# Real-Time Monitoring and Short-term Forecasting of Phenology from GOES-R ABI for the Use in Numerical Weather Prediction Models

- Monitor and Forecast vegetation phenology development for the support of numerical weather modeling.

- Monitor in real time and forecast in the short term phenological metrics using simulated ABI vegetation greenness trajectories.

- Produce a daily enhanced green vegetation fraction (GVF) dataset that is free of gaps caused by clouds and other factors, in real time and a week ahead, respectively.

- Evaluate and validate the stability, precision, and accuracy of the proposed GOES-R phenological metrics.

- Demonstrate the influence of the enhanced phenological metrics on improving Numerical Weather Prediction (NWP) systems at the National Center for Environmental Prediction (NCEP).

- Develop operational product of the GOES-R enhanced phenological metrics to support NCEP NWP
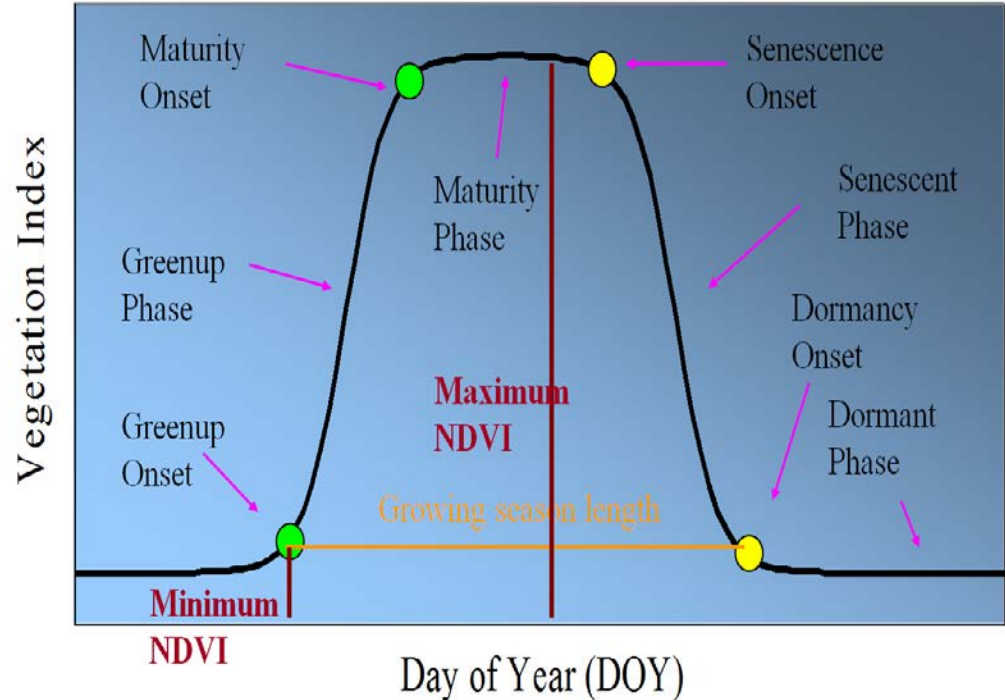
Establishing annual daily trajectory of vegetation index (VI) and key phenological metrics to monitor and forecast continuous green vegetation fraction spatially and temporally

GOES-R green vegetation fraction and phenology will be produced in real-time for NWP system

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