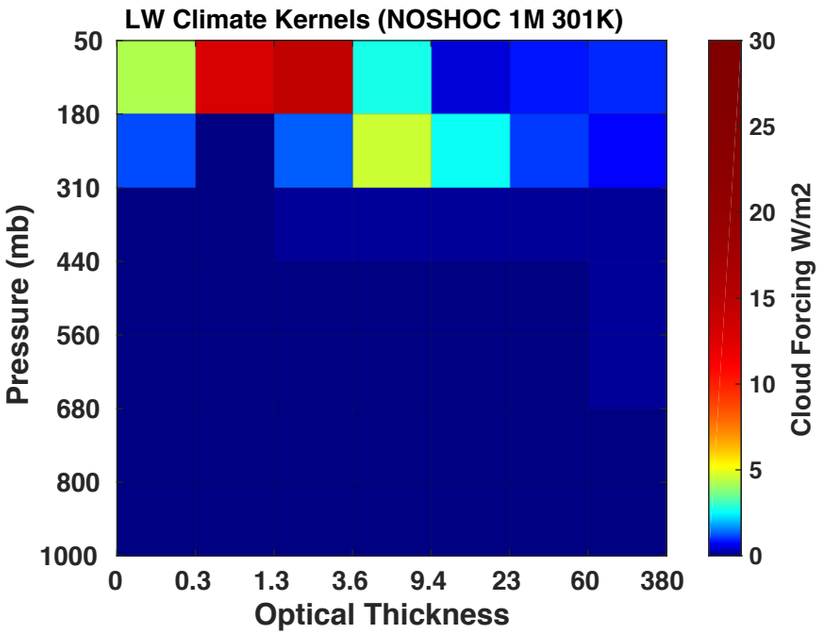
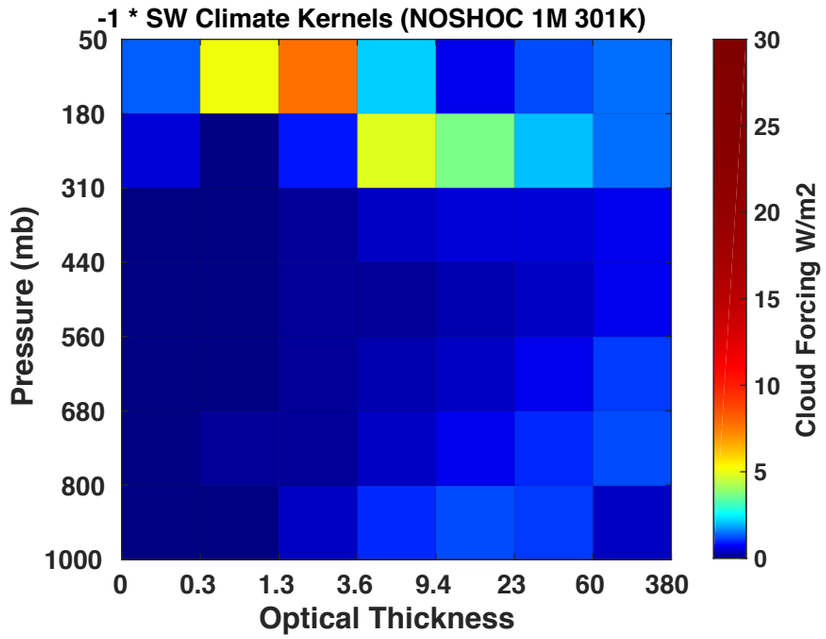
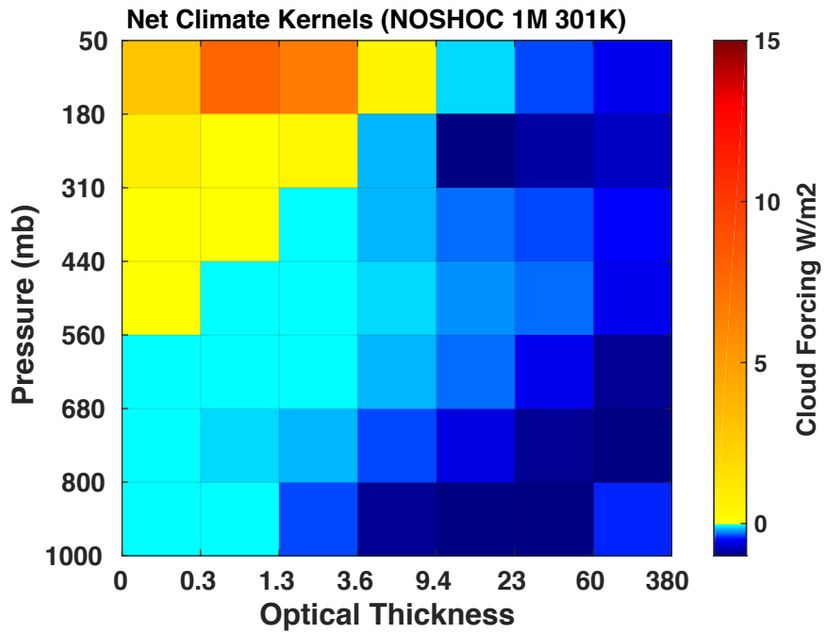
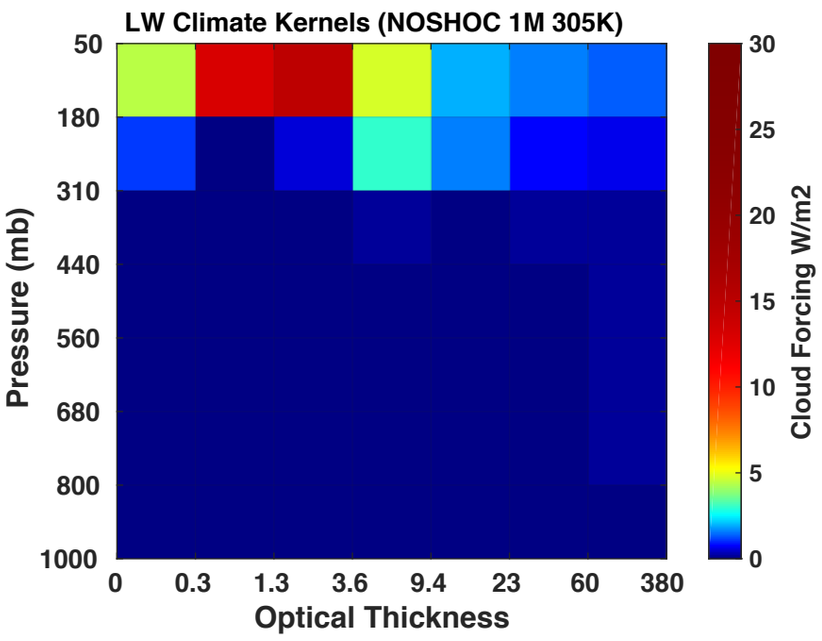
Individual Run LW, SW, Net (from kernels)

