

VIIRS VI Product Validation Methods

1. Global Inter-comparison with Aqua MODIS (or other sensors)
2. Validation using subsets
 - a) Inter-comparison with Aqua MODIS
 - b) Comparison with Aeronet-based surface reflectance
 - c) Comparison with in situ reflectance (tower, UAV, airborne)
 - d) Validation using FLUXNET productivity data

Global Comparison with Aqua MODIS

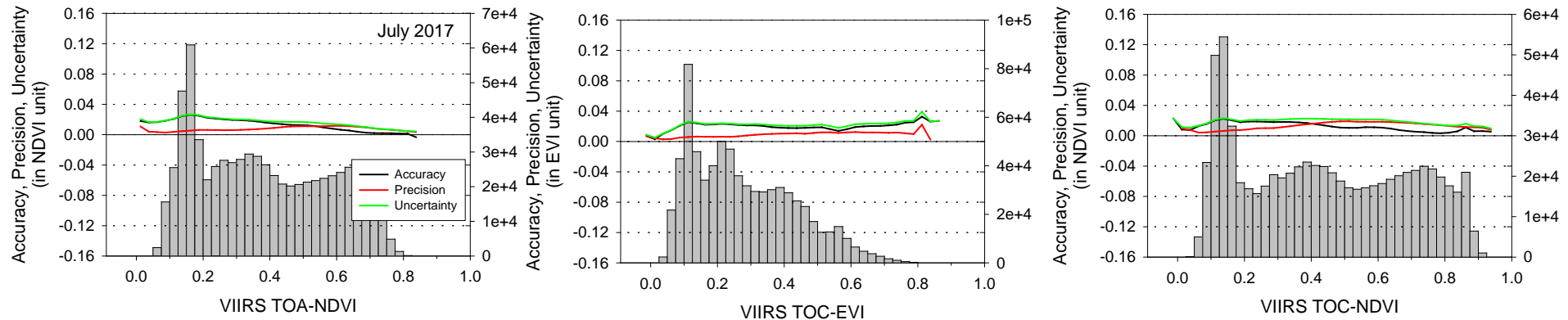
APU for the Month of July (DOY 192, 194, & 197) 2017

TOA NDVI

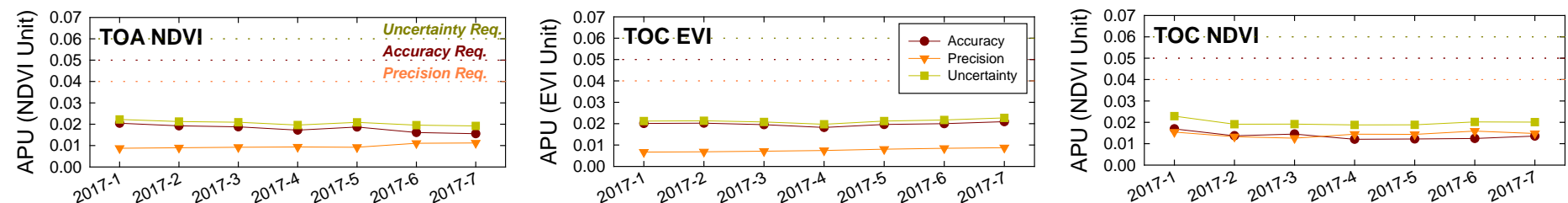
TOC EVI

TOC NDVI

TOA-NDVI	Global APU	L1R	TOC-EVI	Global APU	L1R	TOC-NDVI	Global APU	L1R
Accuracy	0.016	0.05	Accuracy	0.020	0.05	Accuracy	0.012	0.05
Precision	0.011	0.04	Precision	0.009	0.04	Precision	0.016	0.04
Uncertainty	0.019	0.06	Uncertainty	0.022	0.06	Uncertainty	0.020	0.06



