26-28 July 2016, Brookings, SD

Variation of Land Surface Phenology Derived from Landsat 7 and 8 Data across the Tibetan Plateau

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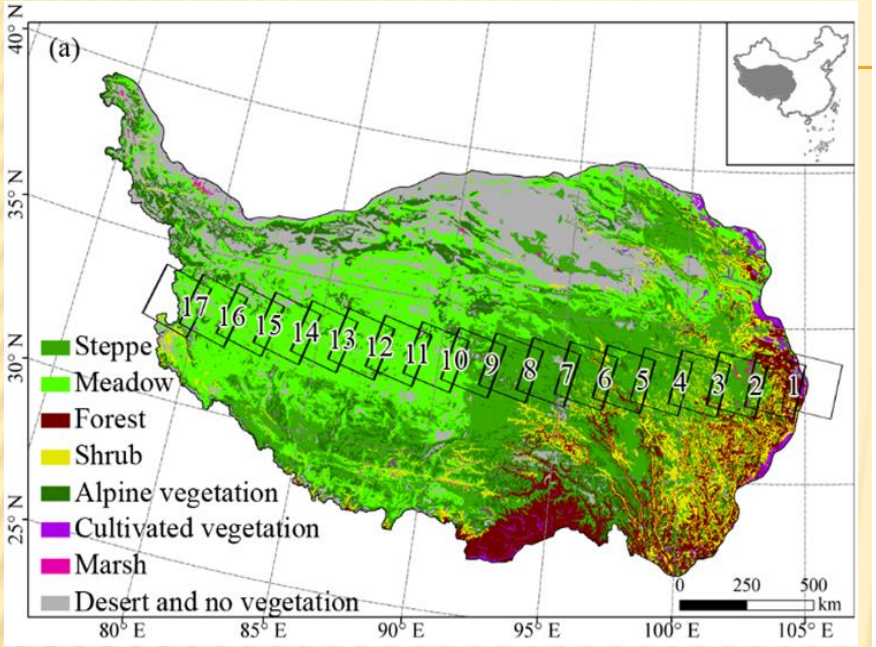
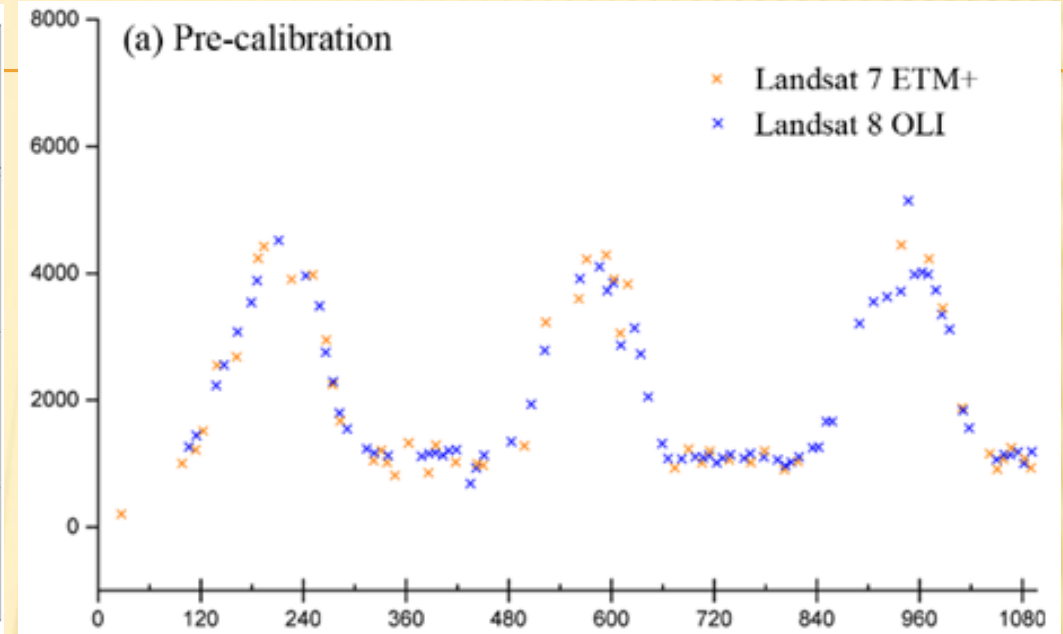
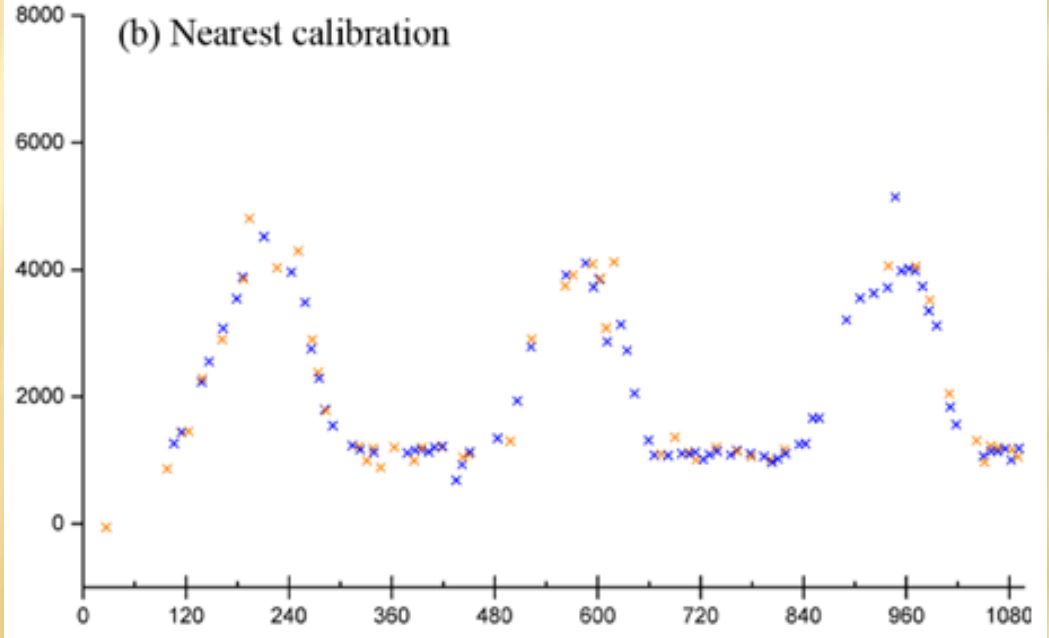
Time Series of Landsat 7 with Landsat 8