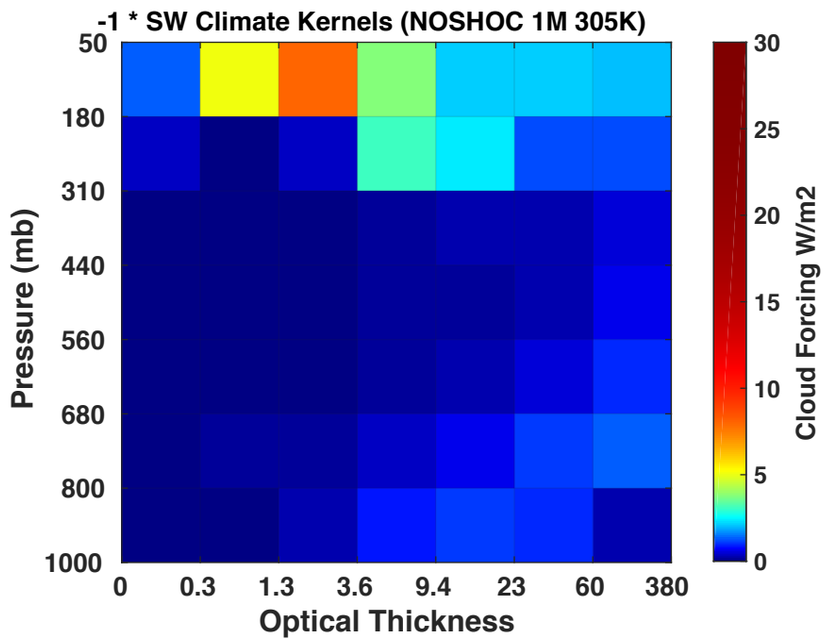
LW, SW, Net Kernel Forcings - NOSHOC 1M

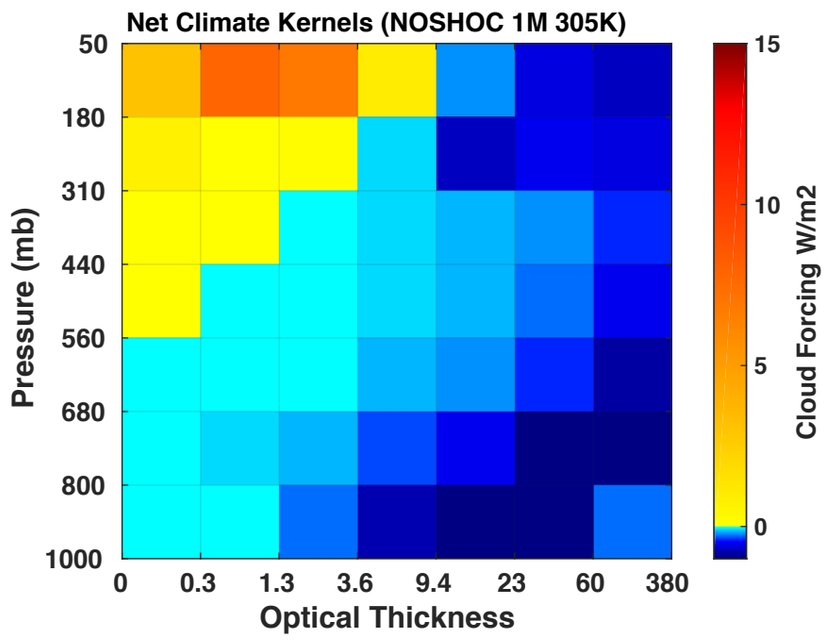




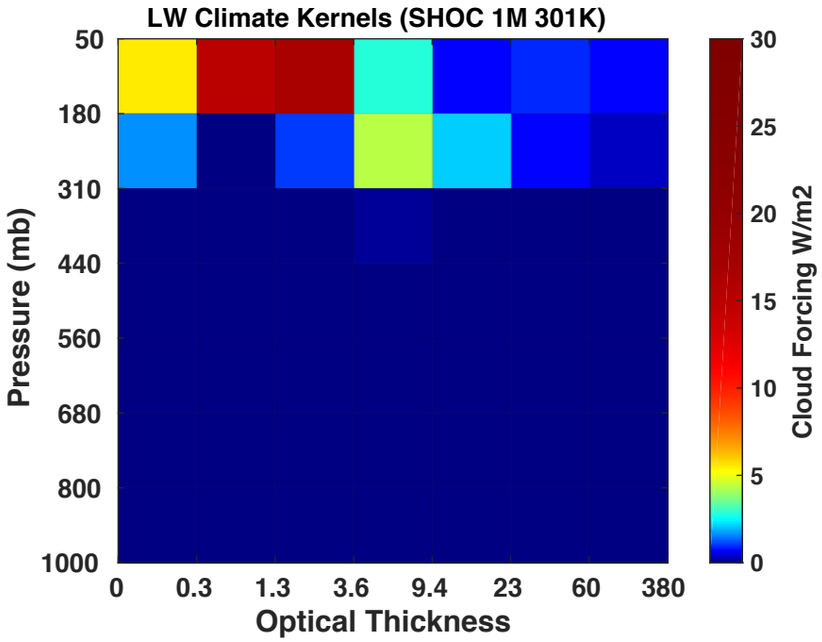


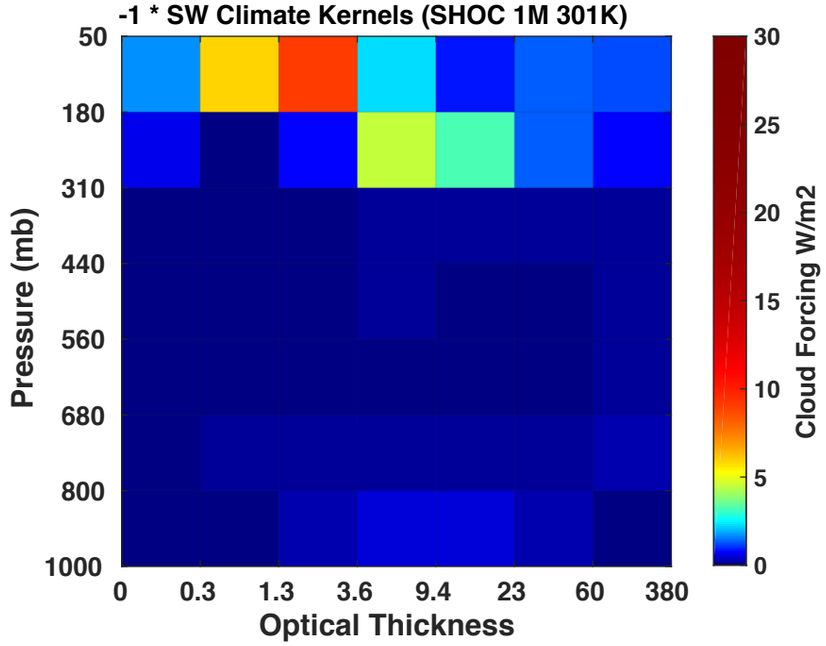


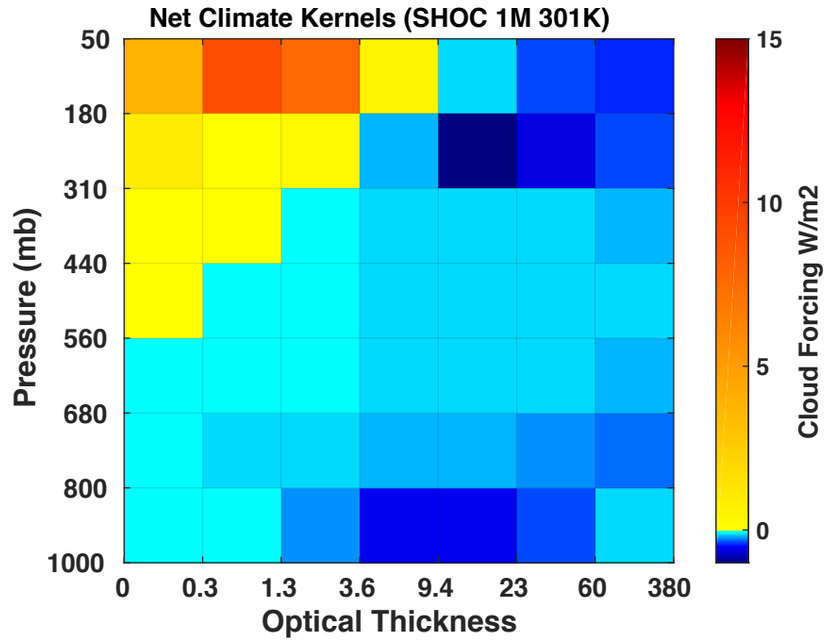


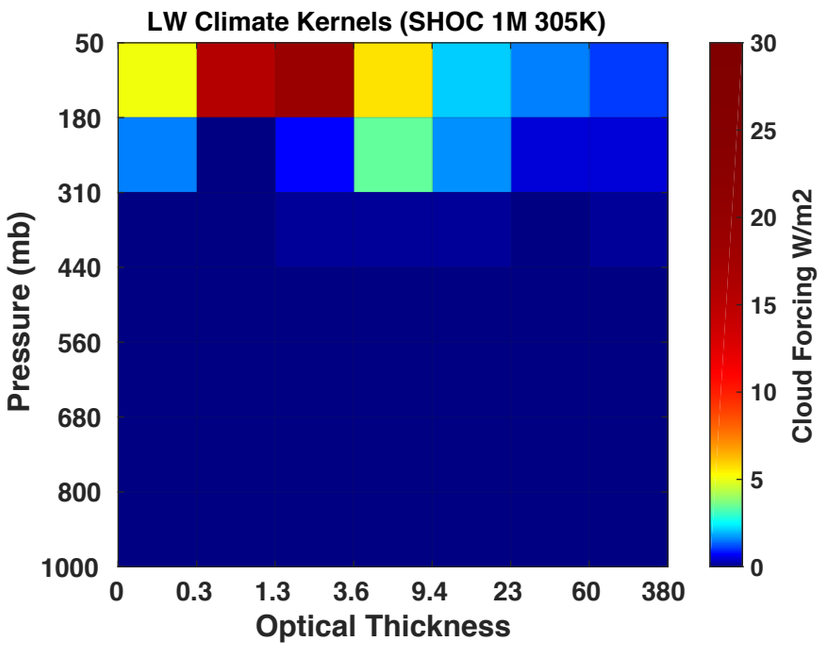


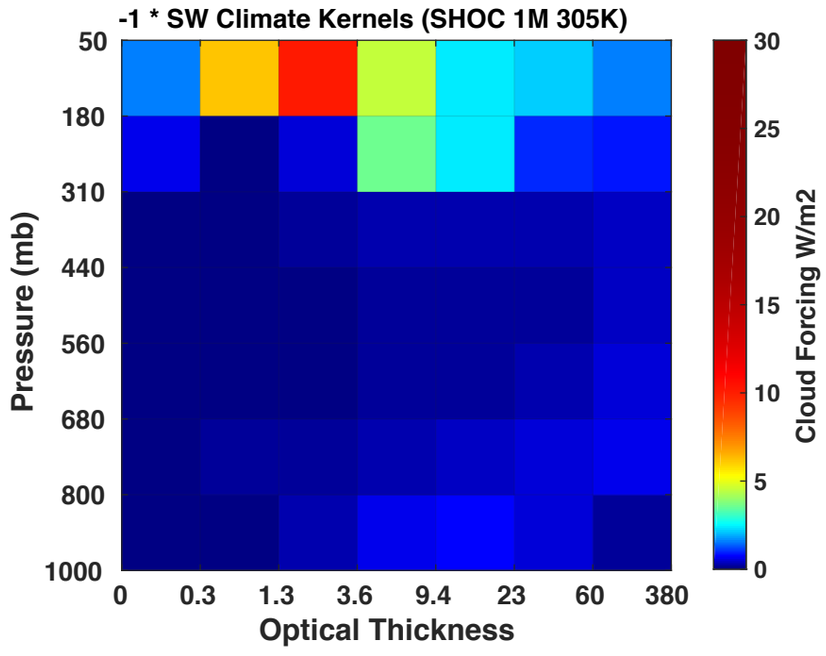
LW, SW, Net Kernel Forcings - SHOC 1M

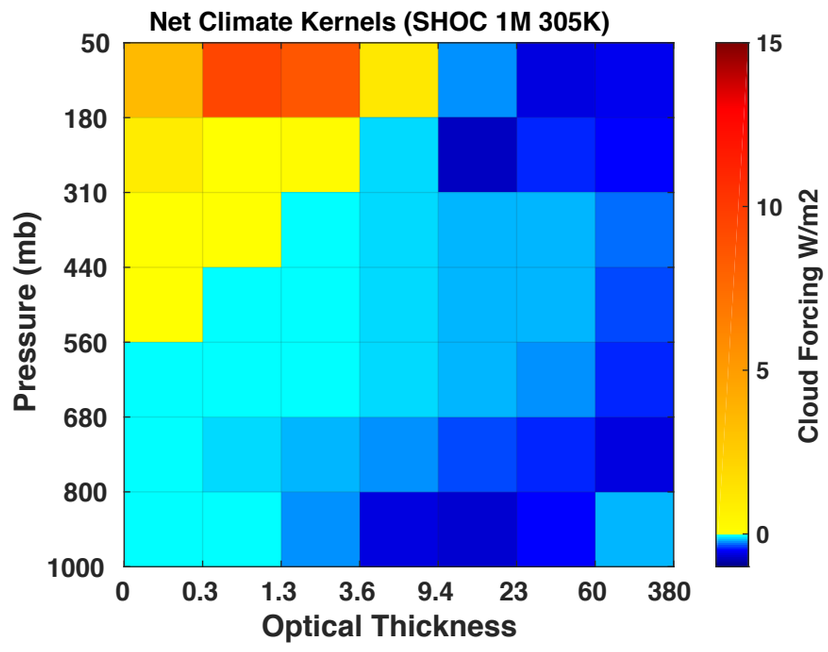