Global APU Time Series Plots for 2017



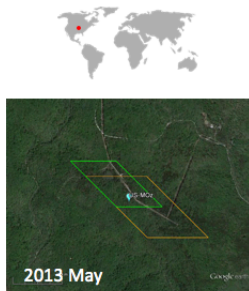


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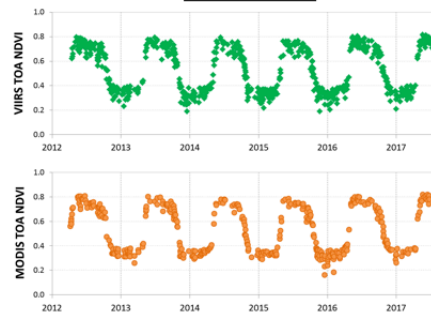
Inter-Comparison of VI Profiles



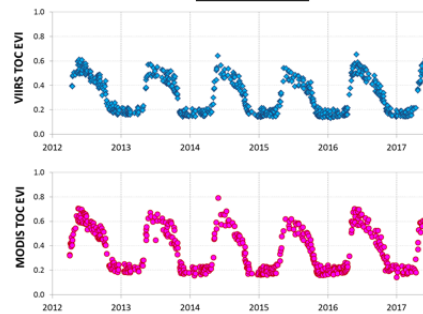
Missouri Ozark (DBF)



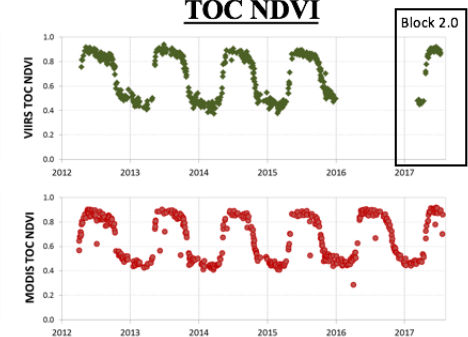
TOA NDVI



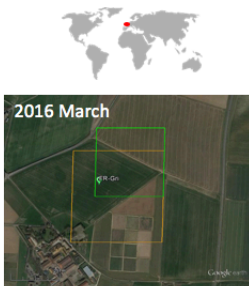
TOC EVI



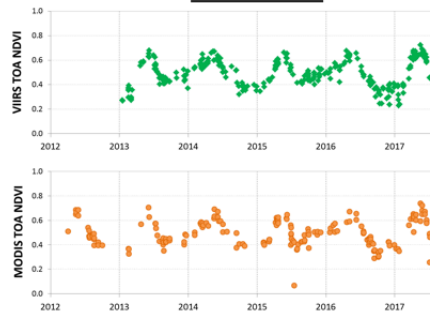
TOC NDVI



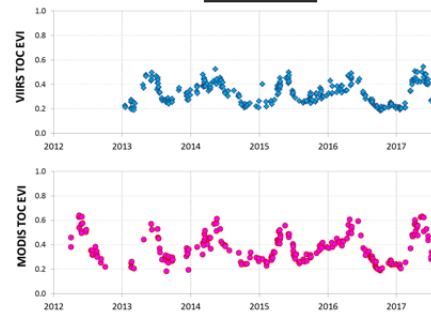
Grignon, France (CRO)



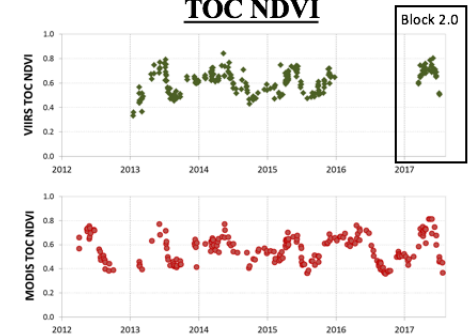
TOA NDVI



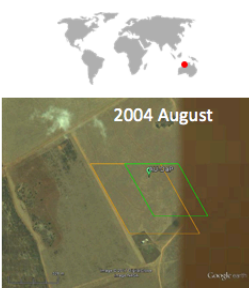
TOC EVI



TOC NDVI



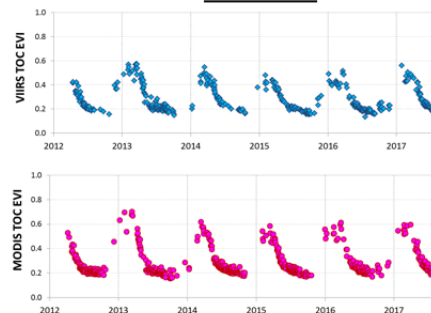
Daly River Pasture (GRA)



