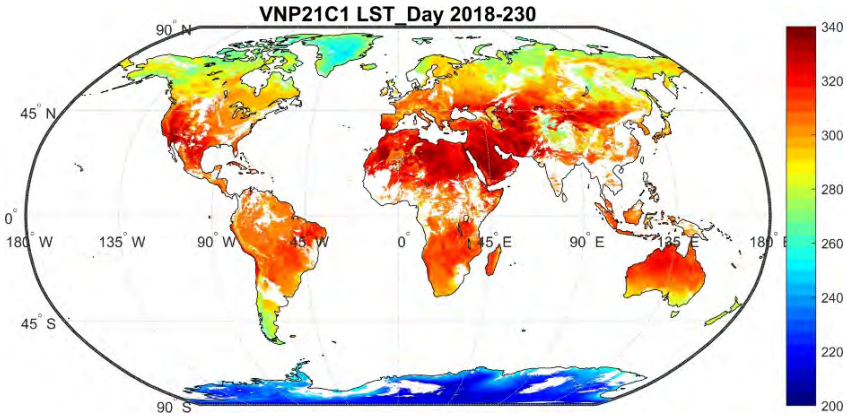
Status of VIIRS LST&E (VNP21)

Status and Updates:

- V1 L2, L3 Daily, and 8-day processing complete through May 2020
- June 2020 currently in processing with latest MERRA2 data
- Version 2 PGE's baselined and tested:
  - Will include Climate Modeling Grid (CMG) products similar to MxD21
  - GEOS5 will replace MERRA2 allowing near real-time processing



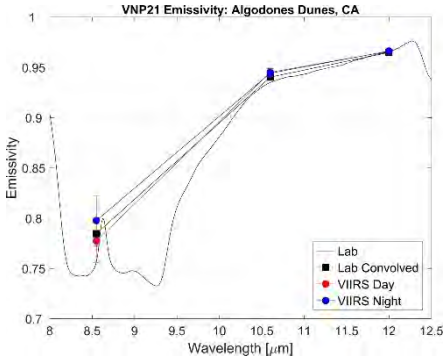
VNP21 LST&E Products:

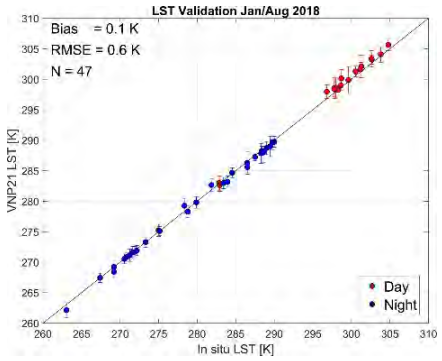
Version 1:

- VNP21 L2: Daily 5-min L2 Swath 750m
- VNP21A1: Daily L3 Global 1km
- VNP21A2 8-day L3 Global 1km

Version 2 additional products:

- VNP21C1: Daily 0.05 degree Climate Modeling Grid (CMG)
- VNP21C2: 8-day 0.05 degree Climate Modeling Grid (CMG)
- VNP21C3: Monthly 0.05 degree Climate Modeling Grid (CMG)





Recent Publications:

- *Hulley, G., Dousset, B., (2020), Spatio-temporal trends in urban extreme heat with new MODIS and VIIRS land surface temperature data, RSE, in review.*
- *Meng, X., Cheng, J., (2020), Estimating Land and Sea Surface Temperature From Cross-Calibrated Chinese Gaofen-5 Thermal Infrared Data Using Split-Window Algorithm, IEEE, 17(3), 509-513*
- *Hulley, G. C., Malakar, N., Islam, T., Freepartner, R, (2018), NASA's MODIS and VIIRS Land Surface Temperature and Emissivity Products: A Consistent and High Quality Earth System Data Record, IEEE TGRS, DOI: 10.1109/JSTARS.2017.2779330.*
- *Islam, T. G. C. Hulley, N. Malakar, R. Radocinski, S. Hook, P. Guillevic (2017), A physics-based algorithm for the simultaneous retrieval of land surface temperature and emissivity from VIIRS thermal infrared data, IEEE Transactions on Geoscience and Remote Sensing, 55, 563-576*