



CSPP VIIRS Land Surface Reflectance and Vegetation Index

Nick Bearson, Kathy Strabala, David Hoese, Liam Gumley



Cooperative Institute for Meteorological Satellite Studies,
Space Science and Engineering Center,
University of Wisconsin-Madison

What is this?

The CSPP VIIRS Land Surface Reflectance and Vegetation Index is a CSPP release of the NOAA/NESDIS/STAR JPSS Enterprise software for retrieving Land Surface Reflectances (LSR) from input direct broadcast Suomi-NPP and NOAA-20 Sensor Data Record (SDR), and VIIRS Environmental Data Record (EDR) inputs.

The JPSS program worked with the CSPP team to integrate the JPSS processing framework enterprise algorithms into stand alone executables, which have been made easy to use via CSPP scripting. The output Land Surface Reflectance product created by this software is identical in naming, format (NetCDF), and structure to the corresponding NPP Data Exploitation system (NDE) files.

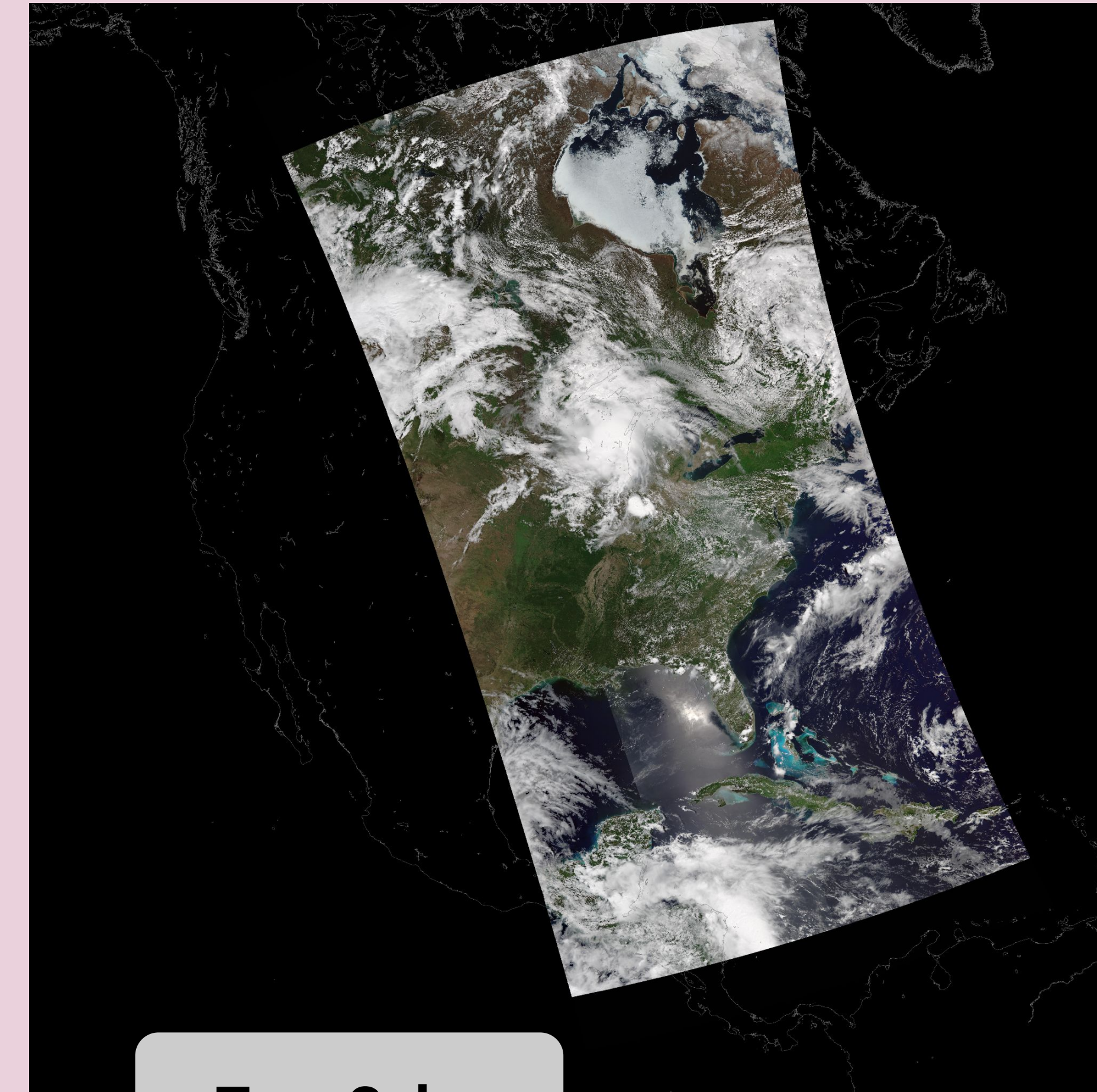
In addition, the Surface Reflectances are then used to create Normalized Difference Vegetation Index (NDVI) and Enhanced Vegetation Index (EVI) products. These retrievals are not created using official NOAA/NESDIS/STAR software, which produces the Vegetation Indices on a multi-day global grid, but are created for each pixel in the input swath at 375m resolution.

