MOD12: Overview
A global database of land cover type classes and vegetation phenology

- MOD12Q1: Land cover type
- MOD12Q2: vegetation phenology
- Prepared at 1-km spatial resolution from MODIS data
- Available in coarser resolutions of 1/20°, 0.25°

MOD12Q1 - Data layers
Five “Internally Consistent” Layers of Land Cover Class Labels

- IGBP: International Geosphere-Biosphere Programme classes
- UMD: University of Maryland Land Cover Classes
- LAI/FPAR: Classes for LAI/FPAR Production
- BGC: Biome BGC Model Classes
- PFT: Community Land Model classes

- Plus:
  - Confidences: Classification confidence (percent scale) for each pixel for each label
  - Quality Assurance for each Pixel: Quality bits, last update, and land/water mask

MOD12Q1: Global Land Cover Training Site Database

- Compiled from Landsat Thematic Mapper
- In association with available ancillary data

STEP:
- System for Terrestrial Ecosystem Parameterization
- Life form, cover fraction
- Leaf type, phenology
- Elevation, moisture regime, perturbation
- Simple description of site and type (text)

STEP Flexibility
- Not restricted to single land cover classification scheme!
- Allows application of many different land cover labeling schemes by inference of label from parameters in database

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MOD12Q2: Global Vegetation Phenology

- Identifies Four Cardinal Transition Dates in Growth Cycle
  - Onset of greenness, onset of maturity, onset of senescence, and onset of dormancy.
- Uses Annual Time Series of EVI
  - Computed from NBARs
  - 16-day temporal resolution (current)
- Method:
  - Identifies periods of sustained increase or decrease in EVI using moving window
  - For each period, fit logistic function
  - Transition dates identified as time at which rate of change in curvature is maximum

MOD12Q2: Phenology

- Regional view of phenology estimated from MODIS in 2001 for the northeastern United States

Global True Color Composite from NBARs, May 23-June 6, 2001