Supporting Information for "A double peak in the seasonality of California's photosynthesis as observed from space"

Alexander J. Turner, P. Köhler, T. S. Magney, C. Frankenberg, I. Fung, & R. C. Cohen

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Introduction

This supporting information contains five additional figures. Figure S1 shows the bias correction that is applied to the TROPOMI SIF data. Figure S2 is an expanded version of main text Fig. 2. Figure S3 shows a scatterplot comparison of TROPOMI SIF and AmeriFlux GPP. Figure S4 shows the time series of AmeriFlux CO_2 fluxes, as opposed to GPP from the main text. Figure S5 shows eigenvalue spectrum for the EOFs from main text Fig. 9.
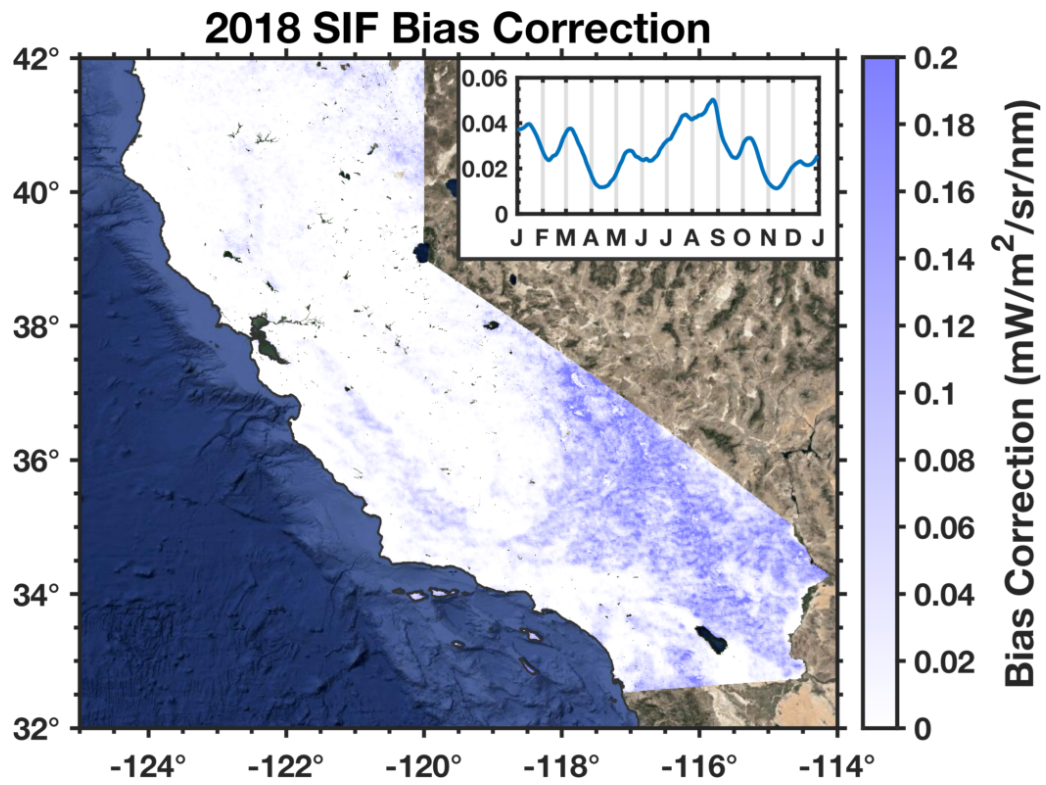
Figure S1: Bias correction applied to the TROPOMI SIF data as described in the main text.