Features

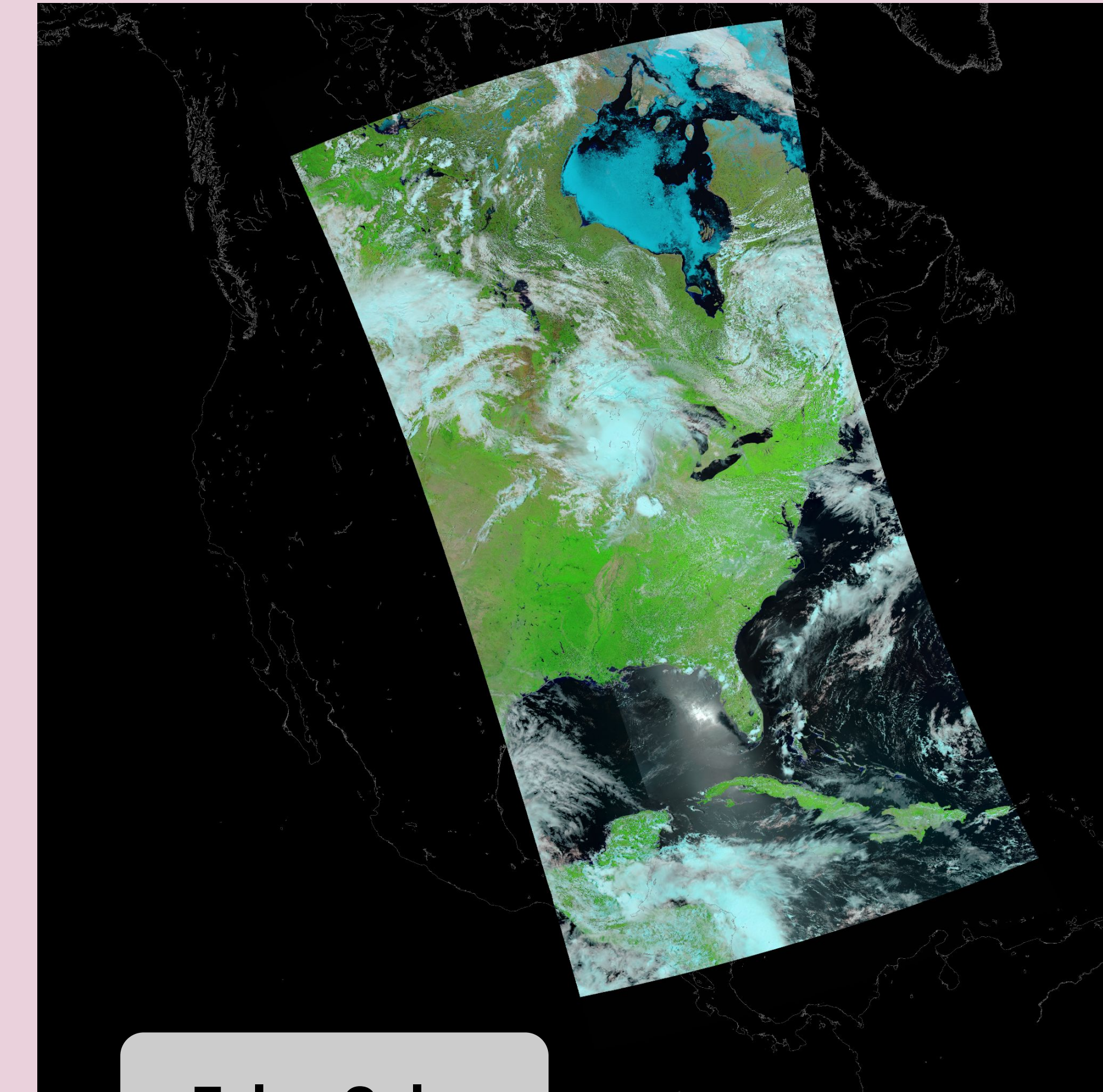
- Algorithm execution through a single bash shell script CSPP_VIIRS_Surface_Reflectance.sh
- Requires VIIRS SDRs and CSPP VIIRS ASCII EDRs as input
- No dynamic ancillary data inputs are required
- NDVI and EVI Vegetation Indices at 375m resolution are generated and included in the output file
- Multi-core processing is supported