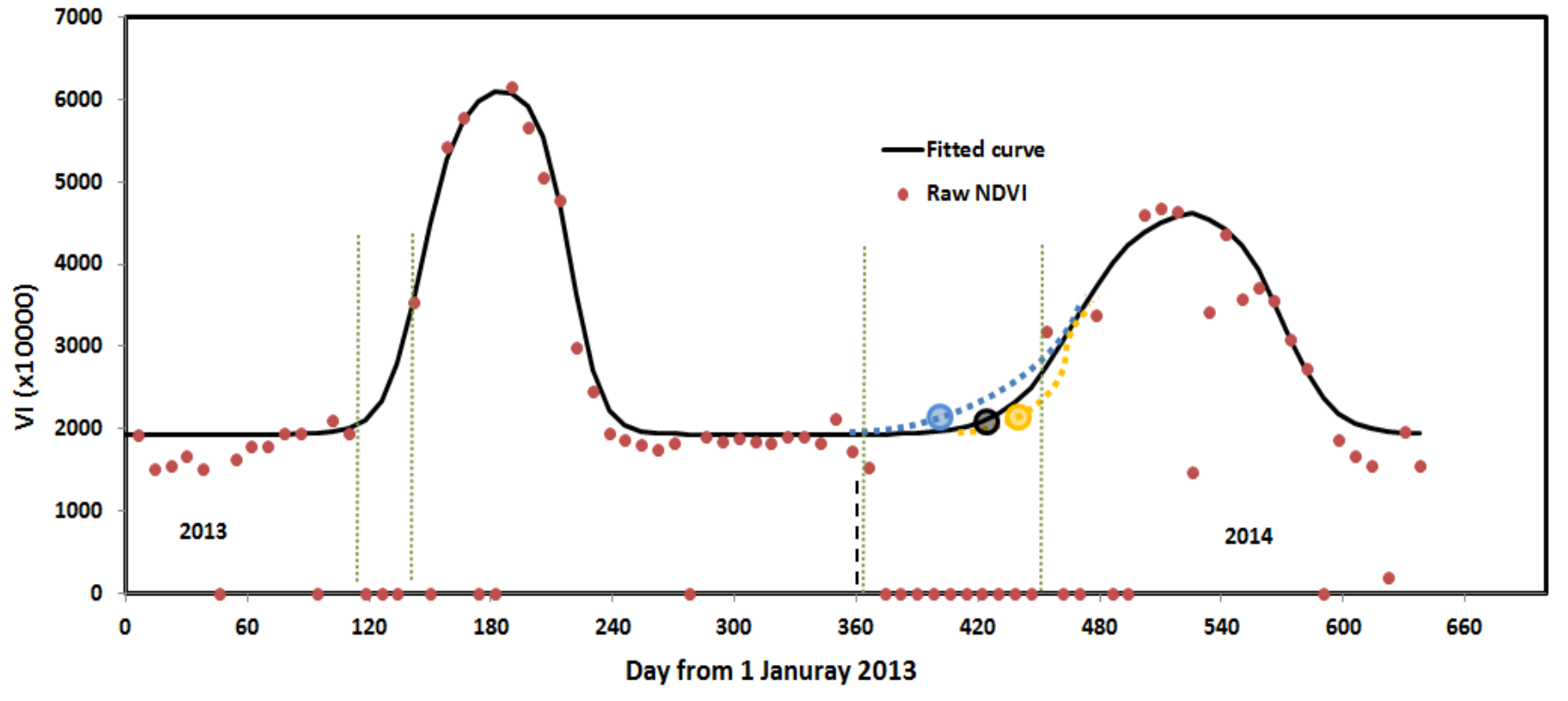




Landsat 7 and 8: 2013-2015 in 17 overlap zones

