Figure S1. Relative difference in annually averaged the surface emissions of isoprene (a and b) and monoterpenes (c and d) for the 2xCO$_2$ (a and c) and the $+\Delta$SST (b and d) experiments. The relative difference is defined as the (FB-ON - FB-OFF) / FB-OFF.
Figure S2. Relative difference in annual averaged column burden of SOA (a and b) as well as $N_a$ in the boundary layer (c and d) for the 2xCO$_2$ (a and c) +ΔSST (b and d) experiments.
Figure S3. The relative difference between the FB-ON and FB-OFF simulations for the 2xCO$_2$ (a and c) and $\Delta$SST (b and d) experiment. The difference shown is the annualy averaged concentration of CCN at 0.2 % (a and b) and 0.4 % (c and d) supersaturation in the boundary layer.
Figure S4. The relative difference in annually averaged CDNC (a and b), $r_e$ (c and d), and CWP (e and f) as well as the absolute difference in annually averaged CF (g and h) between the FB-ON and FB-OFF simulations for the 2xCO$_2$ (a, c, e, g) and $\Delta$SST (b, d, f, h) experiment.
Figure S5. The absolute difference between the FB-ON and FB-OFF simulations for the NCF$_{Ghan}$ during June, July and August (a and b), December January and February (c and d) as well as the NCFS during December January and February (e and f). The averages are from the 2xCO$_2$ (a, c, d) and +ΔSST (b, d, c) experiment.
Figure S6. The figure shows the relative difference in annually averaged AOD (a and b), R (c and d) and GPP (e and f) for the 2xCO$_2$ (a, c, e, g) and +$\Delta$SST (b, d, f, h) experiment.
Figure S7. The figure shows the difference in the annualy averaged NDF$_{Ghan}$ between the FB-ON and FB-OFF simulations for the 2xCO$_2$ (a) and +ΔSST (b) experiment.