

Vegetation Continuous Fields: C5/6 Updates

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Vegetation Continuous Fields—C5

- Version 1 at LP-DAAC—percent tree cover
- 250m resolution, annual
- New layers—percent bare, percent herbaceous
- Code and models delivered/tested
- Minor improvements to bare models ready for testing
- Products available in 2-3 months

VCF Bare Ground Layer Australia 2010



VCF Bare Ground Layer Australia 2010





Vegetation Continuous Fields—C6

- MOD44C compositing code—L2G lite version in place
- VCF—no code changes
- Testing requires 1 year of MOD09

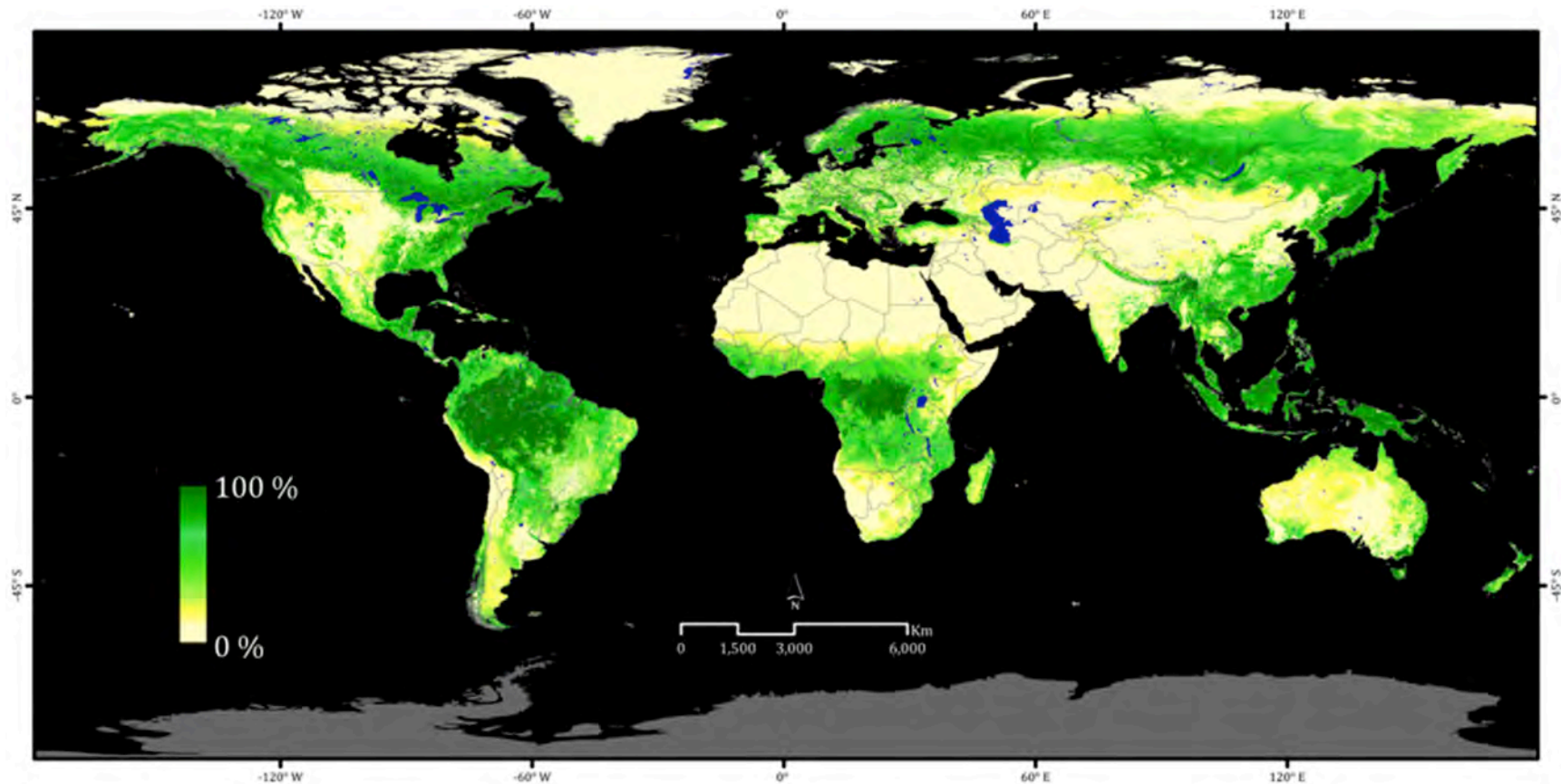
VCF—Next steps

- Evaluation of tree cover layer in progress
- Tree cover layer improvements:
 - update training for sparsely wooded drylands
 - improve persistently cloudy tropics
- Evaluation of bare and herbaceous layers

A global percent tree cover map at Landsat resolution by reflectance-based downscaling of MODIS continuous fields