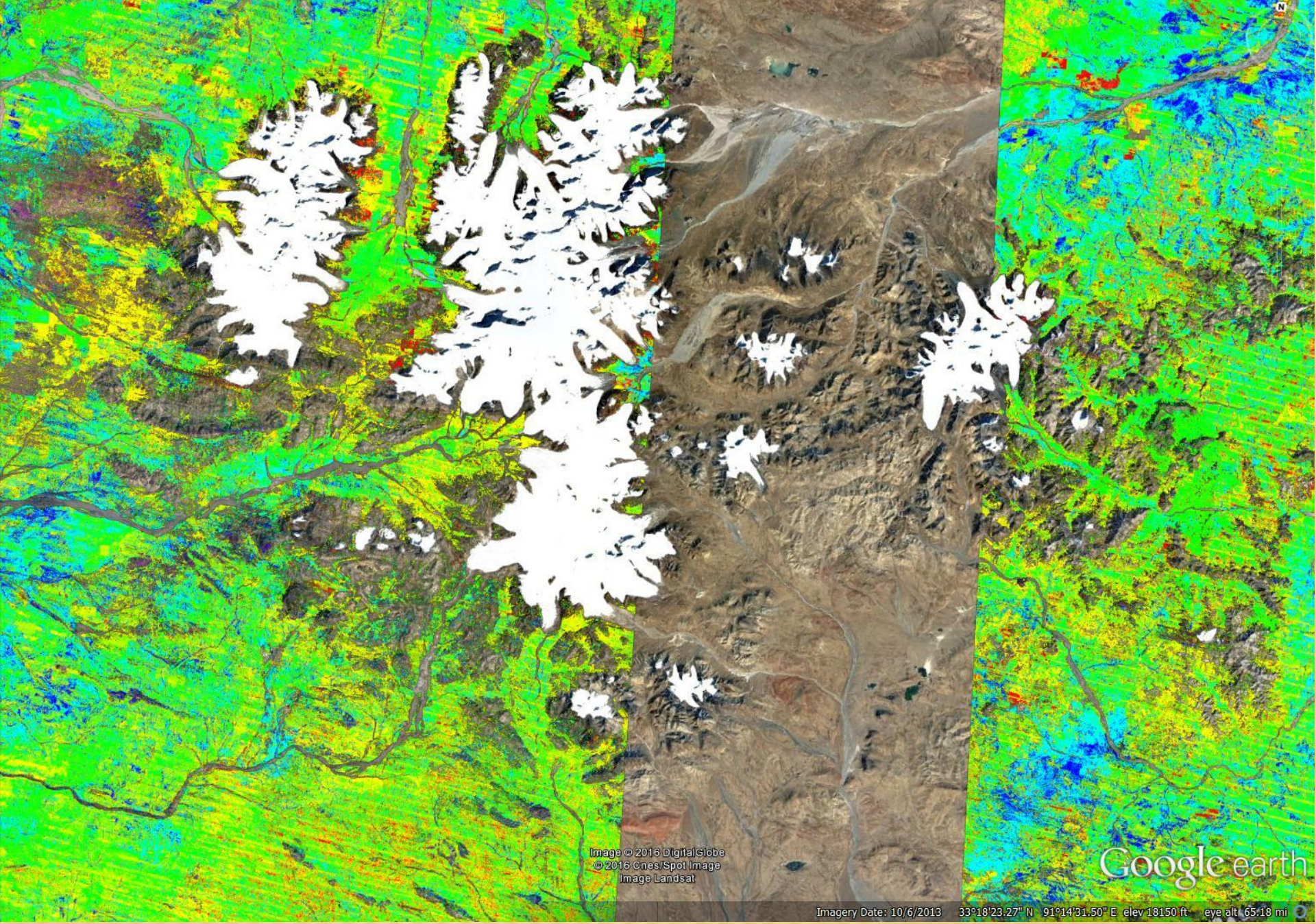
Landsat 7 VI was calibrated to Landsat 8 VI using the nearest pairs of data