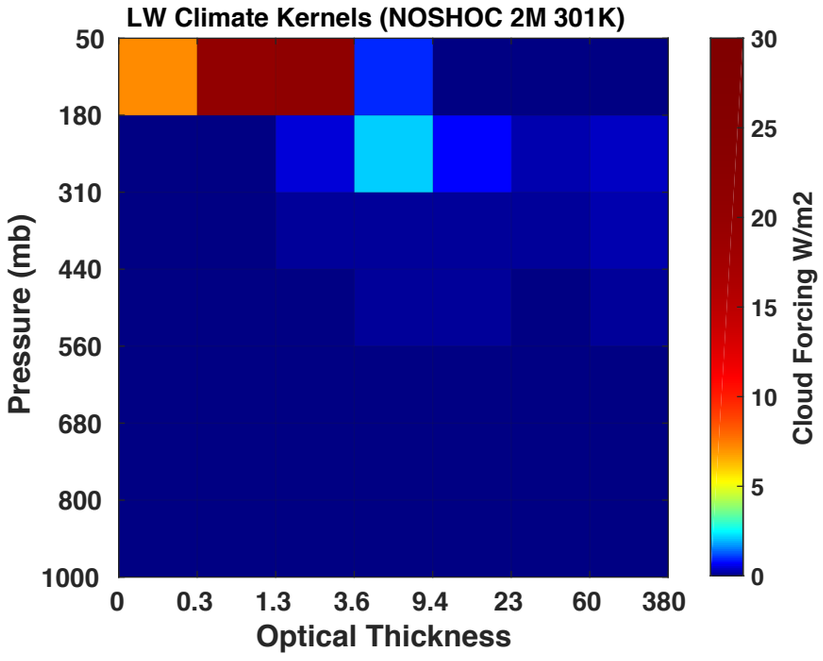


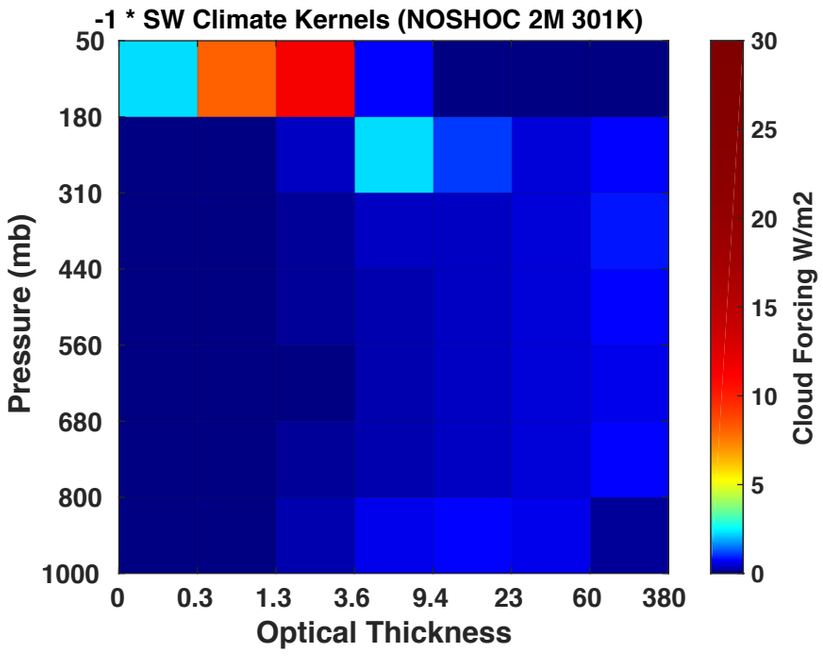


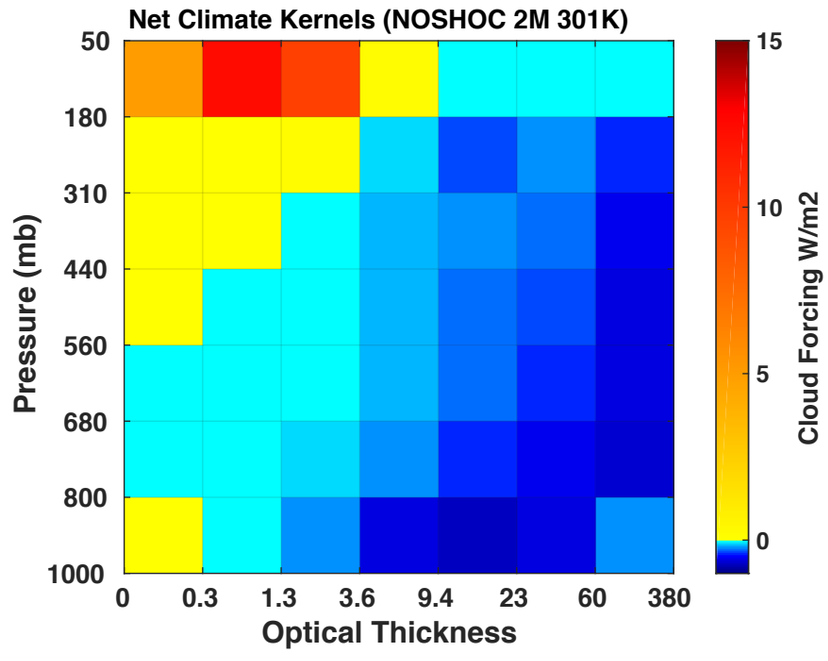


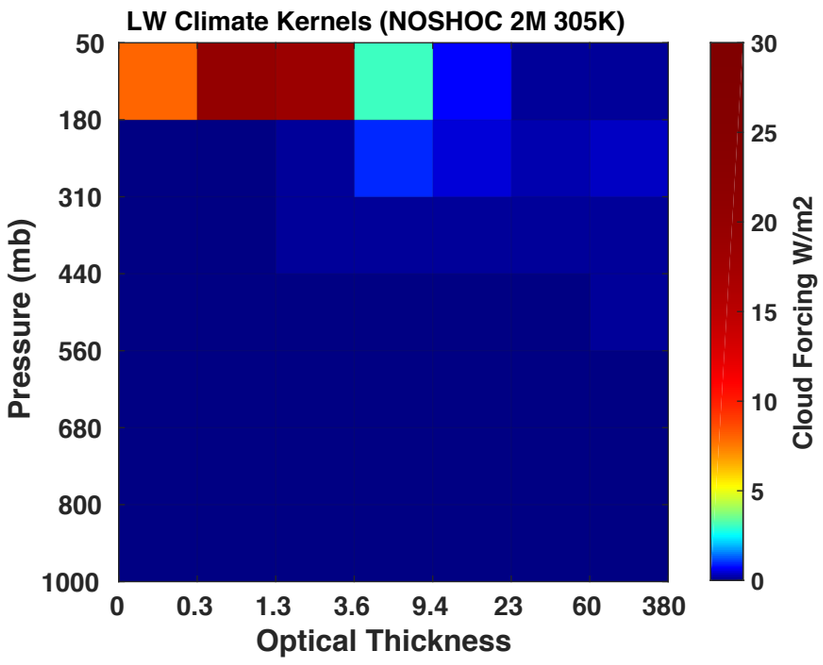


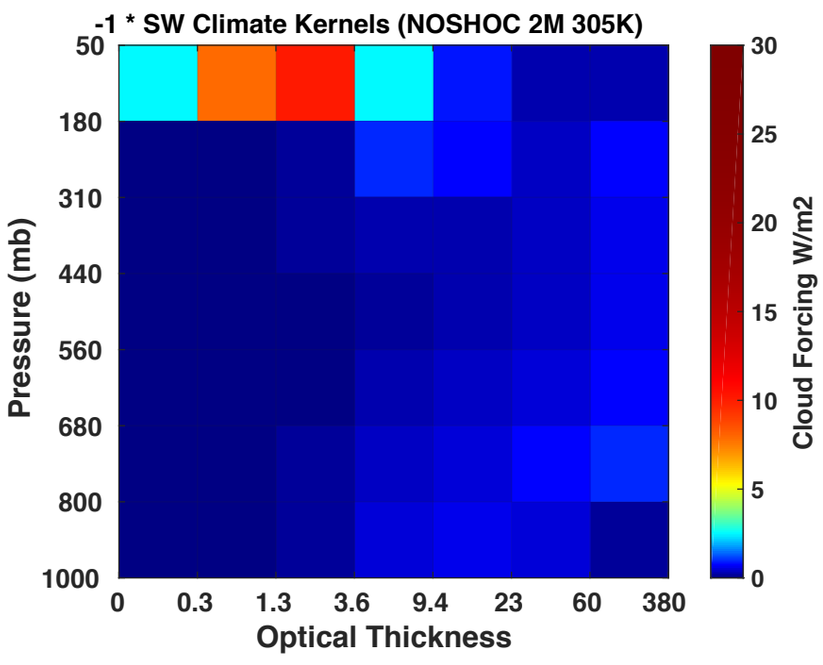
LW, SW, Net Kernel Forcings - NOSHOC 2M

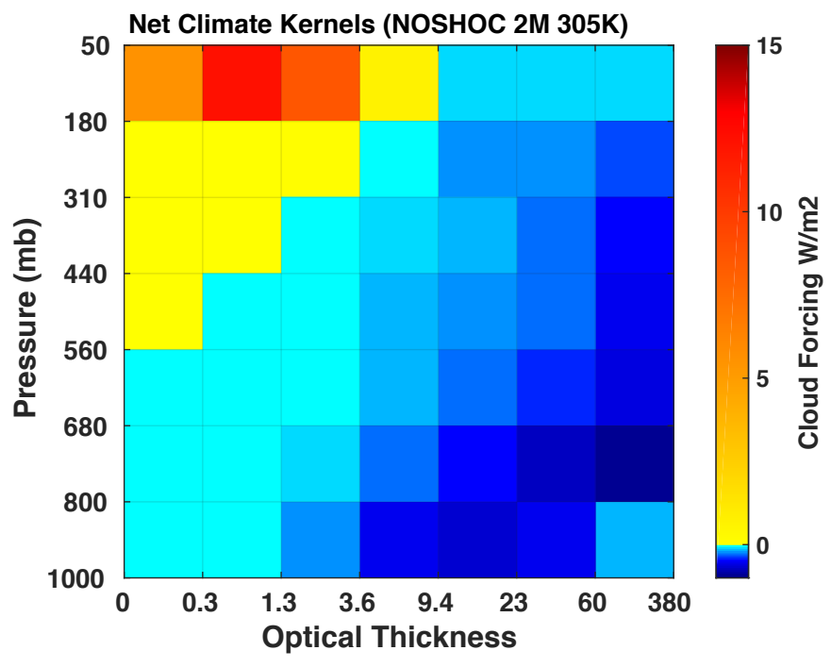




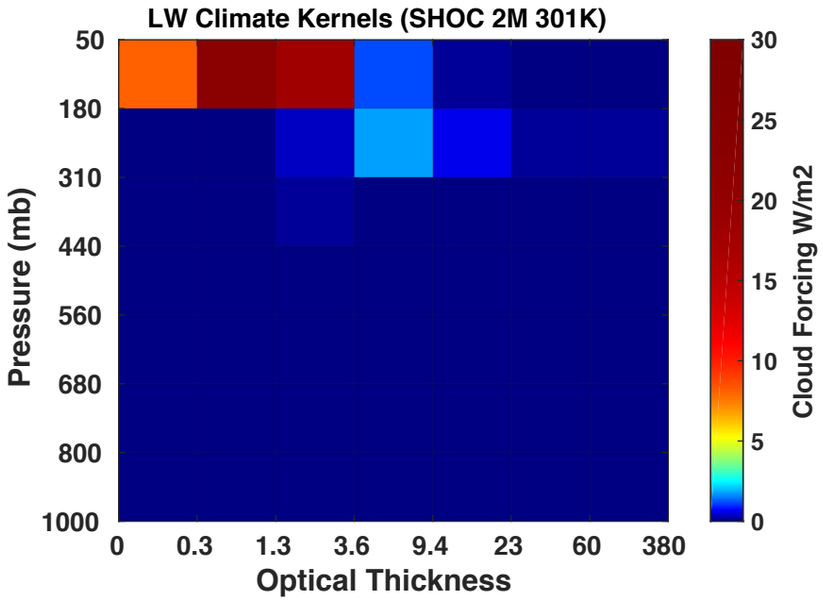


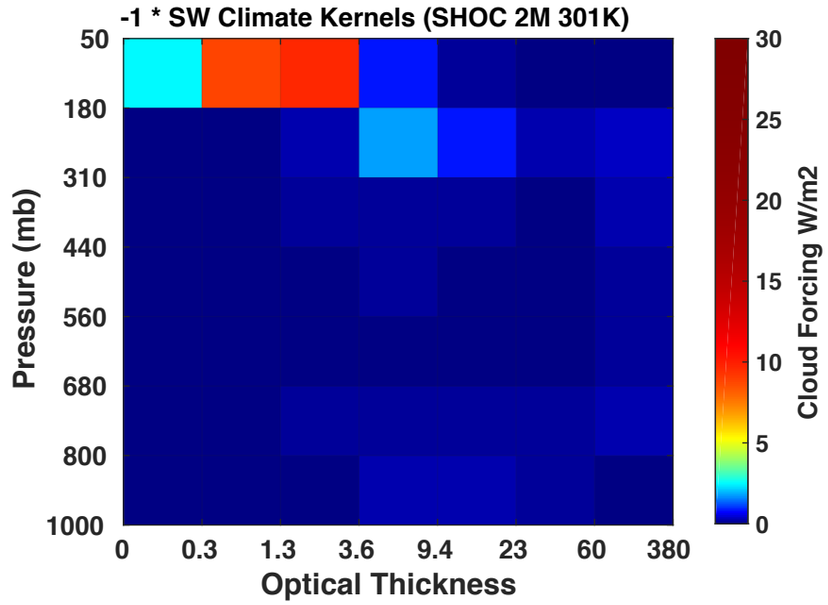


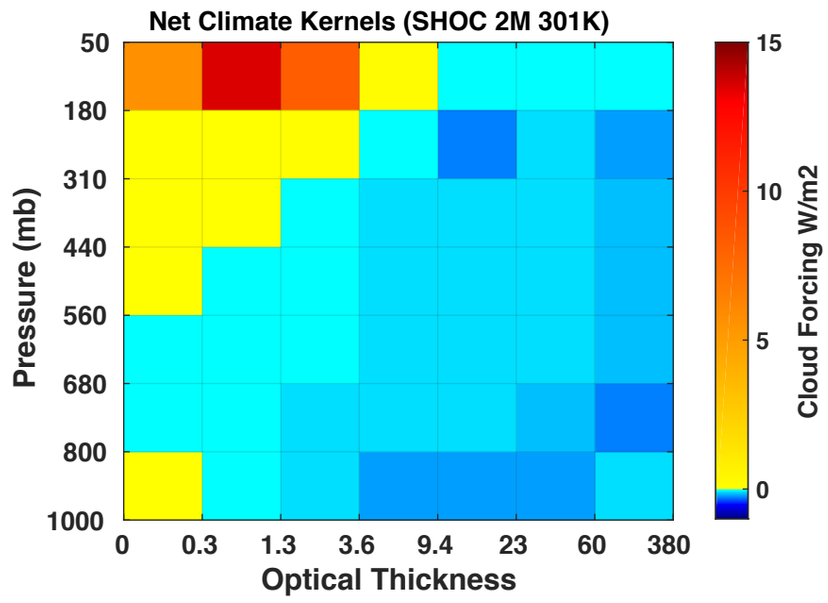