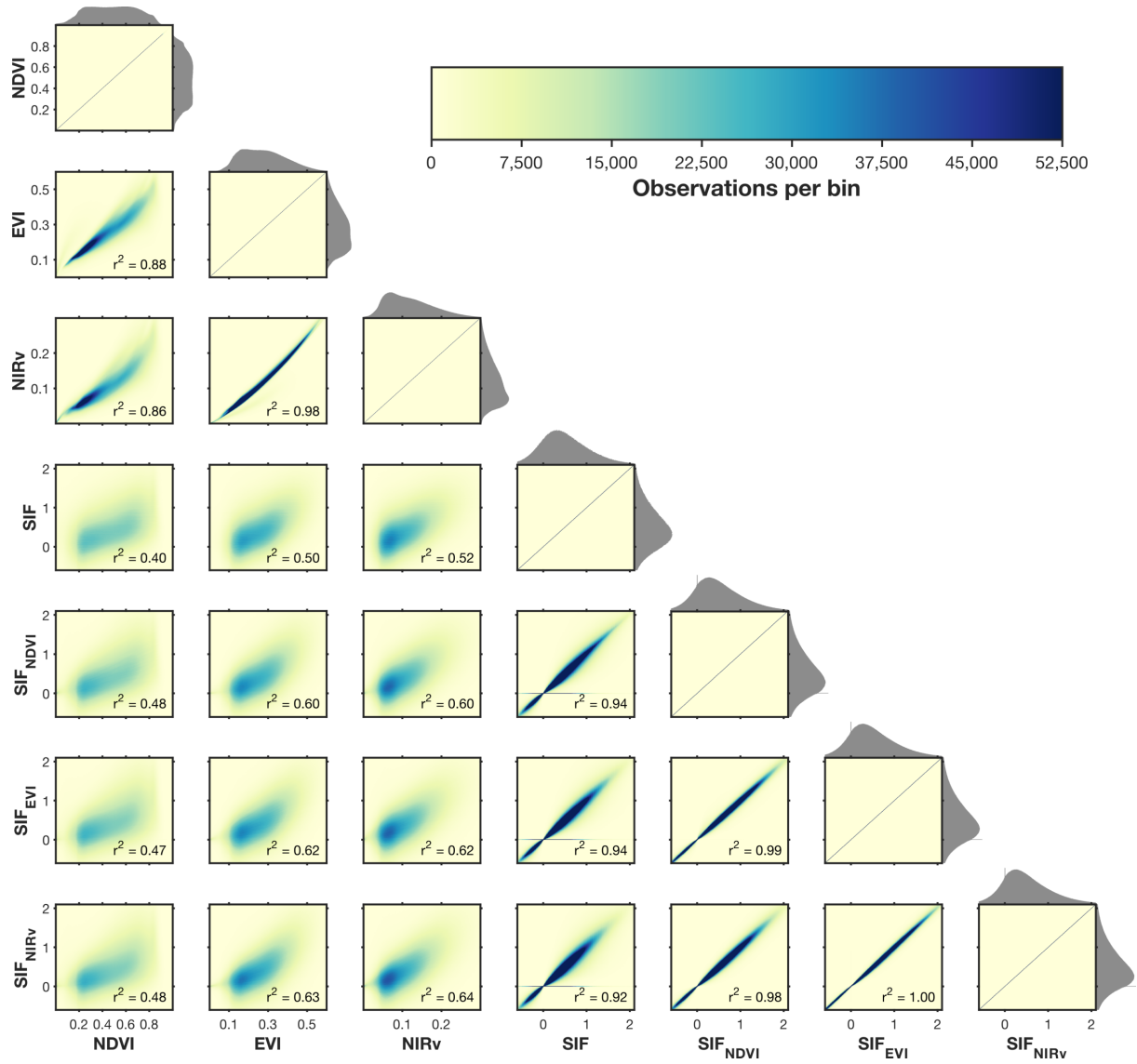
Figure S2: Same as main text Fig. 2, but includes the downscaled SIF data in rows 5, 6, and 7.
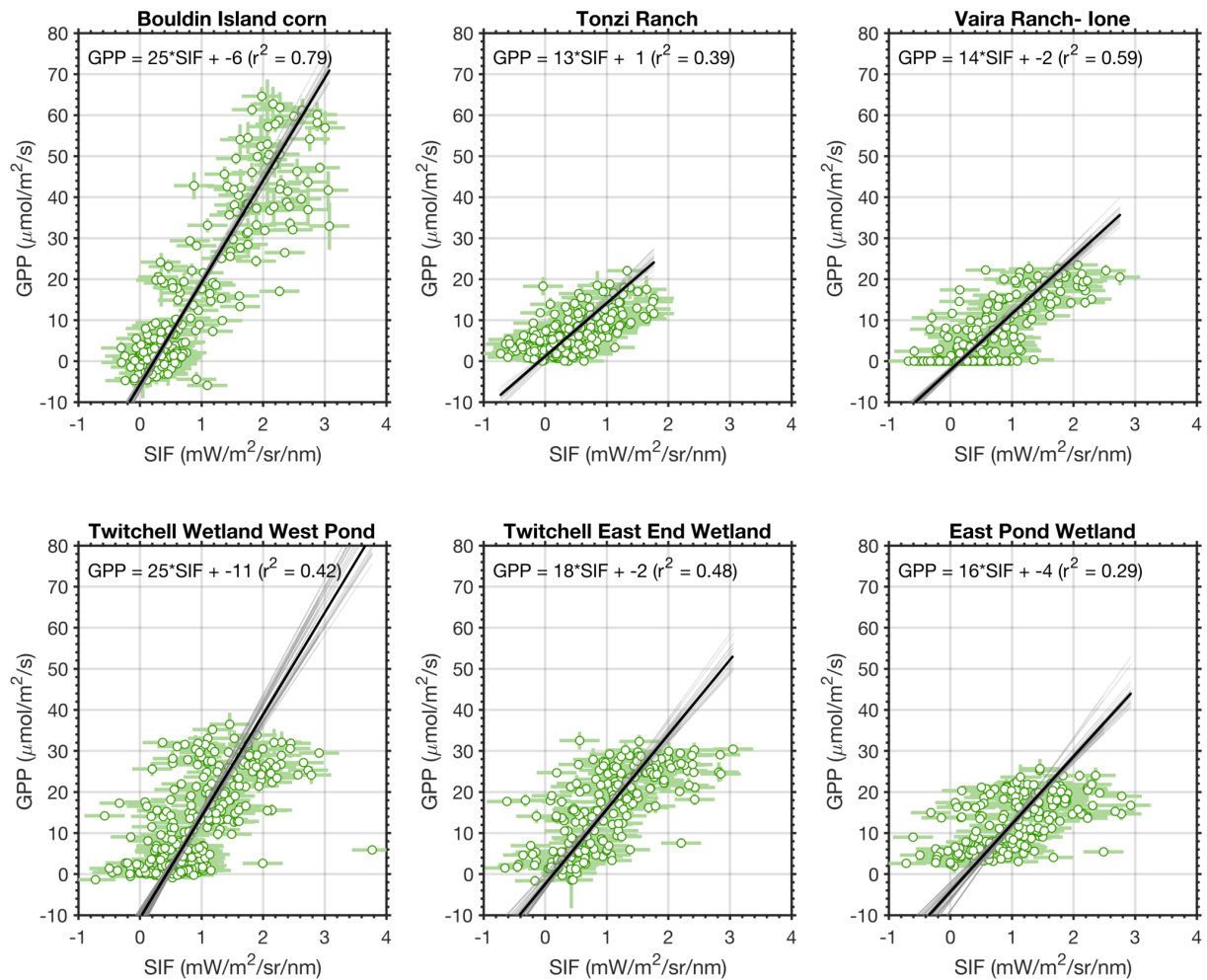
Figure S3: Scatterplot comparison of TROPOMI SIF data with AmeriFlux GPP from main text Fig. 5. Lines are York fits. Solid black line