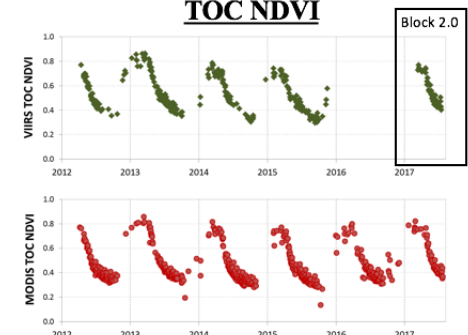
TOA NDVI



TOC EVI



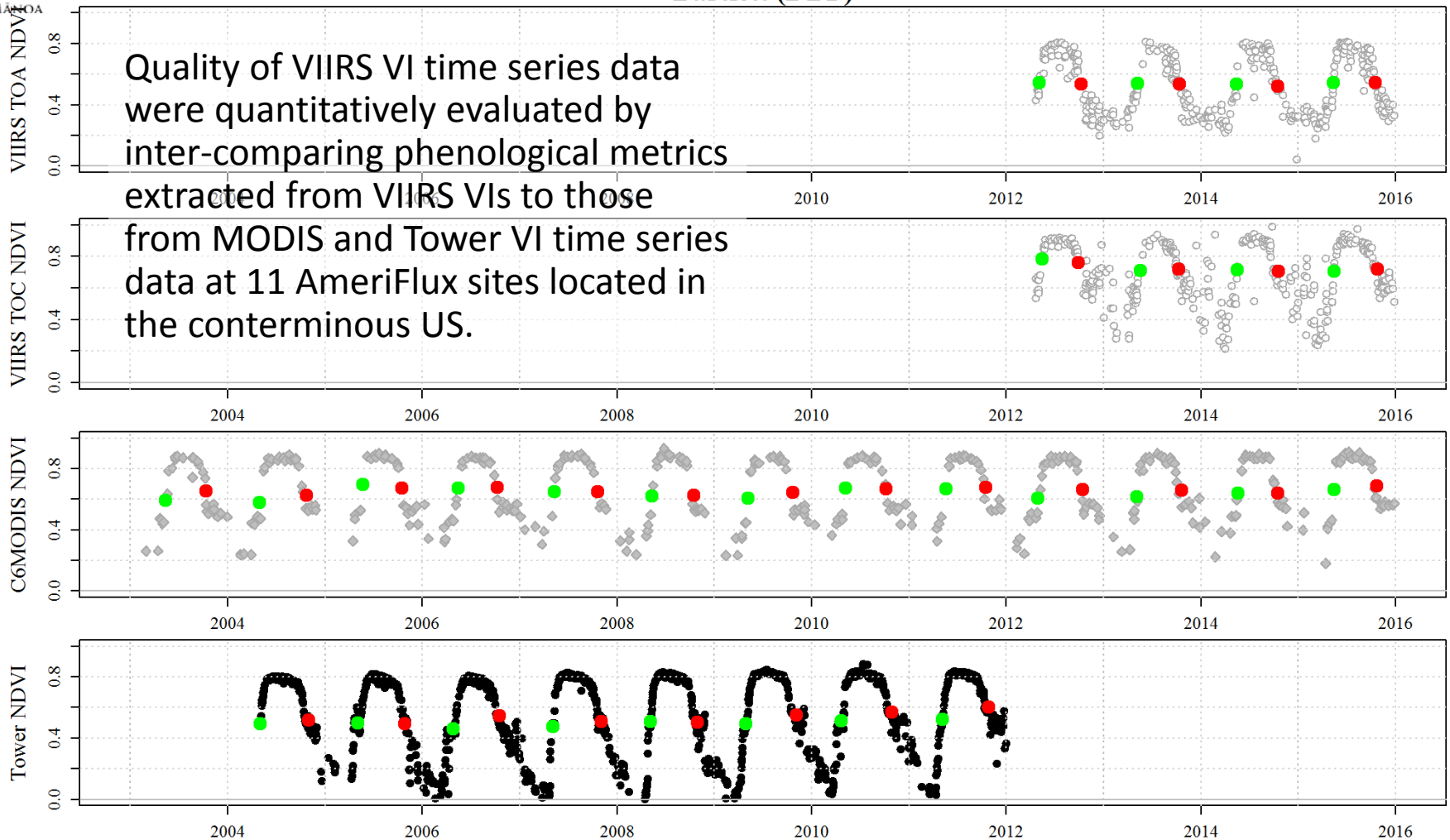