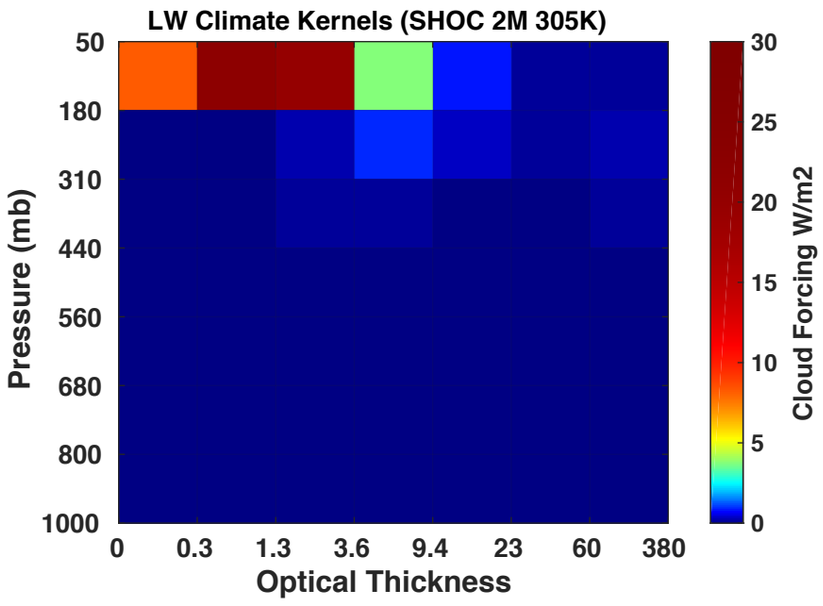


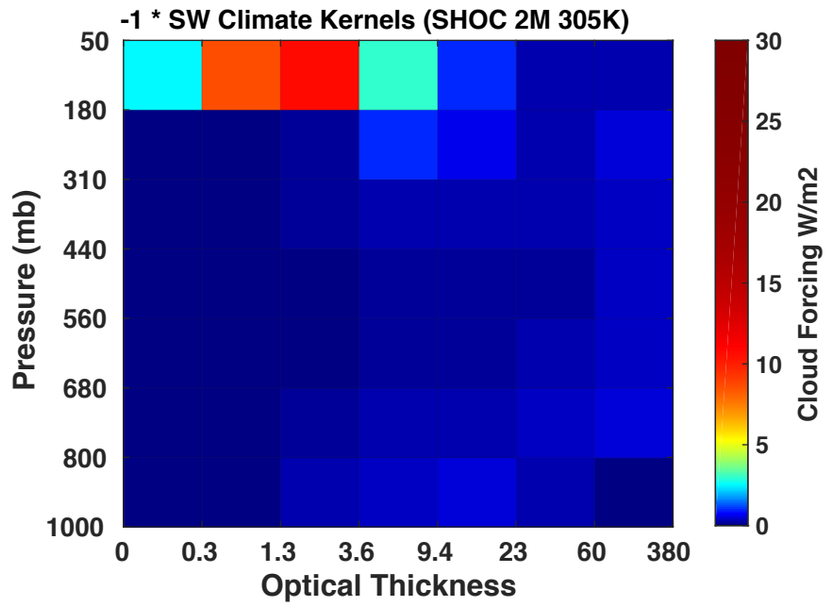
LW, SW, Net Kernel Forcings - SHOC 2M

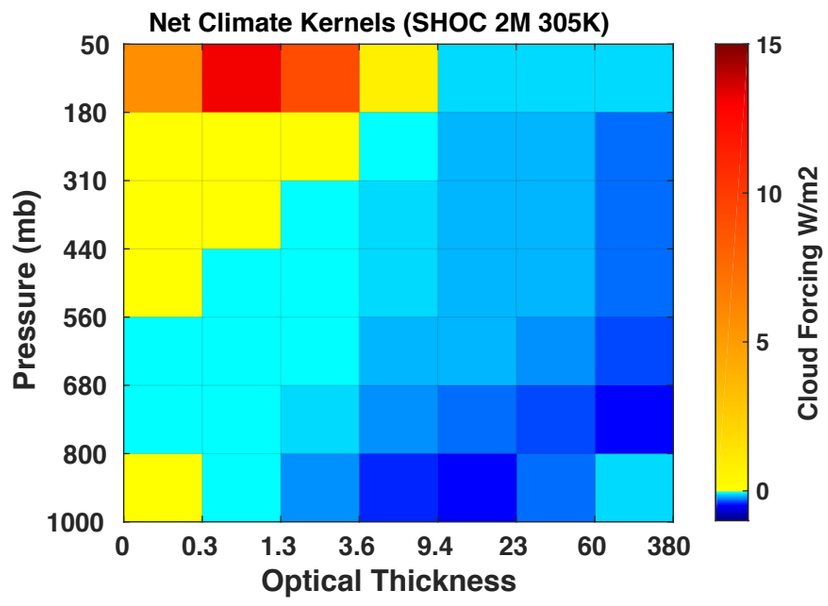












Summary

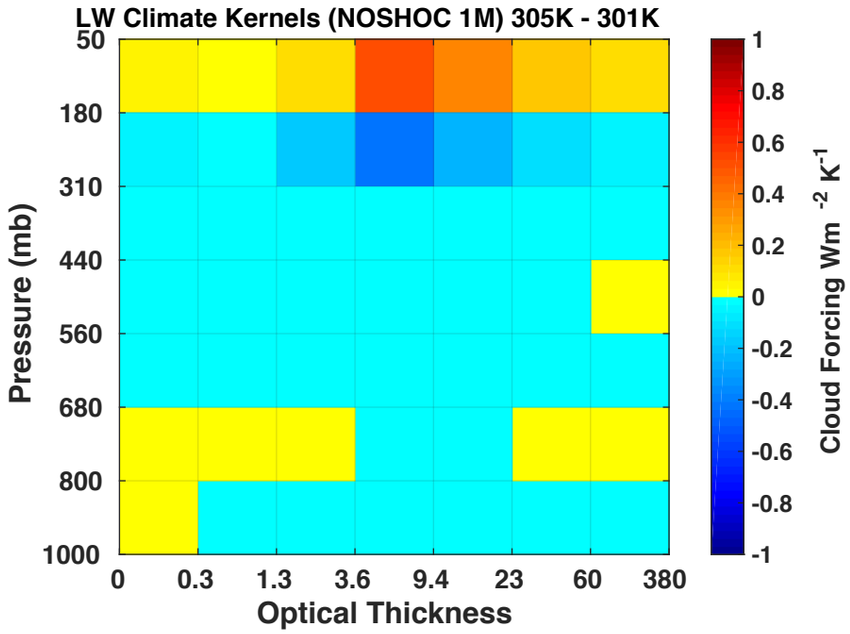
Temperature dependence (top vs bottom rows slides 2-5) seems very small relative to overall kernel derived LW, SW, Net forcings.

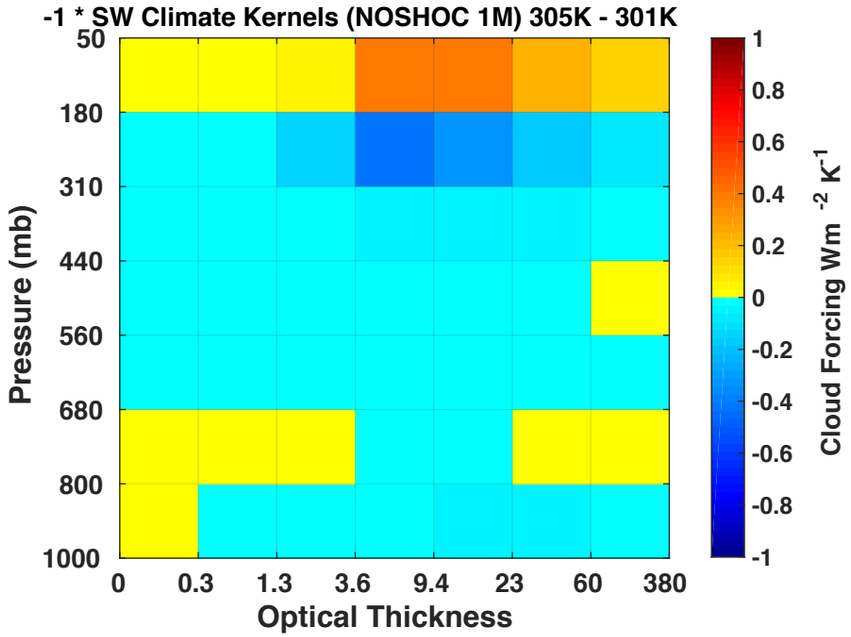