uses all data and light gray lines are bootstrapped fits.
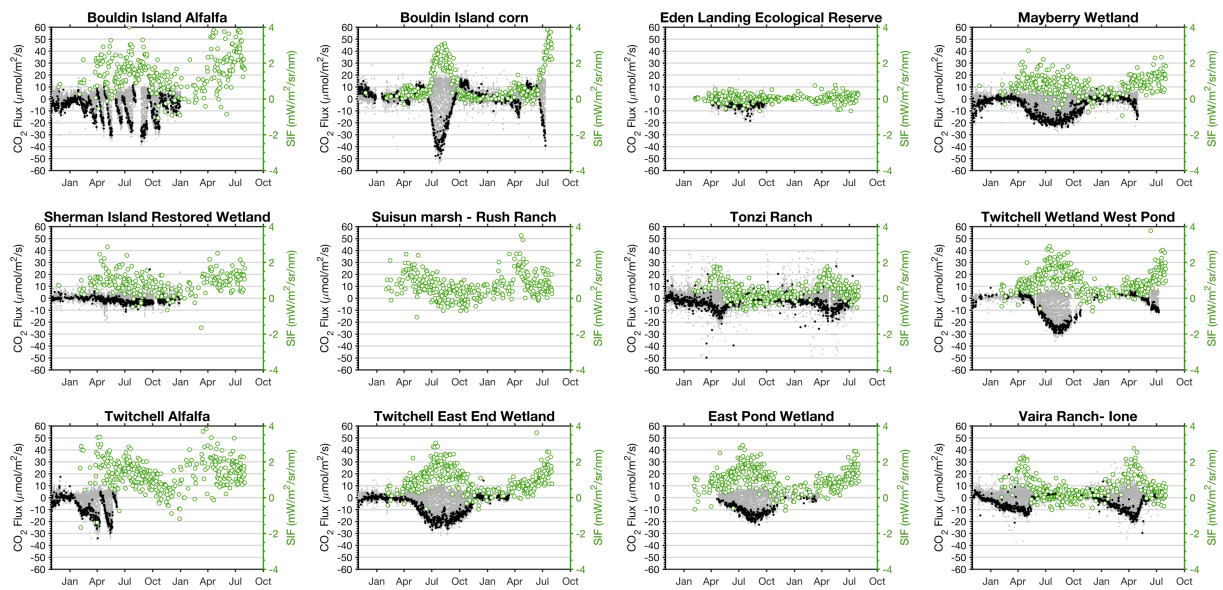
Figure S4: Shows AmeriFlux CO_2 flux measurements (gray) and TROPOMI SIF (green). Black dots are AmeriFlux measurements between 13:00 and 14:00 PST. Timeseries begins in November 2017 and ends in October 2019.