TOC NDVI





Comparison with *in situ* VIs

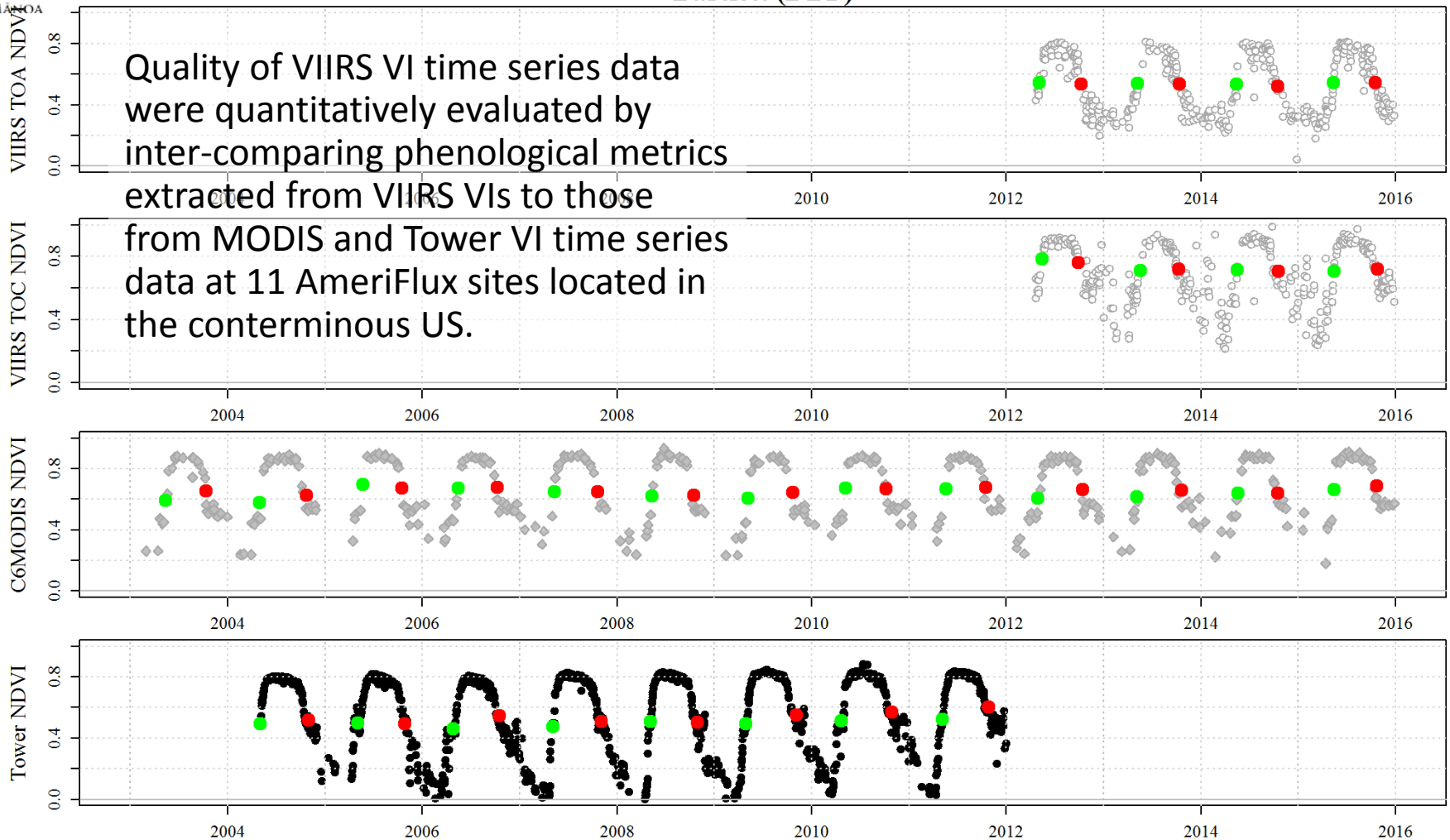
Bartlett (DBF)





