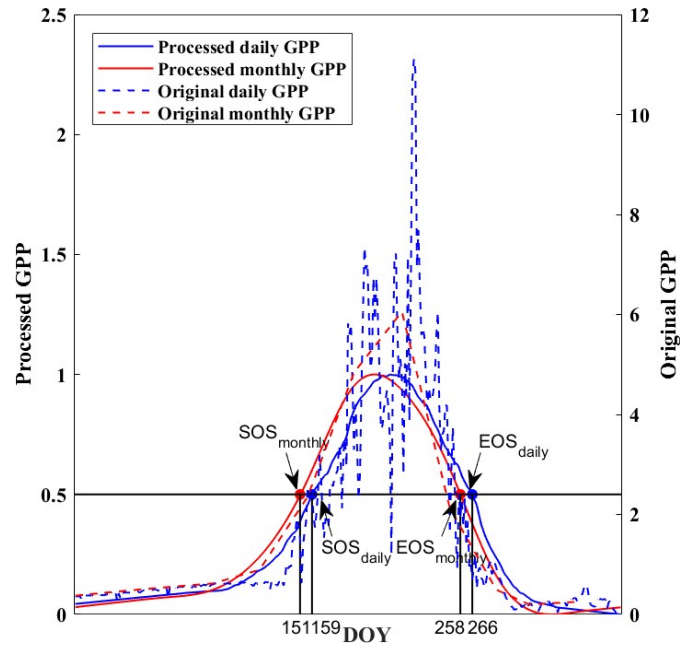# *Supplementary Material*

1 Supplementary Table
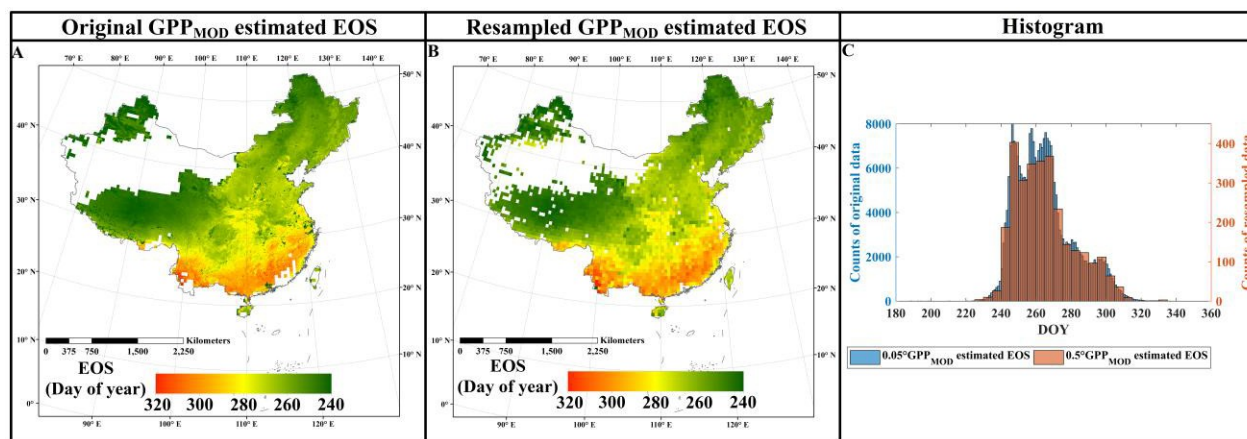
Supplementary Table S1. Elevation is divided into the following 10 grades