Net forcings positive in high altitude, low optical thickness clouds, negative in low altitude, high optical thickness clouds.

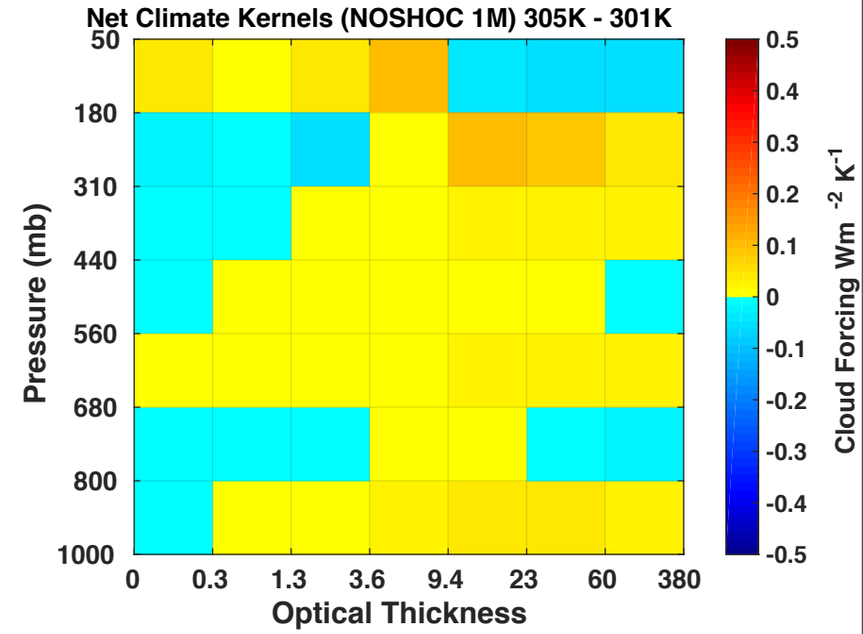
The large cloud frequencies in the lower optical thickness cirrus range generate higher magnitude forcings.

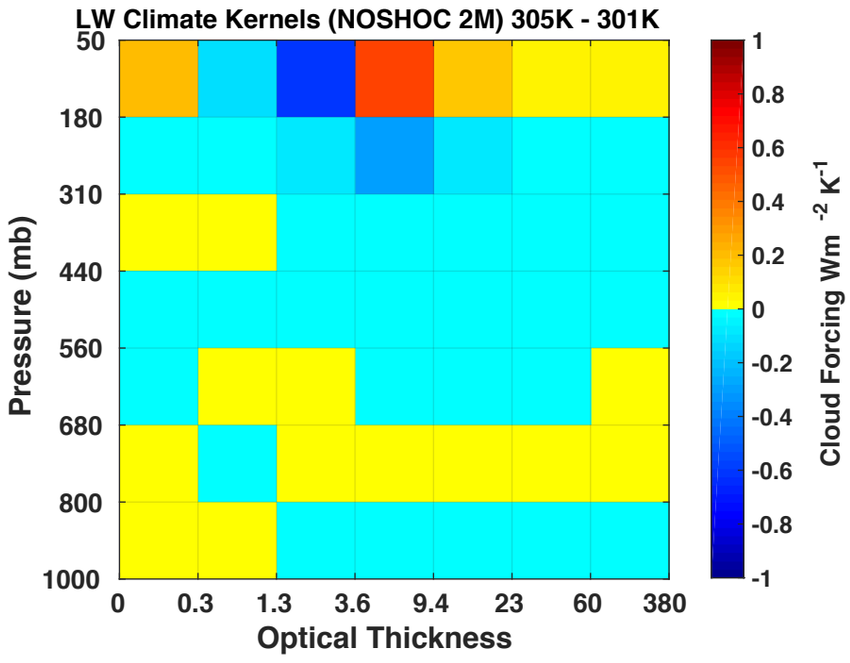
Single moment (slides 2-3) have a low wider range of optical thickness clouds than double moment (slides 4-5).