Comparison with *in situ* VIs

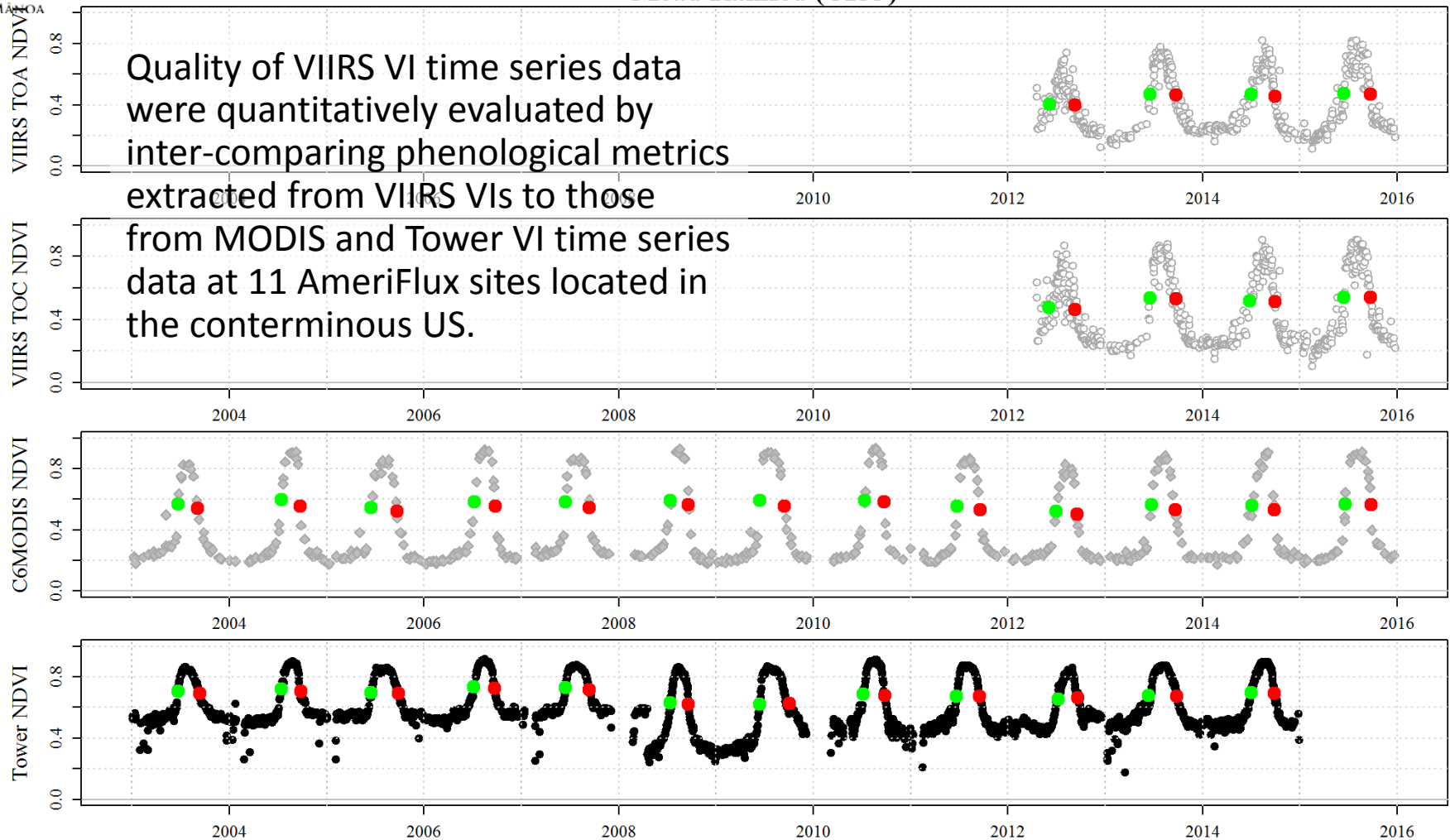
Bartlett (DBF)