Quickstart

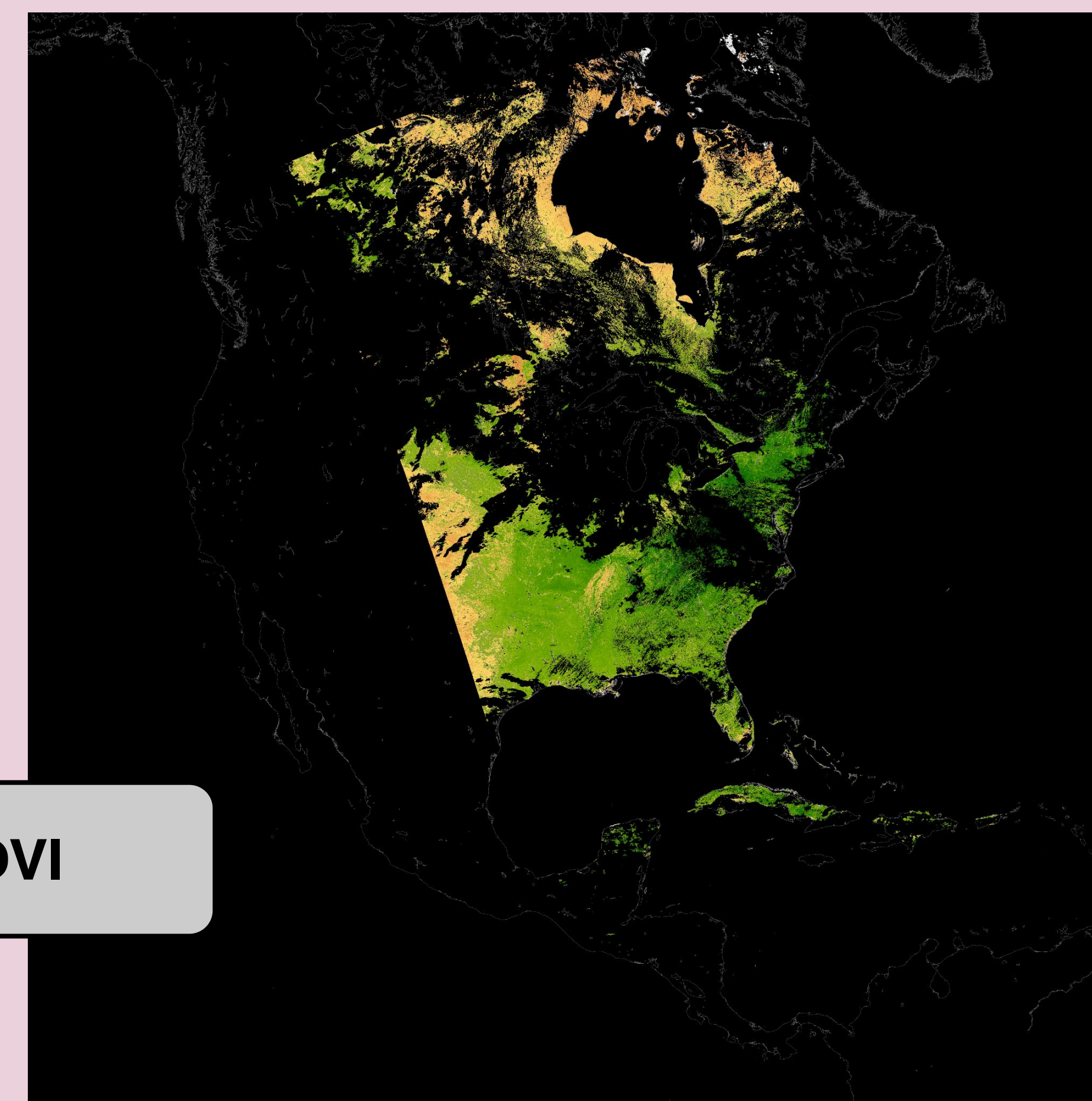
```
$ tar xf CSPP_VIIRS_SURFACE_REFLECTANCE_V1.1.tar.xz
$ export PATH=$PATH:$PWD/CSPP_VIIRS_Surface_Reflectance/bin/
$ CSPP_VIIRS_Surface_Reflectance.sh /your/input/data/
```