Reconstruction of Temporal VI Trajectory and Detection of Land Surface Phenology

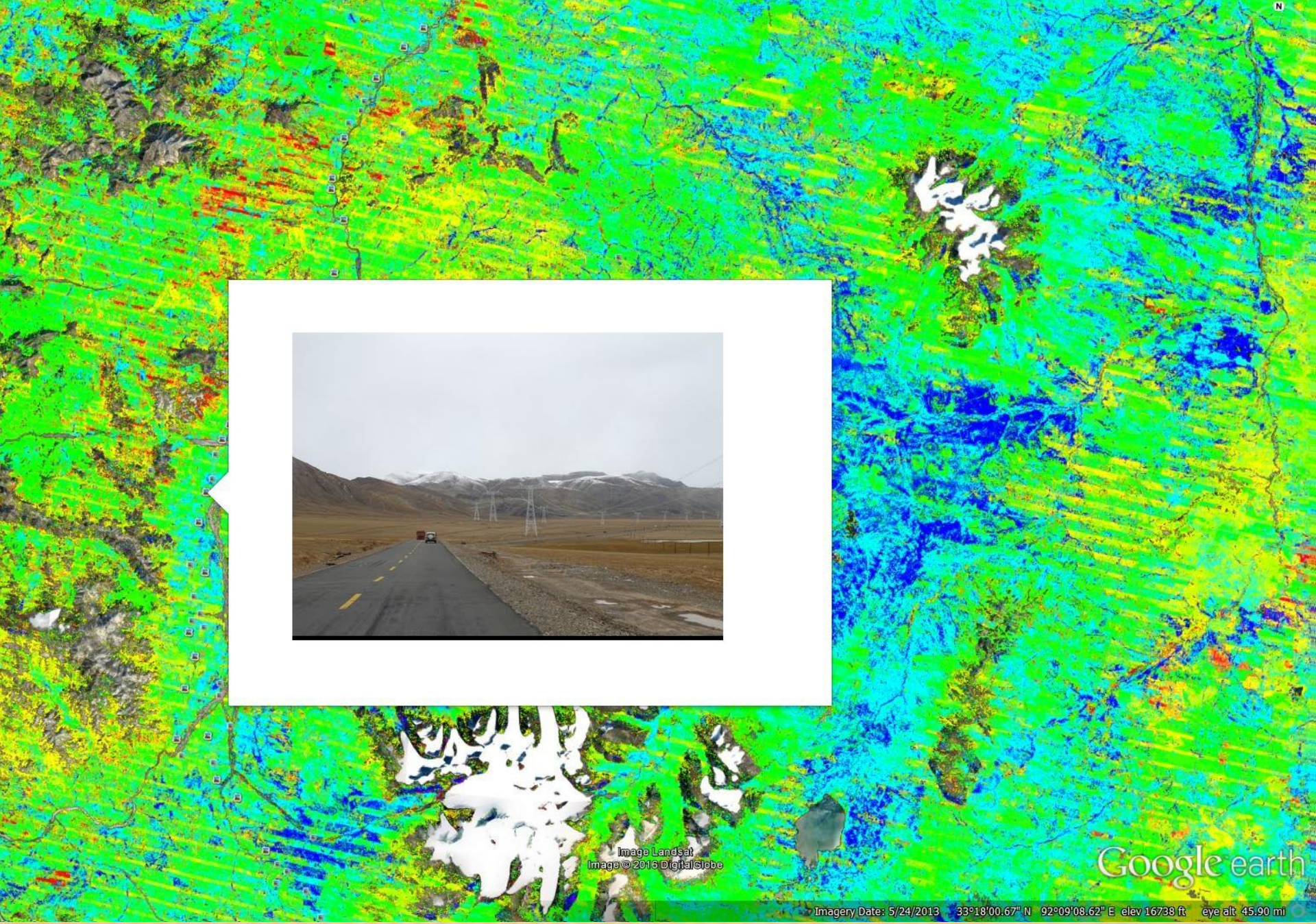


LSP Quality Assessment

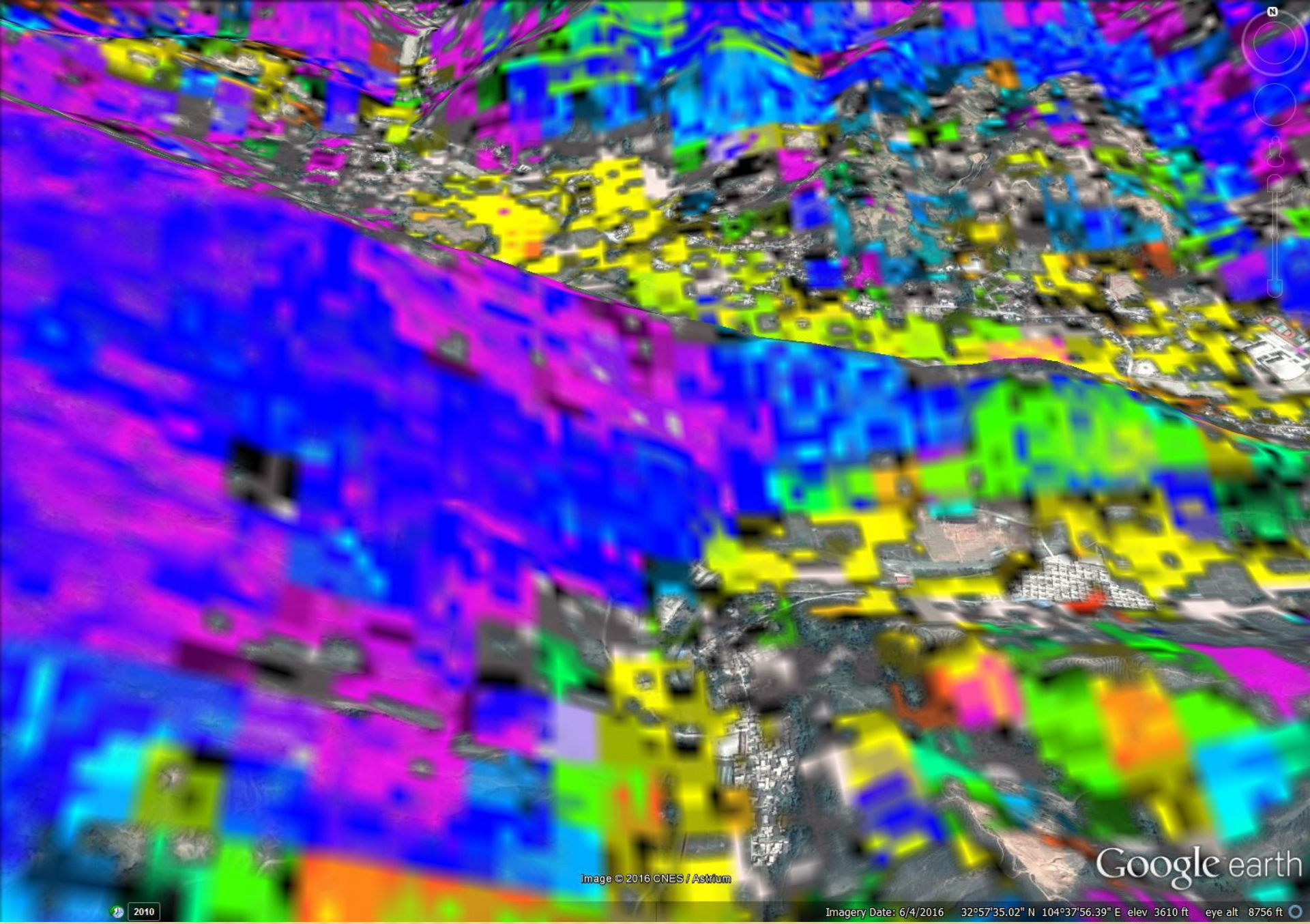
- Curve fitness
- Proportion of good quality observations (P_{qa0}) during a growing season
- Local good quality observations around phenological event