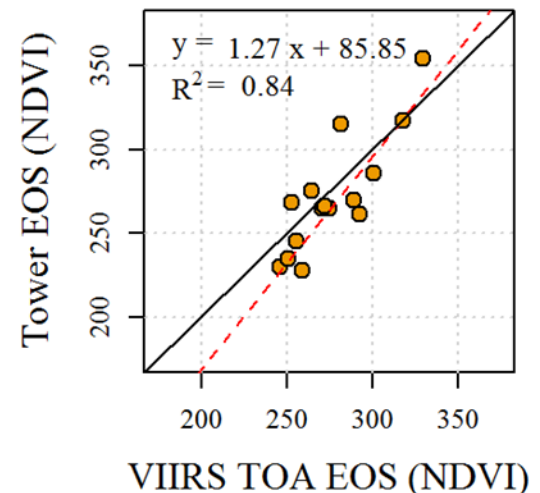
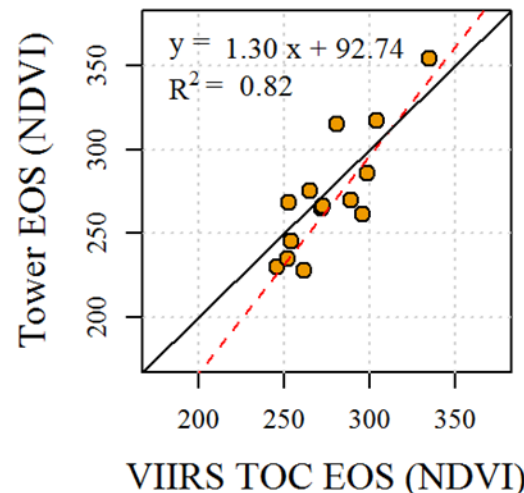
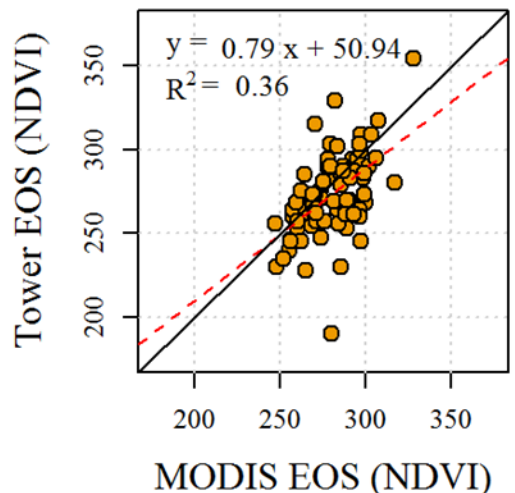
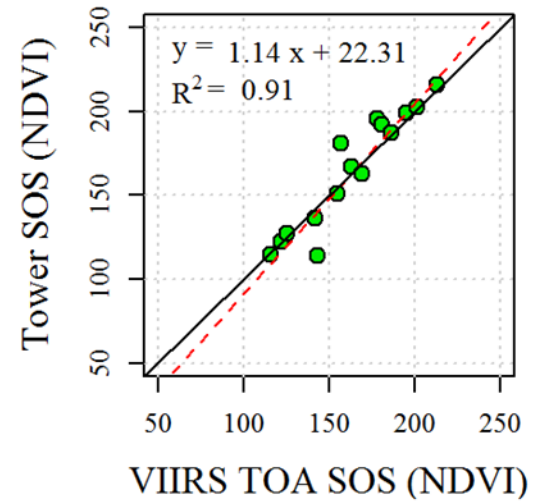
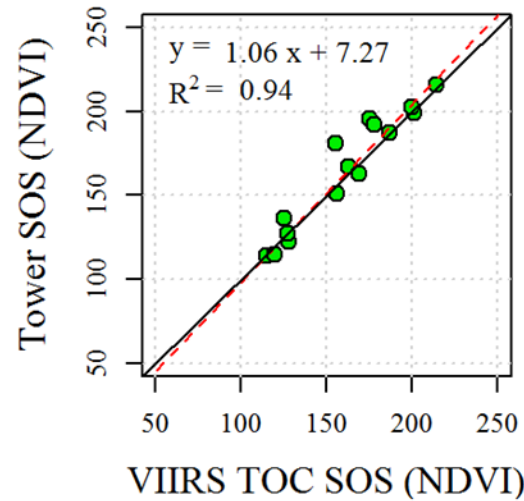
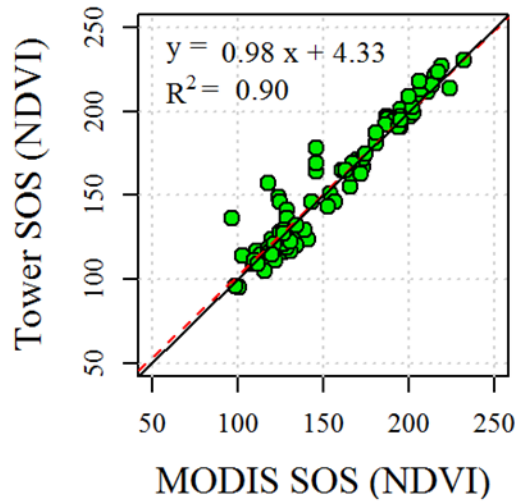


