Jet Propulsion Laboratory
California Institute of Technology

Evaluating a CONUS-wide DisALEXI Evapotranspiration product

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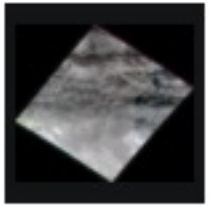
Objectives

Our main goal is to **develop, validate and evaluate DisALEXI ET products throughout CONUS**.

1. Develop a 70 m resolution DisALEXI ET product for the entire CONUS.
2. Evaluate the current DisALEXI algorithm over agricultural field validation sites.
3. Modify the algorithm if needed, especially over regions not covered by the current implementation.
4. Include an appropriate uncertainty quantification, based on leveraged existing research.
5. Make the data publicly available through LP DAAC.

Progress

- DisALEXI products are currently available for all ECOSTRESS daytime data acquired over CONUS!



ECOSTRESS Evapotranspiration dis-ALEXI Daily L3 CONUS 70 m V001

10,802 Granules • 2018-07-15 ongoing • The ECOsystem Spaceborne Thermal Radiometer Experiment on Space Station (ECOSTRESS) mission measures the temperature of plants to better understand how much water plants need and how they respond to stress. ECOSTRESS ...

GEOSS | ECO3ETALEXI v001 - LP DAAC

Progress

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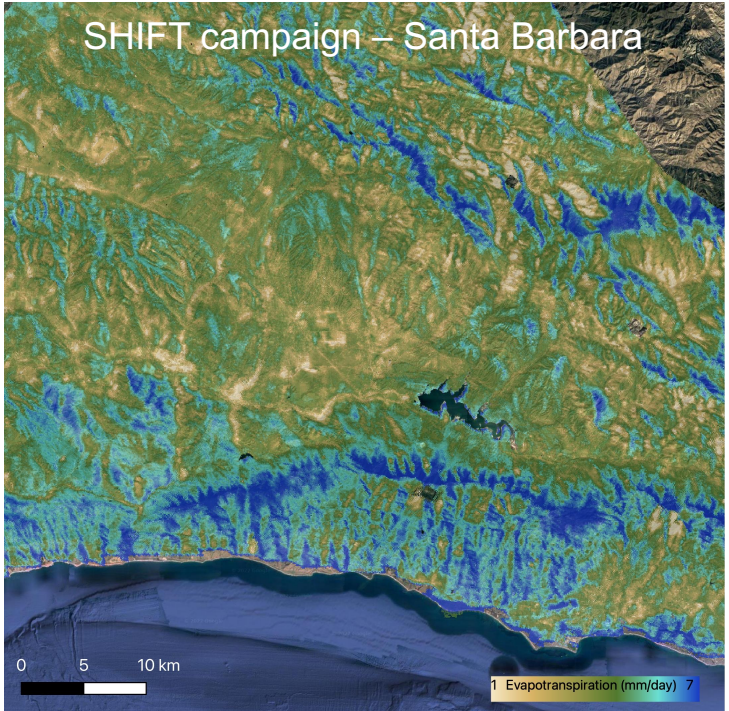
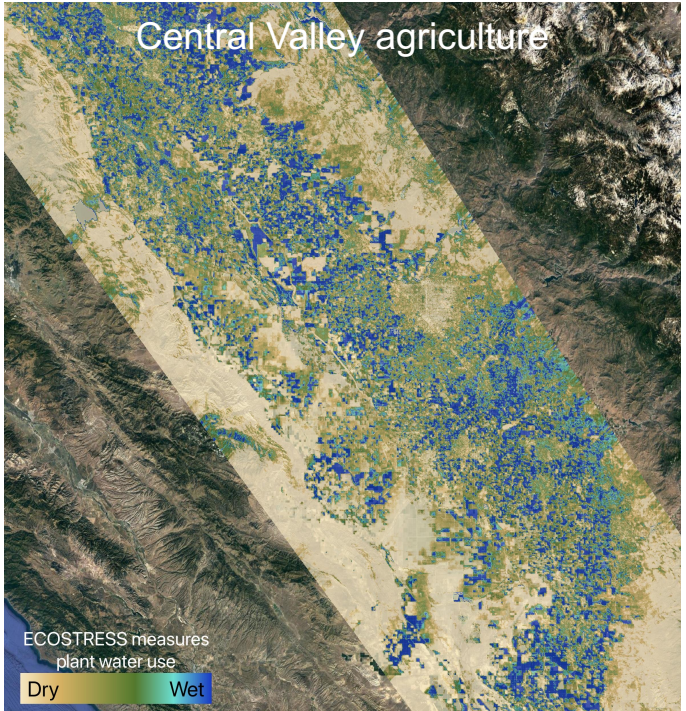
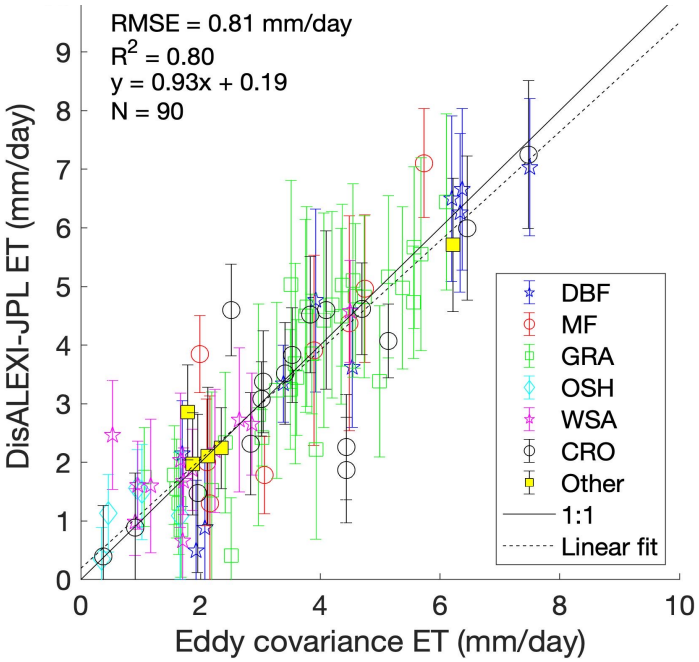
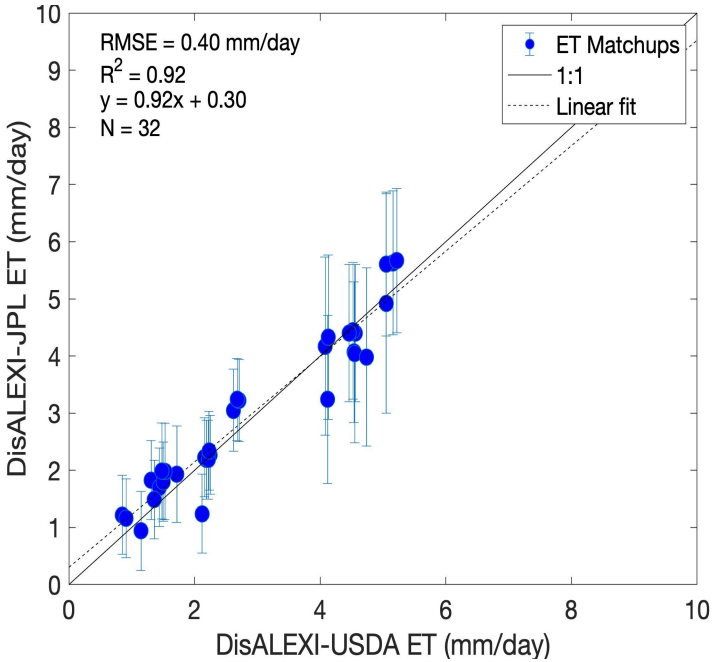