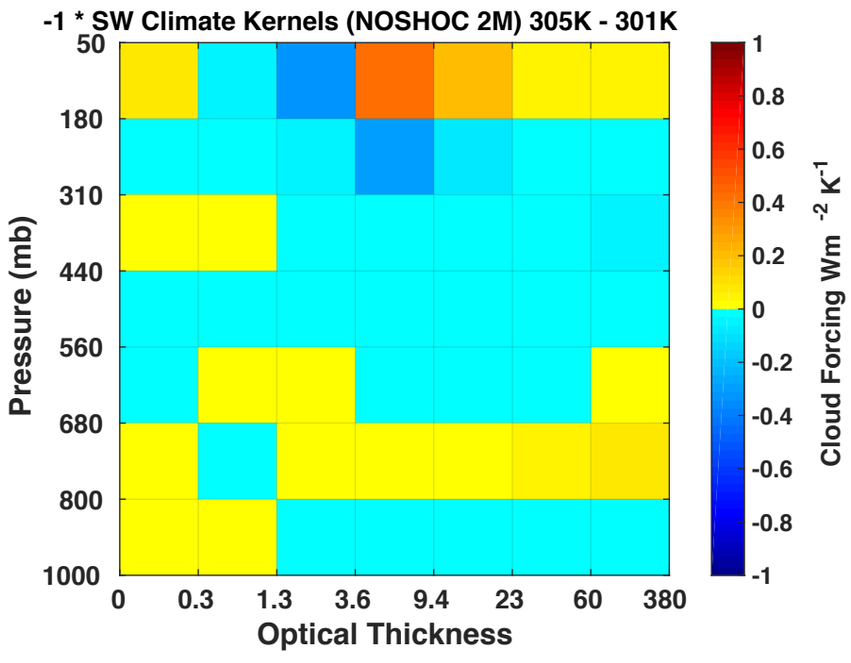
NOSHOC Temperature Dependence

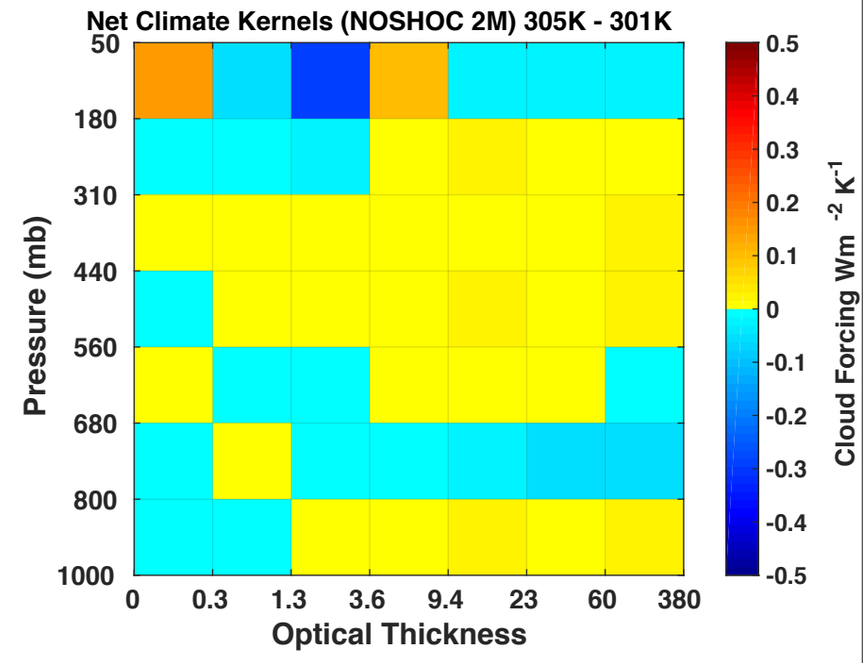




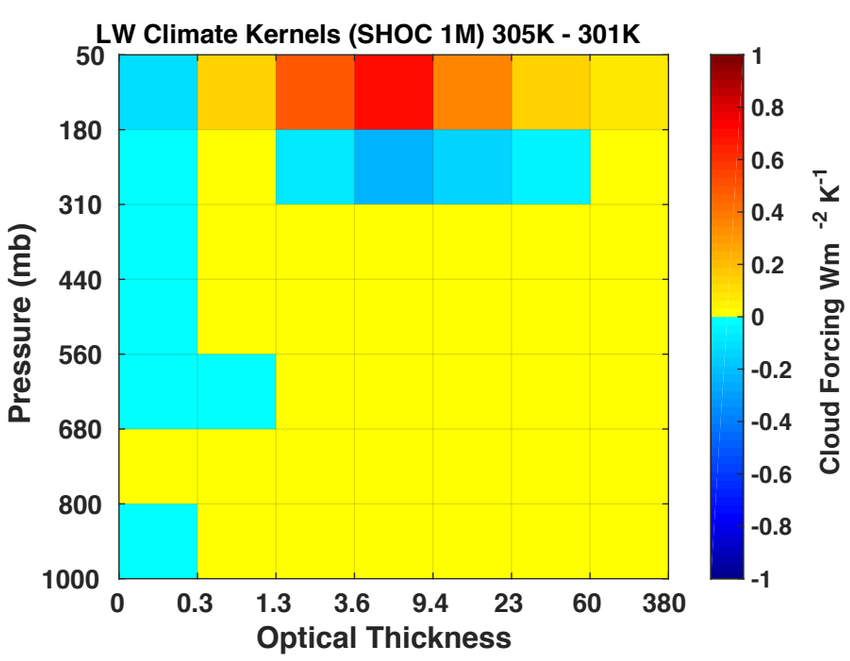


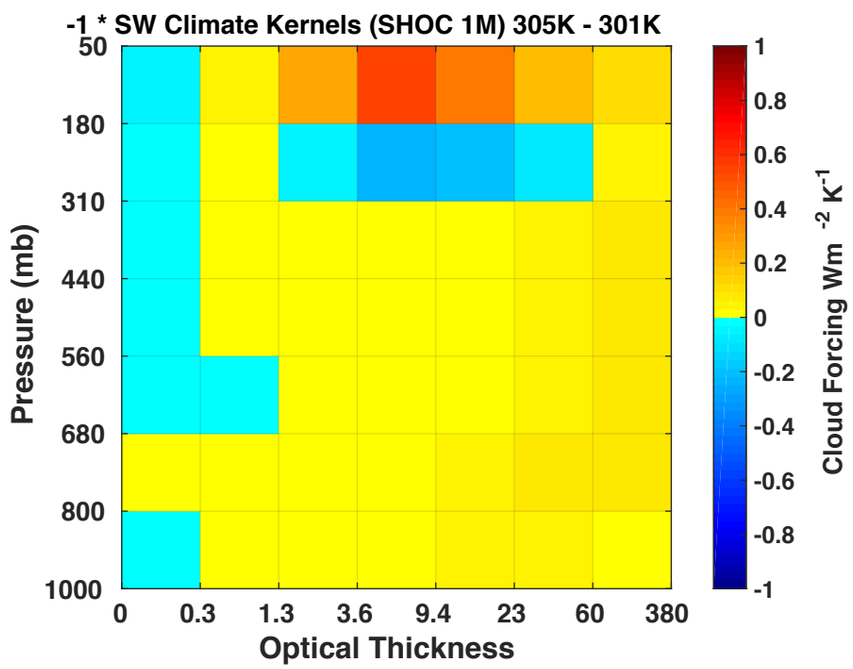


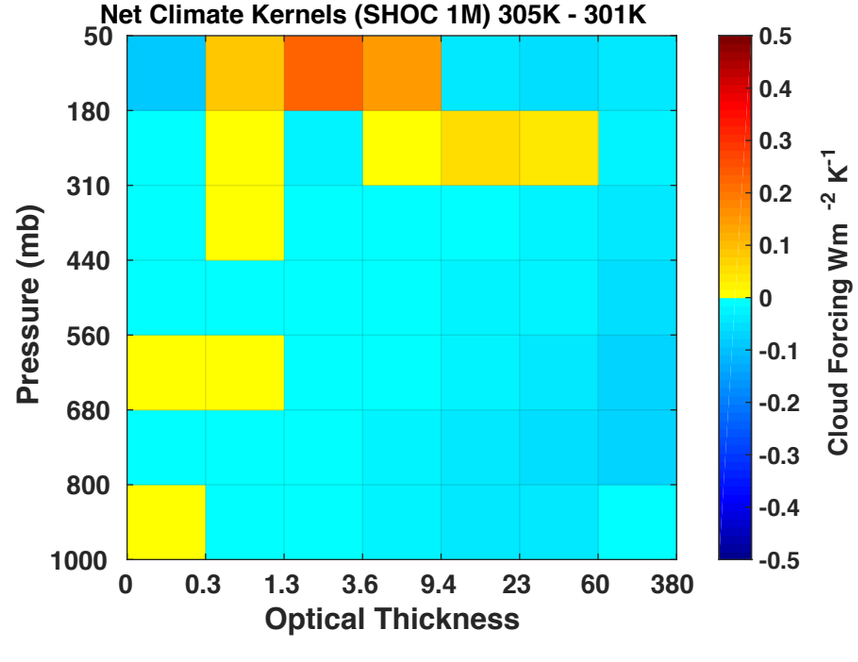


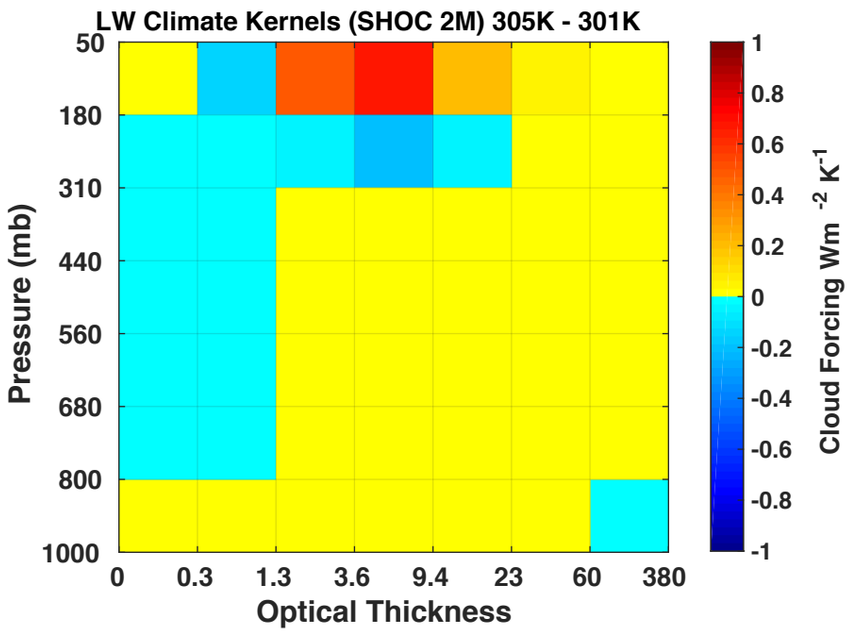


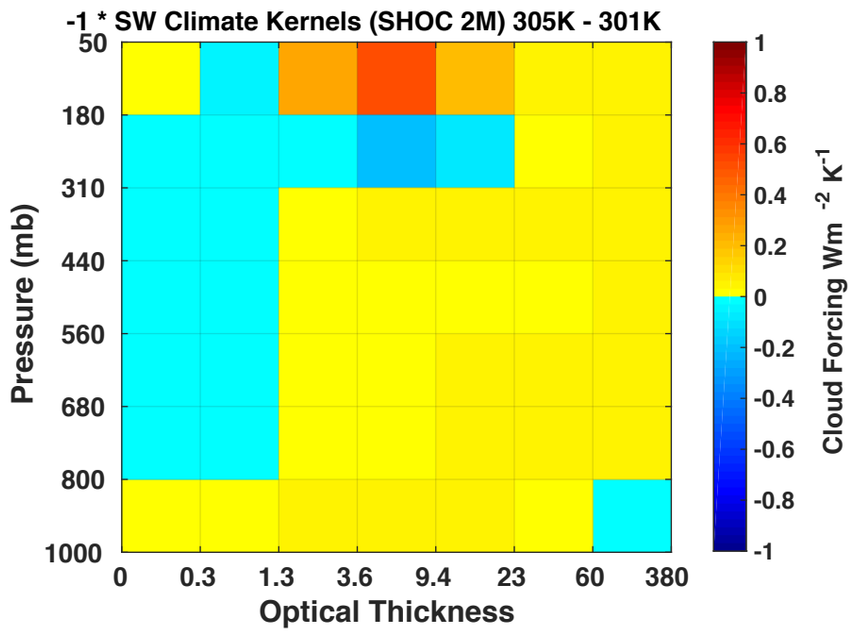