Comparison with *in situ* VIs

Mead Rainfed (CRO)

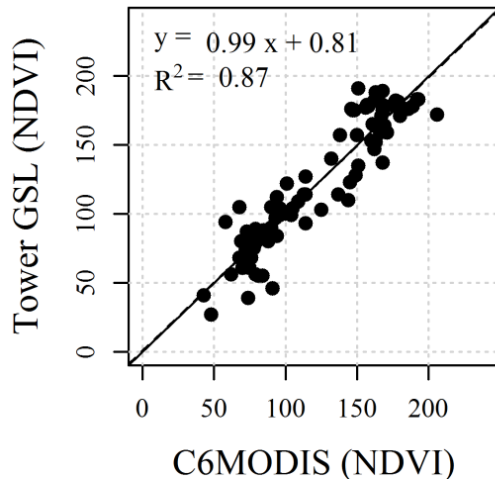


Inter-Comparison of Start and End of Growing Seasons (SOS & EOS) Derived from VIIRS, MODIS, and Tower NDVI

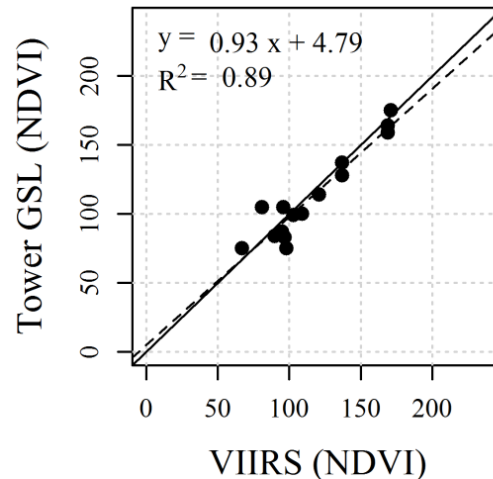


Inter-Comparison of Length of Growing Season Derived from VIIRS, MODIS, and Tower VIs

Tower vs. MODIS (C6)



Tower vs. VIIRS



MODIS (C6) vs. VIIRS