Progress

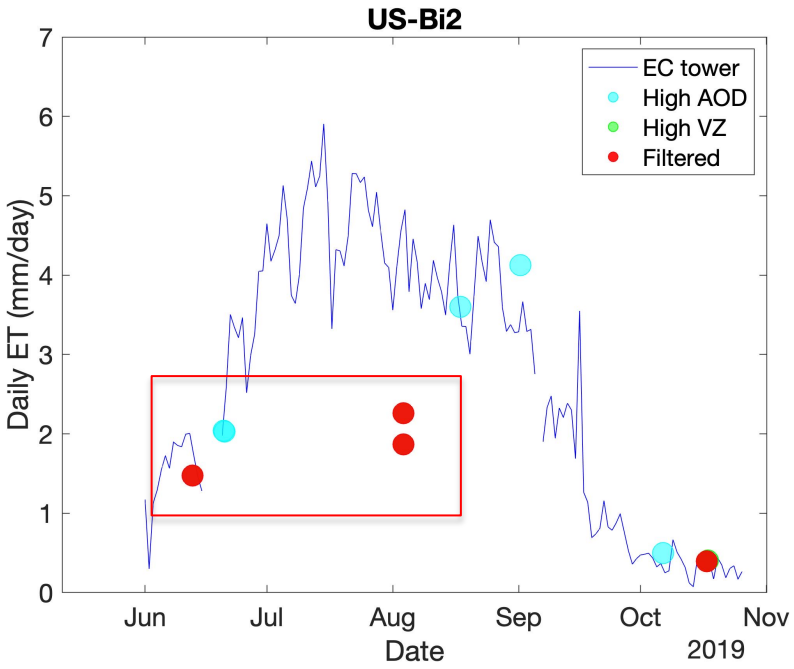
- Validation over a variety of landcover types showed accuracy < 1 mm/day