SHOC Temperature Dependence

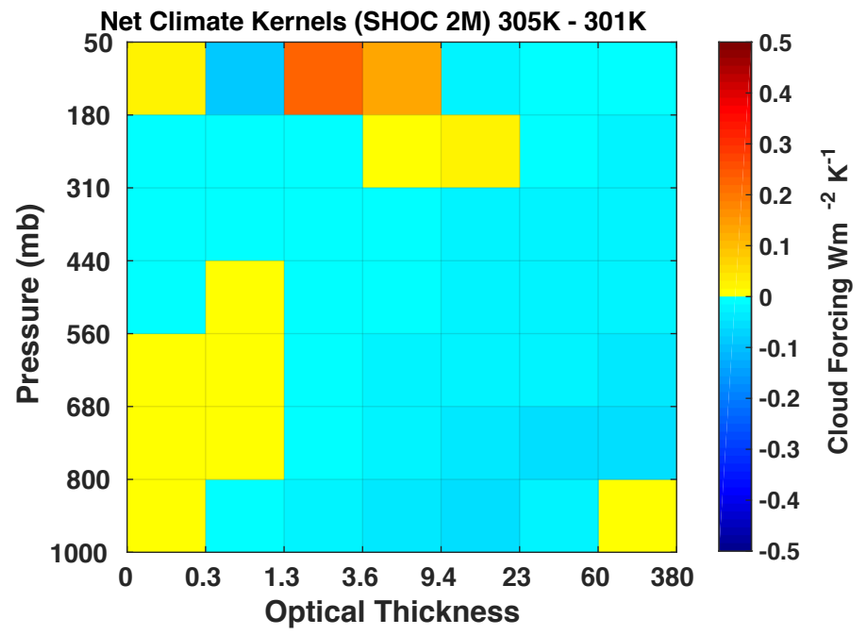












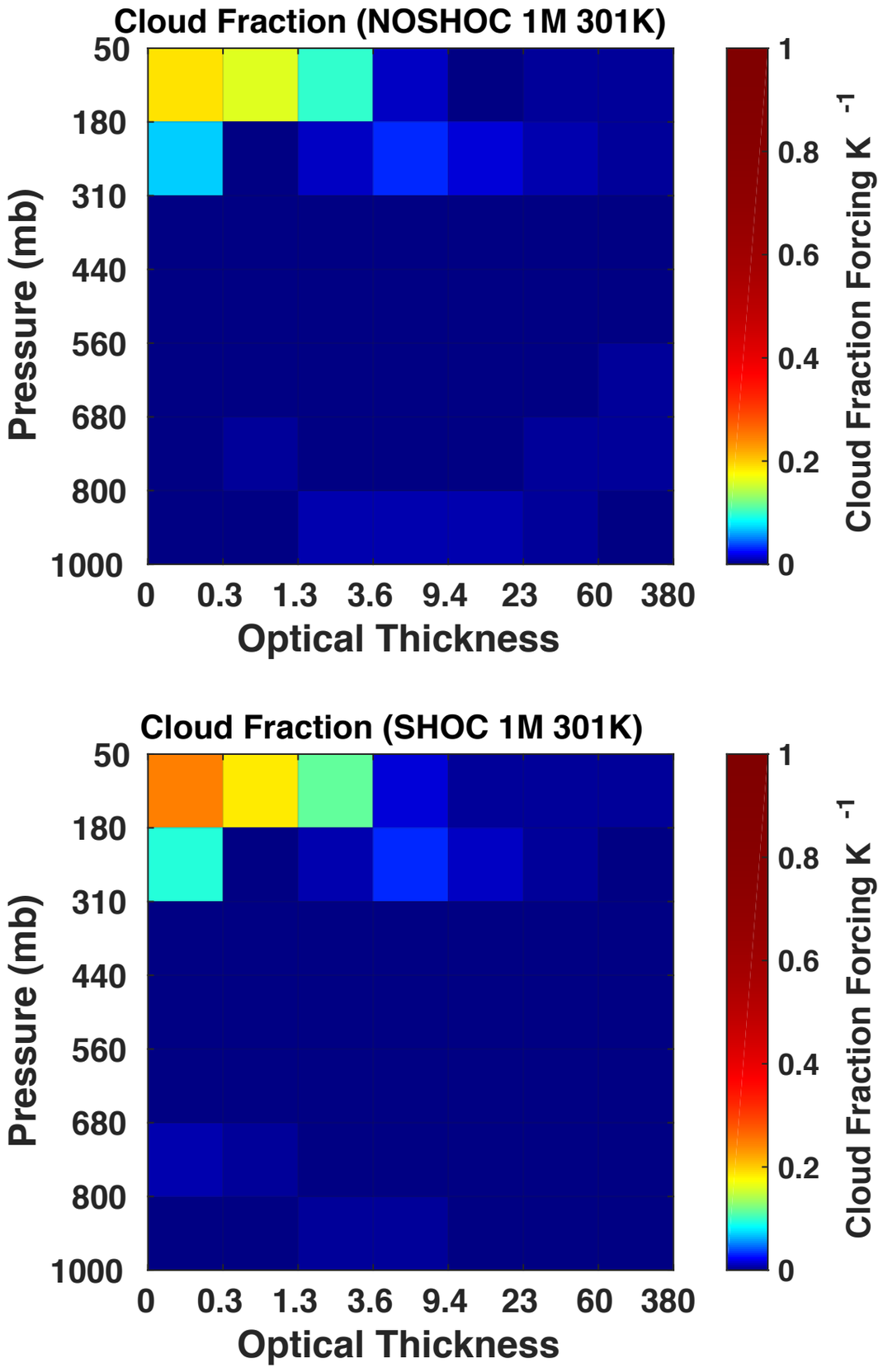
Summary

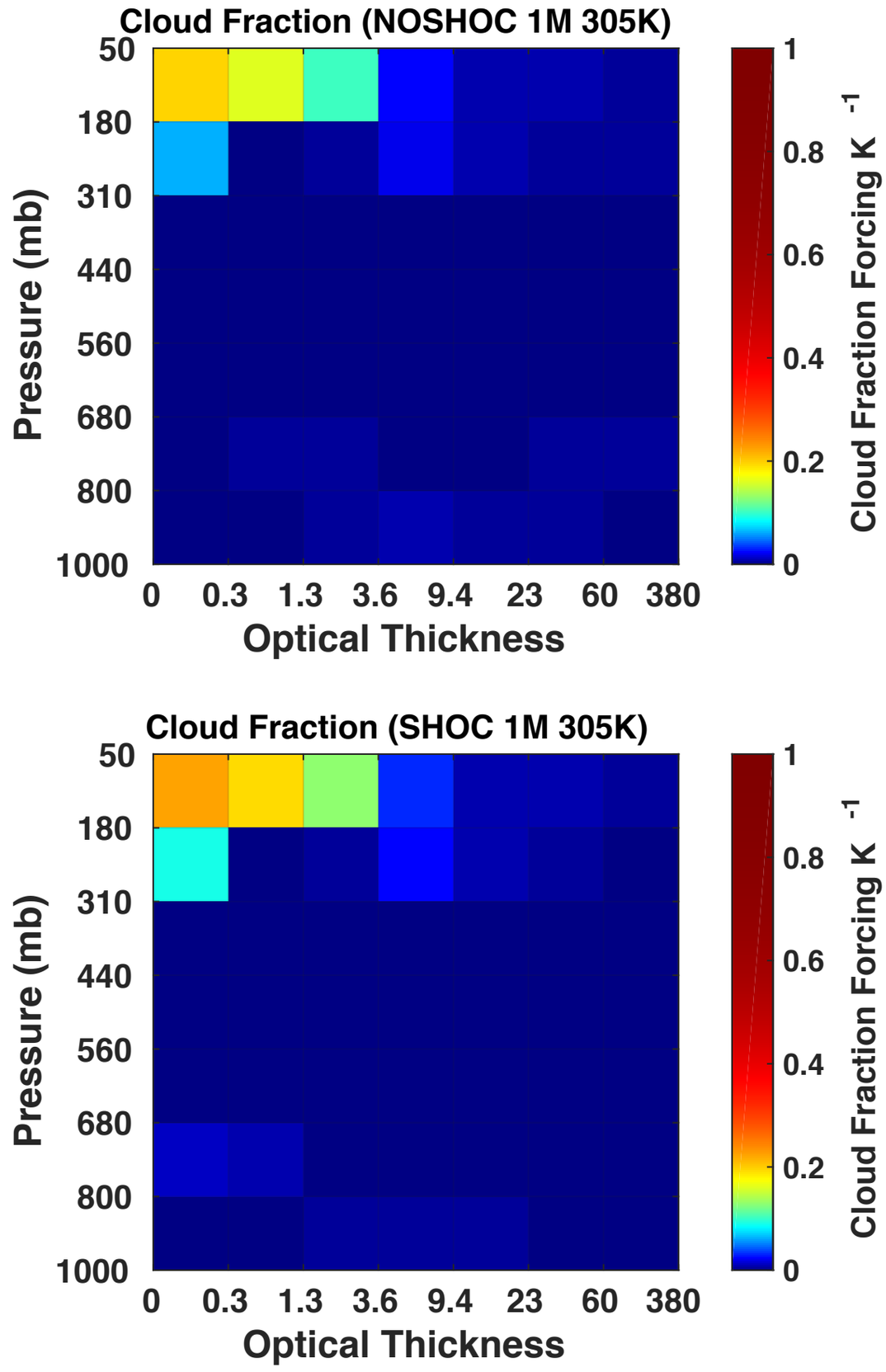
Since kernels are all positive for LW and negative for SW, they tend to cancel. This results in a lot of similarity for LW and -SW maps.