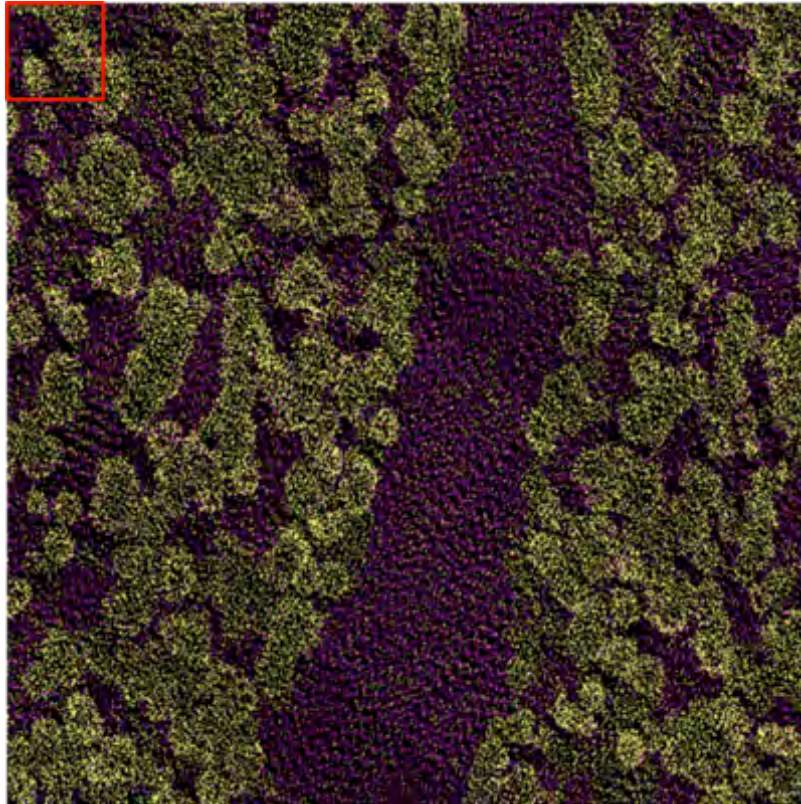
J. O. Sexton, Xiao-Peng Song, M. Feng, P. Noojipady, A. Anand, D.H. Kim, D. Song, K.M. Collins, C. DiMiceli, C. Huang, S. Channan and J. R. Townshend

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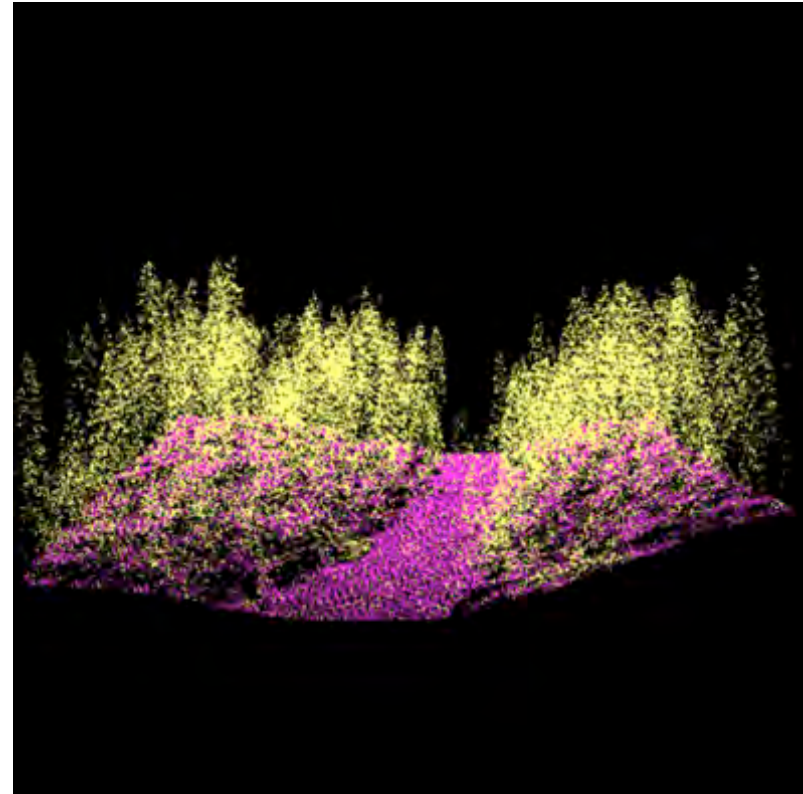


Error estimation based on lidar-measured tree cover

nadir



oblique



Three-dimensional distribution of lidar returns within one MODIS pixel (Sierra Nevada, CA test site).

VCF—Long-term Data Records

MEaSURES

- Annual product, 0.05° resolution
- Uses Land Long-term Data Record of Surface Reflectance (Eric Vermote, NASA Goddard)
- AVHRR, MODIS
- 7 layers—including needleleaf, evergreen, broadleaf, deciduous
- Annual regression tree models overcome instrument differences
- Smoothing to remove noisy data for change detection



Percent tree cover, Amazon Basin, 1990--Land LTDR AVHRR data



Percent tree cover, Amazon Basin, 2000—MODIS CMG data