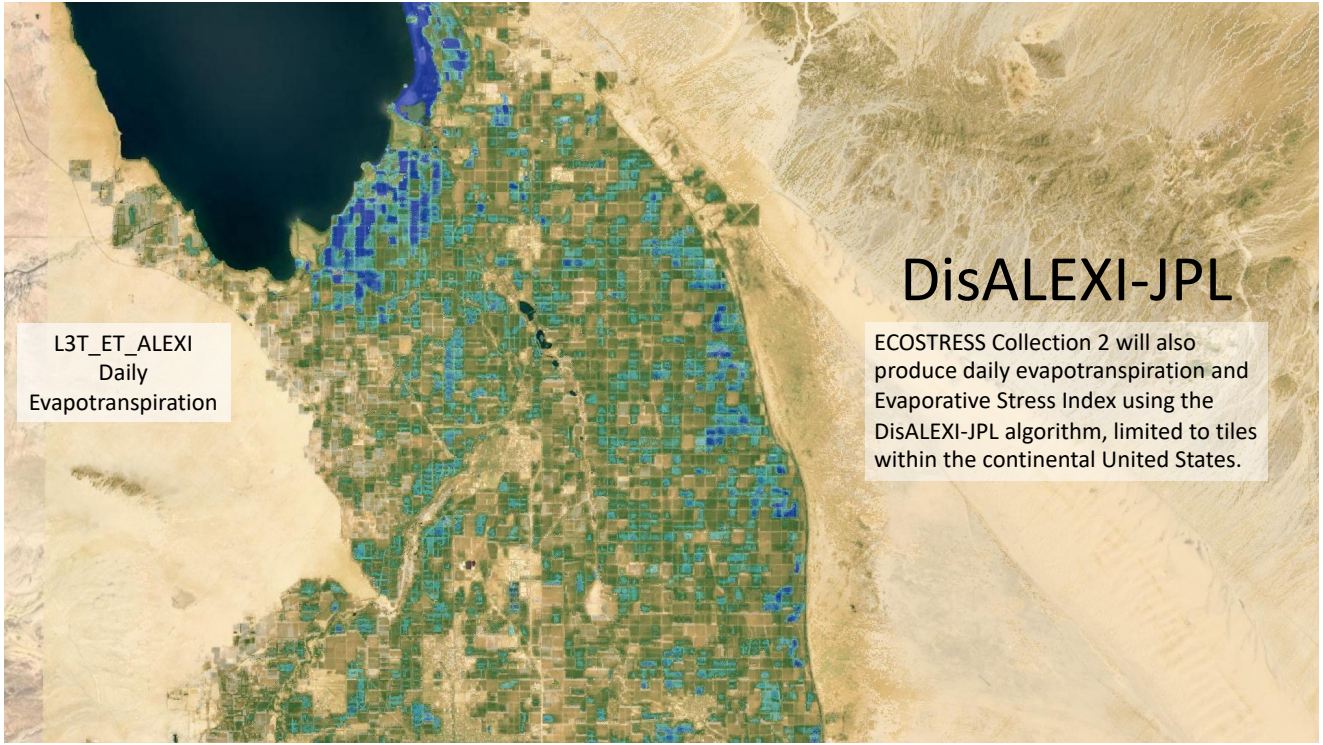
Progress

- Greatest source of uncertainty is temporal offset between VNIR and TIR inputs



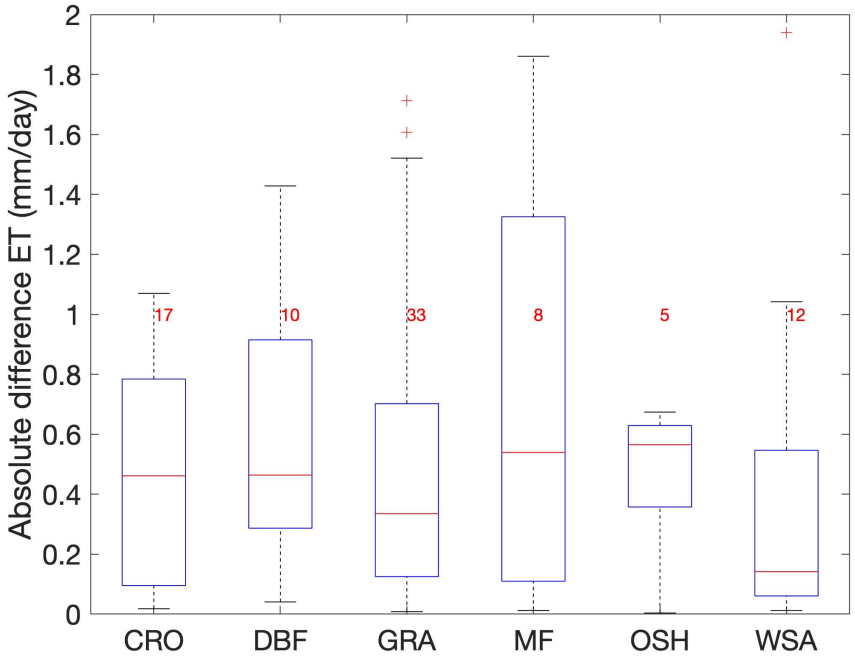
Progress

- New DisALEXI incorporates STARS NDVI and albedo



Progress

- Updated ALEXI provides more accurate estimates over forests



Next steps

- Re-validate DisALEXI collection 2
- Incorporate STARS uncertainty into DisALEXI uncertainty

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