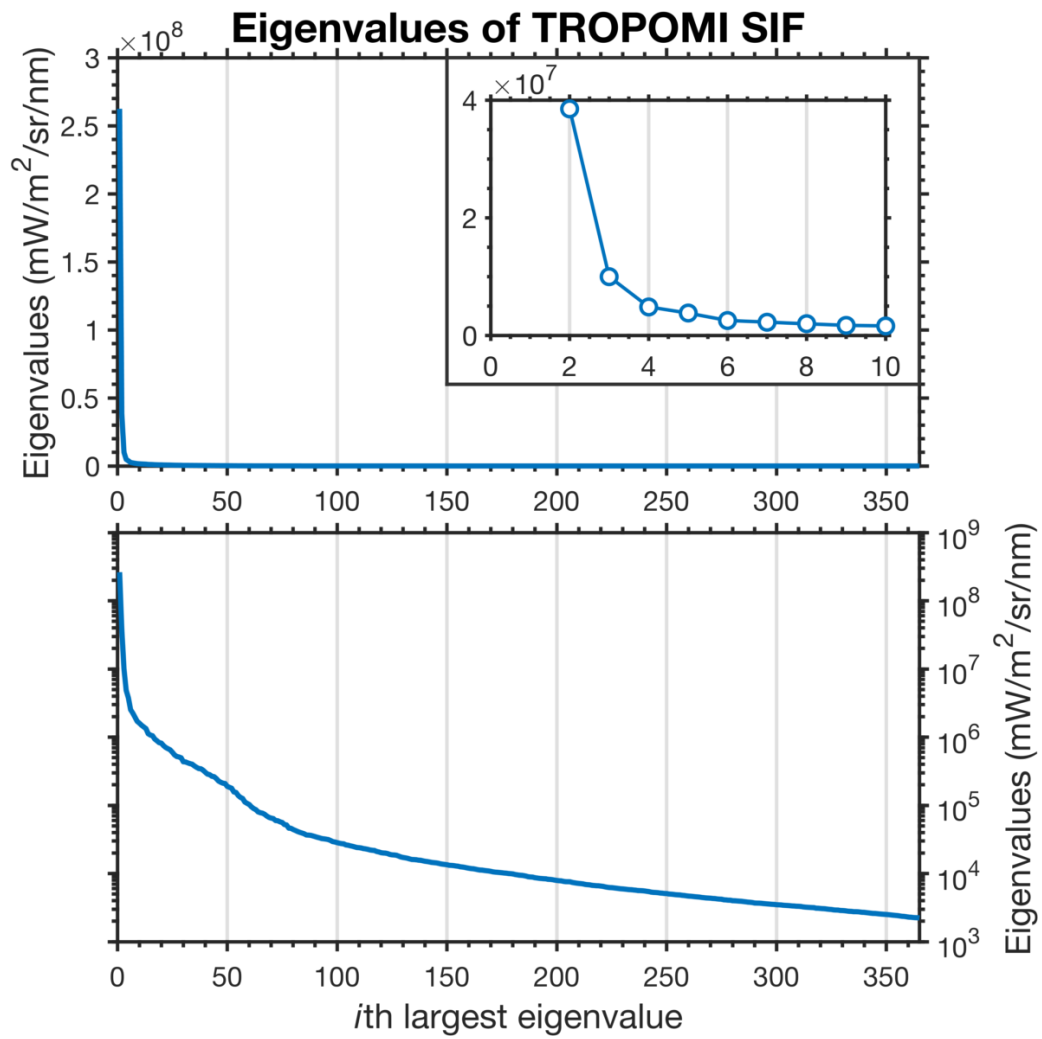
Figure S5: Eigenvalue spectrum of TROPOMI SIF data over California. Shows the spectrum of eigenvalues values of SIF data from March 2018 through September 2019 over California. Top panel is on a linear-scale and bottom panel is a log-scale. Inset shows the first ten eigenvalues.