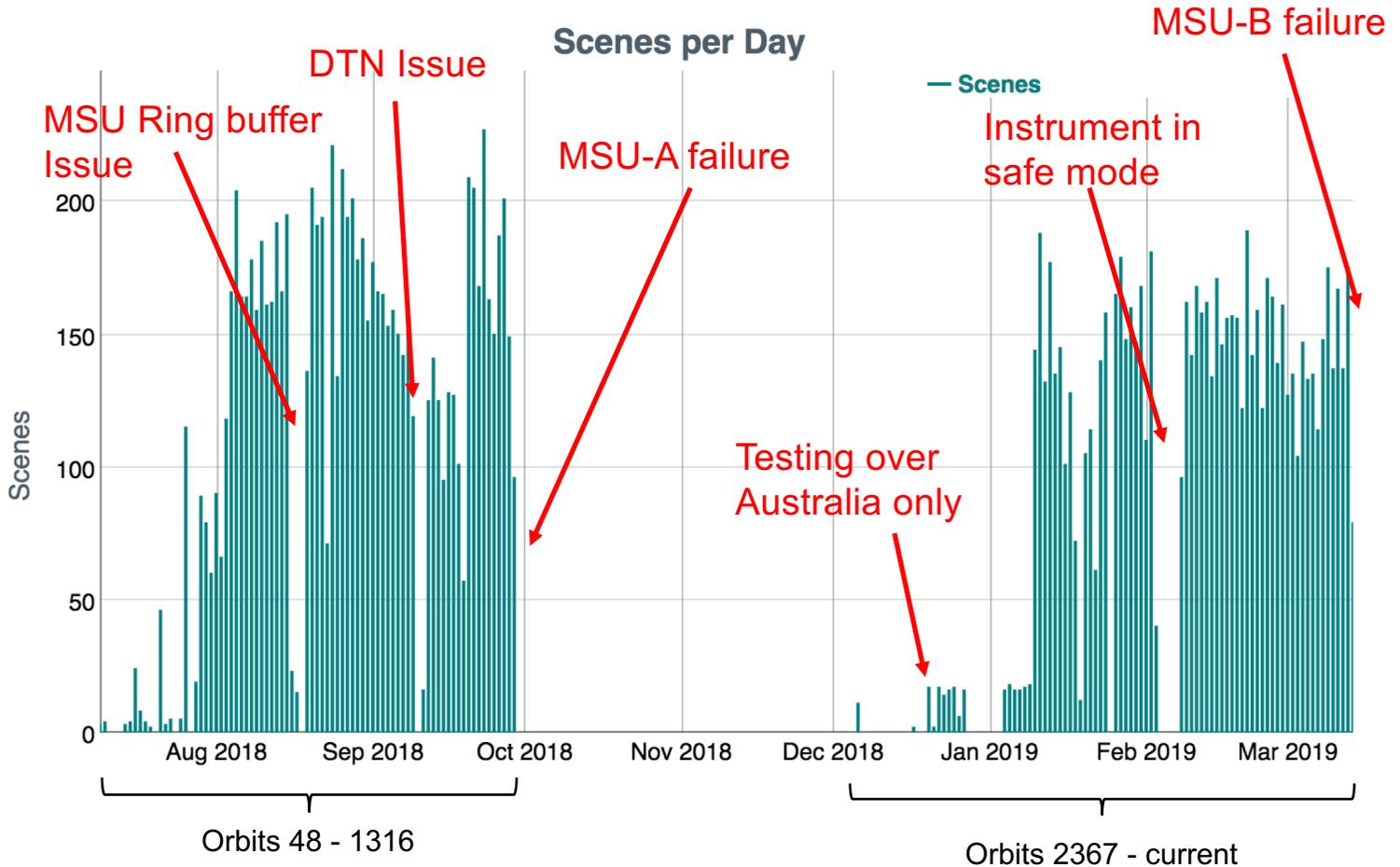


Temporal Coverage Summary

- ECOSTRESS has one year of guaranteed funding, to end 19 August 2019. A second year is a possibility, but is not guaranteed.
- Two MSU anomalies have caused breaks in data availability.
- MSU-A failed on 9/29/2018
- MSU-B anomaly occurred on 3/14/2019
 - Incident currently under investigation
- Direct streaming that bypasses the MSU will be implemented soon.



Data availability





Final Summary

- Data is available for priority regions over CONUS and key biomes
- Data is available in two temporal blocks:
 - 7/29/2018 – 9/29/2018
 - 1/10/2019 – 3/14/2019
 - With some smaller acquisitions in between
- Latest data products available through LP DAAC are Build 5.0x
 - PGE versions were consistent, regardless of build
- ECOSTRESS has acquired 17,636 scenes (400 km x 400 km); this is the equivalent of covering the land surface of the Earth 5 times!