SUPPLEMENTARY MATERIAL

Phenological characteristics of global ecosystems based on optical, fluorescence, and microwave remote sensing

Matthew P. Dannenberg^{1,*}, Xian Wang², Dong Yan², and William K. Smith²

¹Dept. of Geographical and Sustainability Sciences, University of Iowa, Iowa City IA 52242 ²School of Natural Resources and the Environment, University of Arizona, Tucson AZ 85721

*Corresponding author: Matthew P. Dannenberg, 308 Jessup Hall, University of Iowa, Iowa City IA 52242, matthew-dannenberg@uiowa.edu



Fig. S1. Level II phenoregions within Level I phenoregion 1. The number of pixels (*n*) assigned to each phenoregion are also shown in each time series plot.



Fig. S2. Level II phenoregions within Level I phenoregion 2. The number of pixels (*n*) assigned to each phenoregion are also shown in each time series plot.



Fig. S3. Level II phenoregions within Level I phenoregion 3. The number of pixels (*n*) assigned to each phenoregion are also shown in each time series plot.



Fig. S4. Level II phenoregions within Level I phenoregion 4. The number of pixels (*n*) assigned to each phenoregion are also shown in each time series plot.



Fig. S5. Level II phenoregions within Level I phenoregion 5. The number of pixels (*n*) assigned to each phenoregion are also shown in each time series plot.



Fig. S6. Level II phenoregions within Level I phenoregion 6. The number of pixels (*n*) assigned to each phenoregion are also shown in each time series plot.



Fig. S7. Level II phenoregions within Level I phenoregion 7. The number of pixels (*n*) assigned to each phenoregion are also shown in each time series plot.



Fig. S8. Level II phenoregions within Level I phenoregion 8. The number of pixels (*n*) assigned to each phenoregion are also shown in each time series plot.



Fig. S9. Level II phenoregions within Level I phenoregion 9. The number of pixels (*n*) assigned to each phenoregion are also shown in each time series plot.



Fig. S10. Level II phenoregions within Level I phenoregion 10. The number of pixels (n) assigned to each phenoregion are also shown in each time series plot.



Fig. S11. Level II phenoregions within Level I phenoregion 11. The number of pixels (*n*) assigned to each phenoregion are also shown in each time series plot.



Fig. S12. Level II phenoregions within Level I phenoregion 12. The number of pixels (n) assigned to each phenoregion are also shown in each time series plot.