Greenup onset DOY90 DOY200

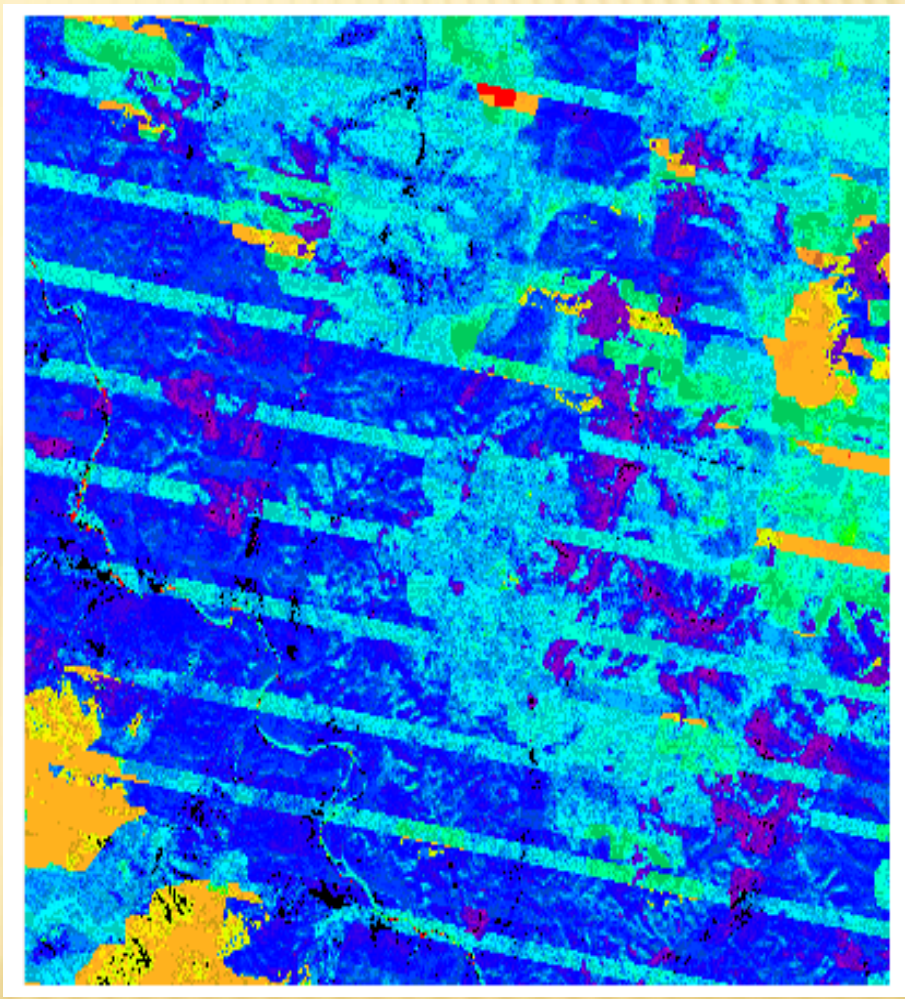


Greenup onset DOY90 DOY200



Greenup onset DOY90 DOY200

Removal Poor LSP Detections Using Quality of VI Temporal Trajectory



QA--Poor

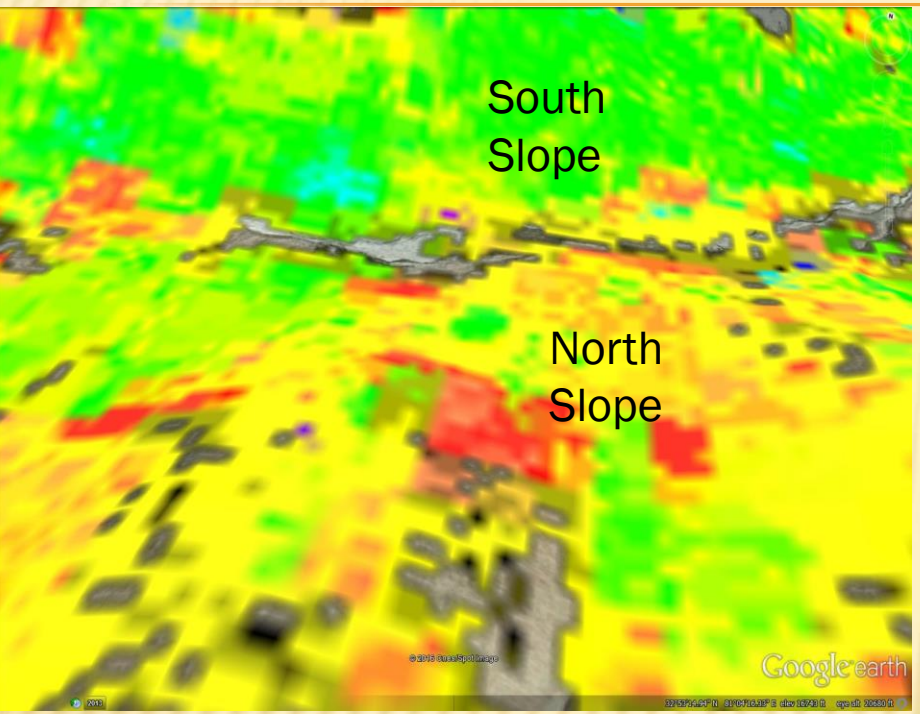
QA--Good

DOY 90

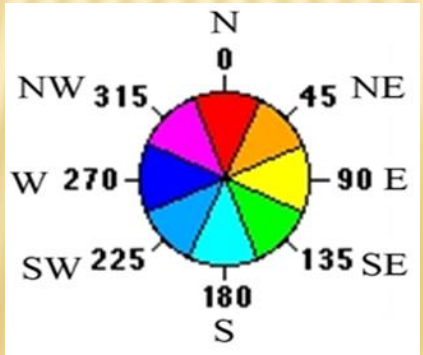