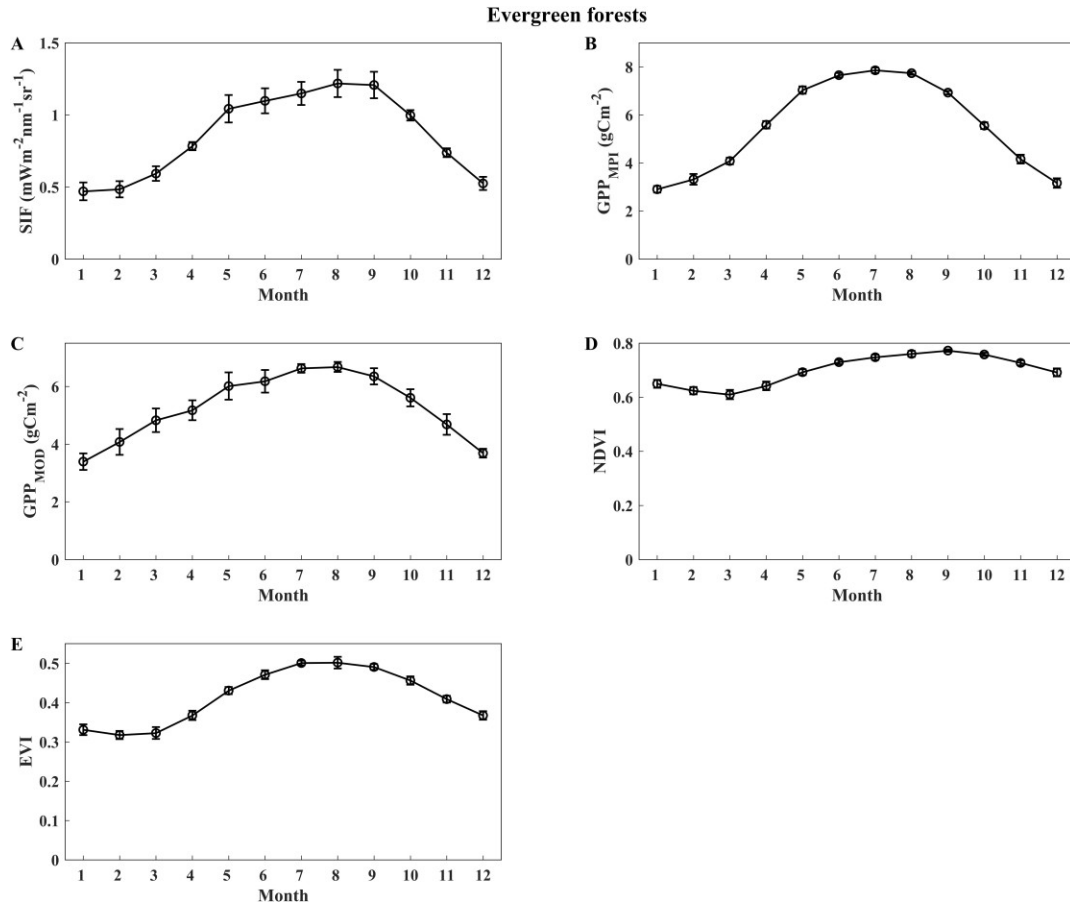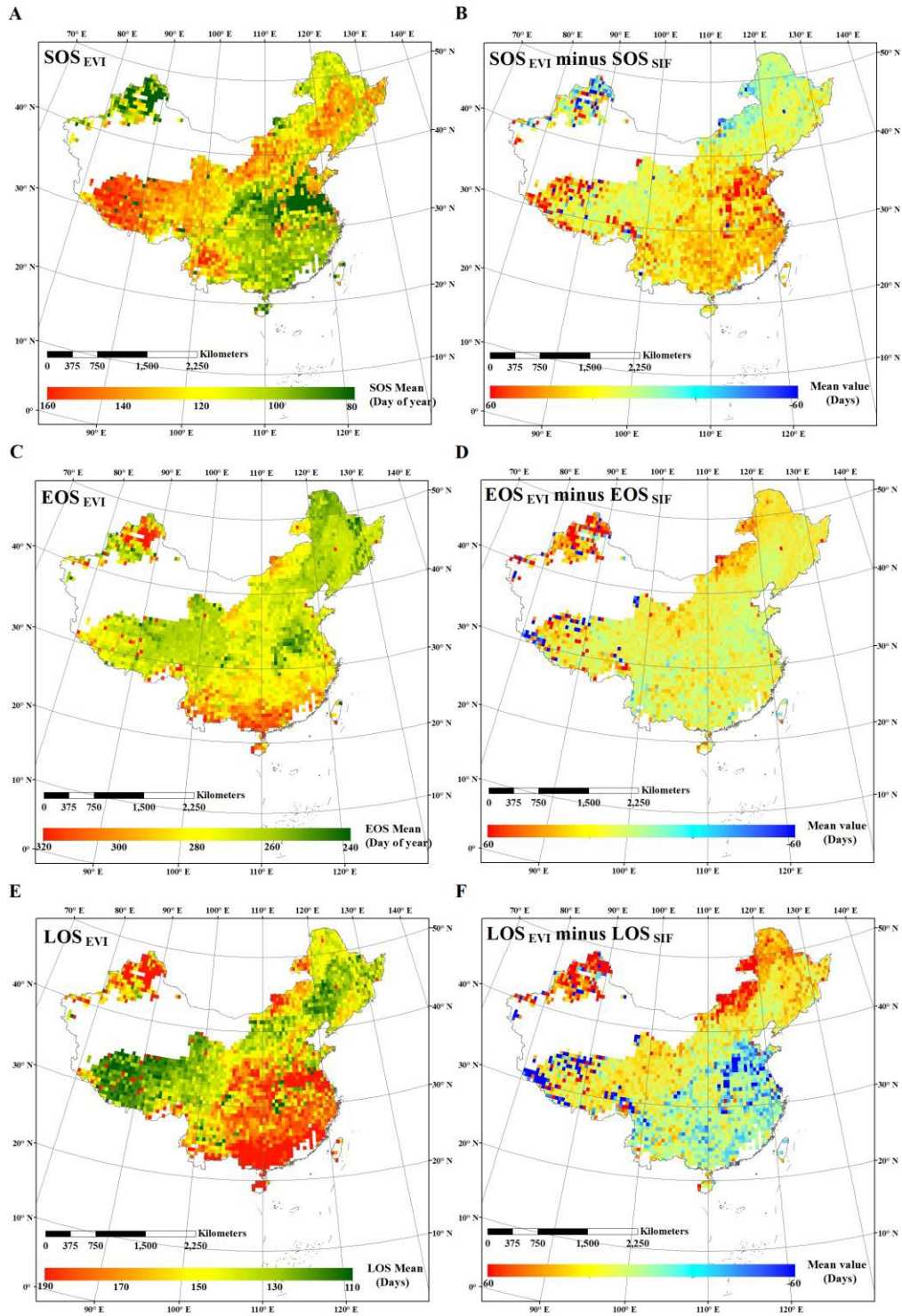| Grades	Elevation (E)
1	$E < 100m$
2	$100m \leq E < 300m$
3	$300m \leq E < 600m$
4	$600m \leq E < 900m$
5	$900m \leq E < 1200m$
6	$1200m \leq E < 1500m$
7	$1500m \leq E < 2500m$
8	$2500m \leq E < 4000m$
9	$4000m \leq E < 4800m$
10	$4800m \leq E$