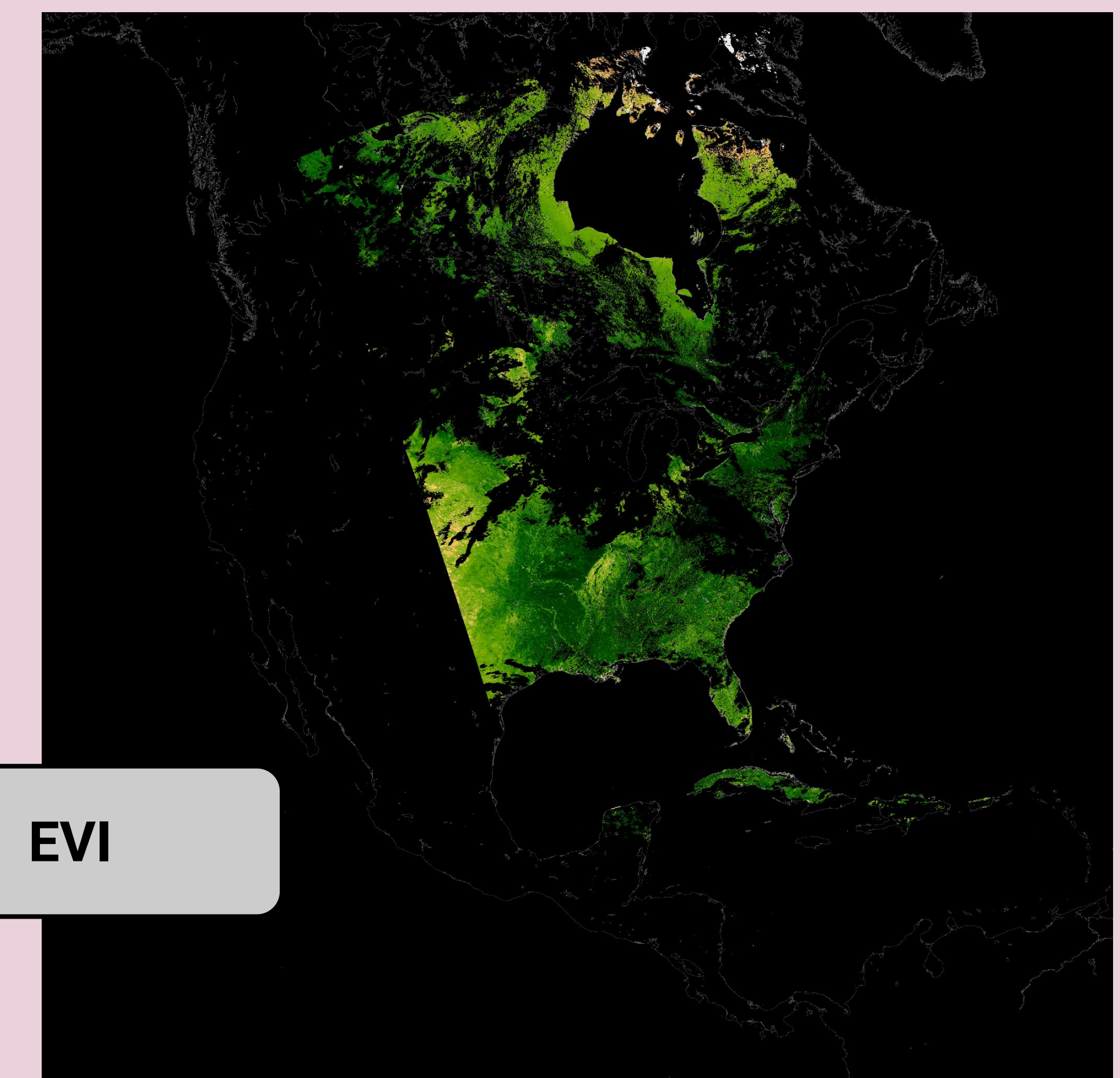
True Color



False Color



NDVI



EVI

Download the software or learn more at our website:
<http://cimss.ssec.wisc.edu/cspp/>