DOY 200

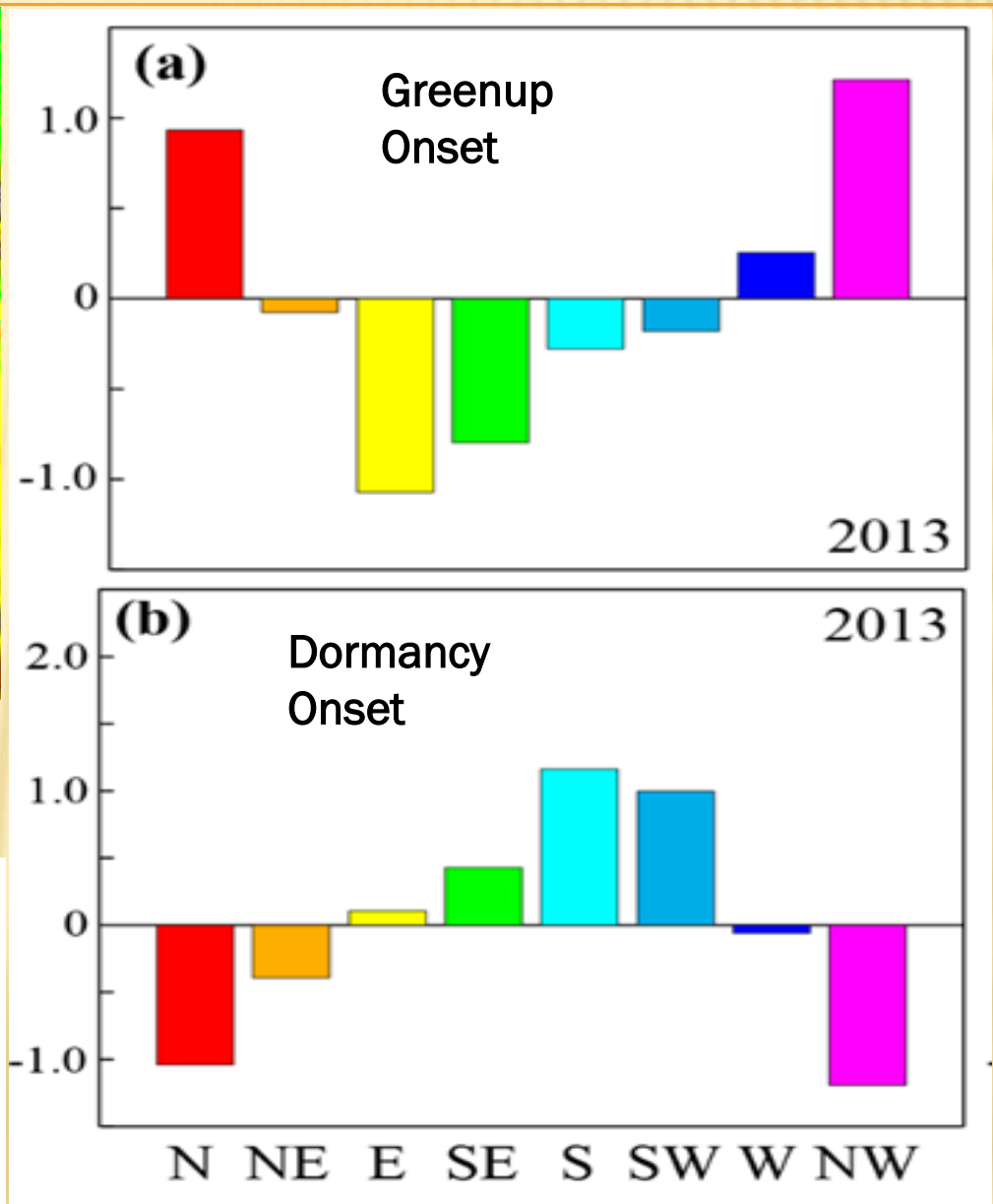
Greenup onset

Slope Aspect Influence of LSP
-Relative Difference to Mean Value (day)



DOY90 DOY200





Thank You
Data SIO, NOAA, U.S. Navy, NGA, GEBCO
Image Landsat
Google earth
Imagery Date: 12/13/2015 33°52'25.98" N 94°09'36.67" E elev 15081 ft eye alt 2339.14 mi