2   Supplementary Figures

Supplementary Figure S1. GPP time-series (daily and monthly) data sample and estimated phenological characteristics dates on CN-Cng Flux-site in 2007. The daily GPP is in blue, and the monthly GPP is in red. The GPP data was smoothed by the Savitzky–Golay model and interpolated by Spline. All the interpolated data was normalized and a threshold of 0.5 was applied to determine the dates of SOS and EOS.
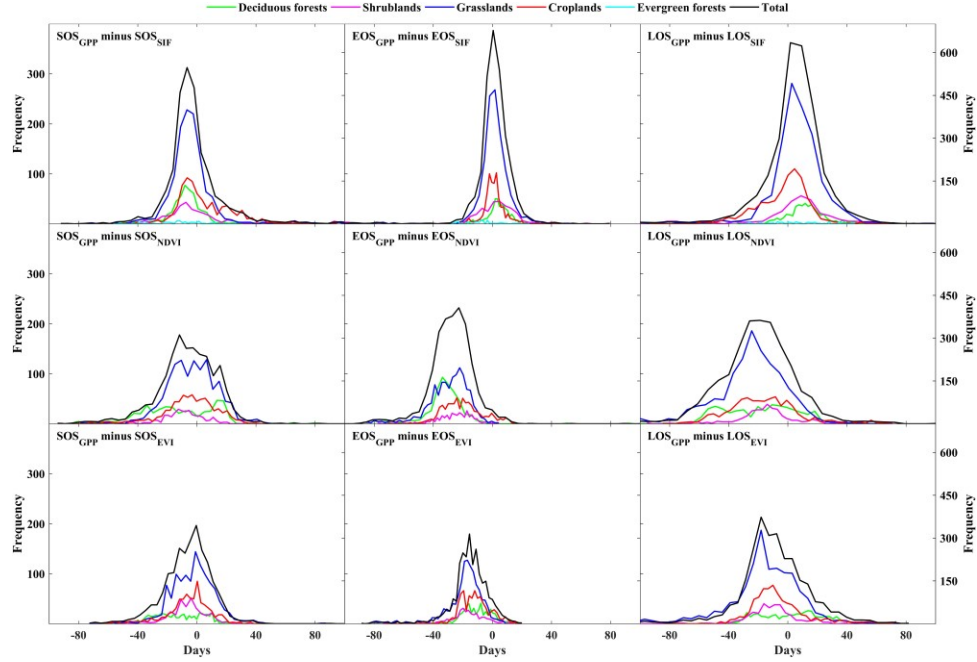
Supplementary Figure S2. Spatial distributions of 7-year averaged the original GPP$_{MOD}$-based EOS with the spatial resolution of 0.05° (A), the resampled GPP$_{MOD}$-based EOS with the spatial resolution of 0.5° (B) in China during 2007–2013, and the histogram of the original and resampled GPP$_{MOD}$-based EOS(C).

Supplementary Figure S3. The seasonal cycle of area-averaged SIF (A), GPP$_{MPI}$ (B), GPP$_{MOD}$ (C), NDVI (D), and EVI (E) of evergreen forests in the low-latitude region (below 31°N) of China between 2007 and 2013. Error bars in all figures represent the monthly standard deviations during 2007–2013.

Supplementary Figure S4. Spatial distributions of 7-year averaged EVI-based SOS (A), EOS (C), and LOS (E) dates, the difference between EVI and SIF-based SOS (B), EOS (D), and LOS (F) dates in China during 2007–2013.

Supplementary Figure S5. Frequency distributions of day difference between the 7-year average SIF and GPP estimated SOS, EOS, and LOS, NDVI and GPP estimated SOS, EOS, and LOS, as well as EVI and GPP, estimated SOS, EOS, and LOS in China during 2007–2013. The black line represents total pixels, and the frequency values are shown on the right-Y axis. The green, pink, blue, red, and cyan represent deciduous forests, shrublands, grasslands, croplands, and evergreen forests, respectively, and the frequency values are shown on the left-Y axis.