More boxes with increasing SW or LW forcing with temperature (warm colors) in SHOC runs than in NOSHOC runs.

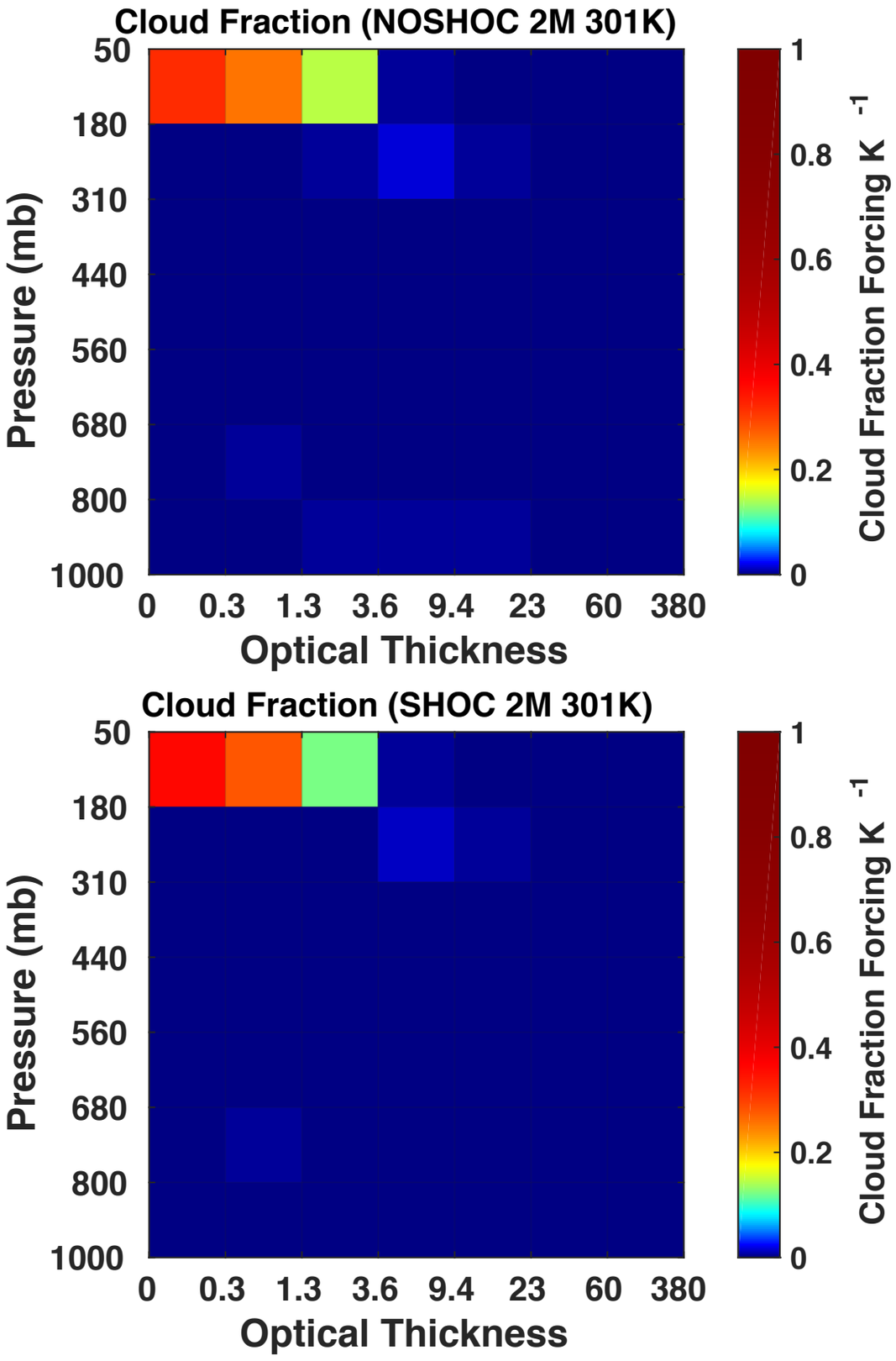
Single vs double moment seems to not matter as SHOC/NOSHOC (i.e. slide 7 looks more different than slide 8 than the top half of slide 7 from the bottom half of slide 7).

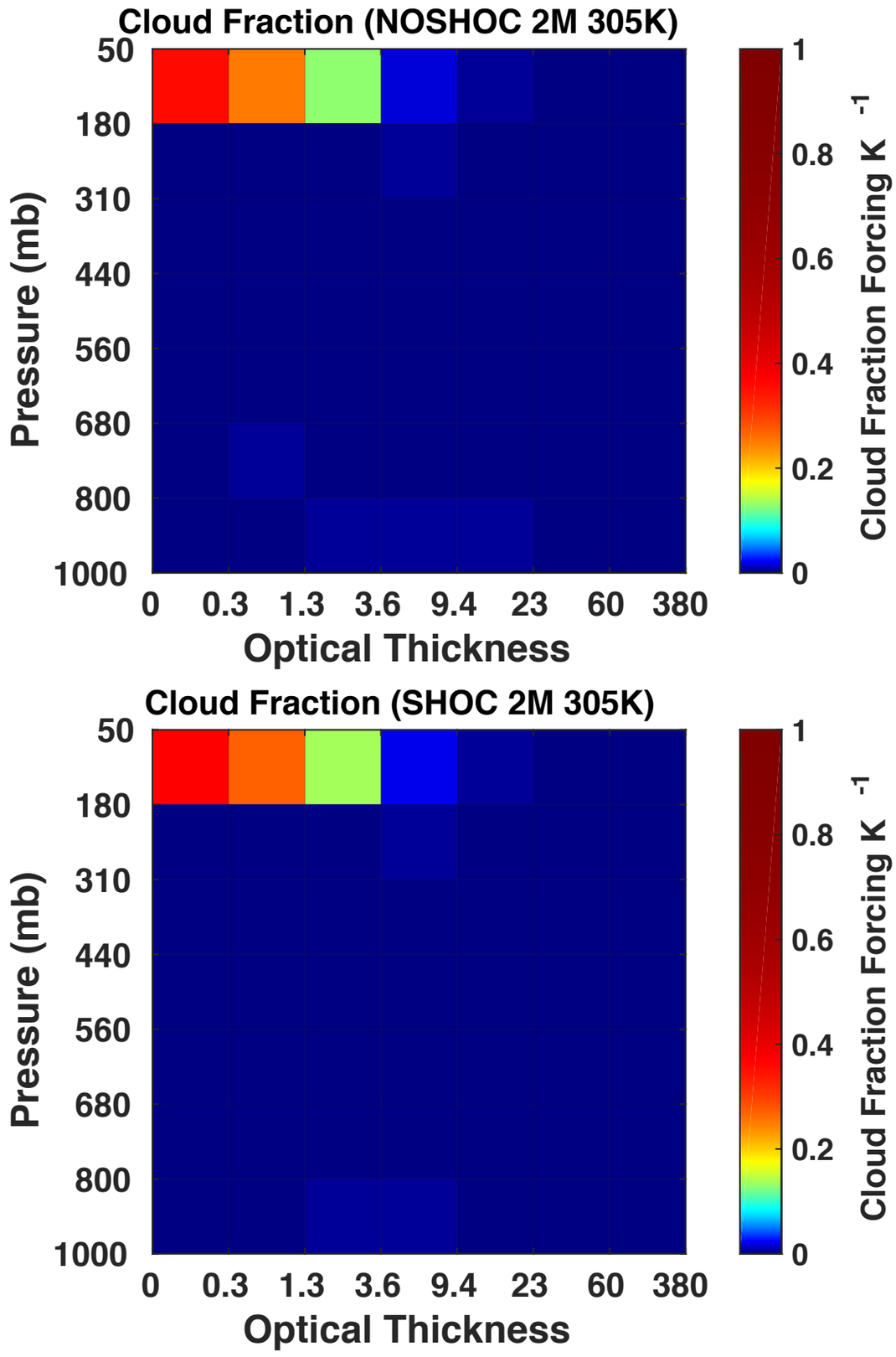
Cloud Fraction - 1M Runs



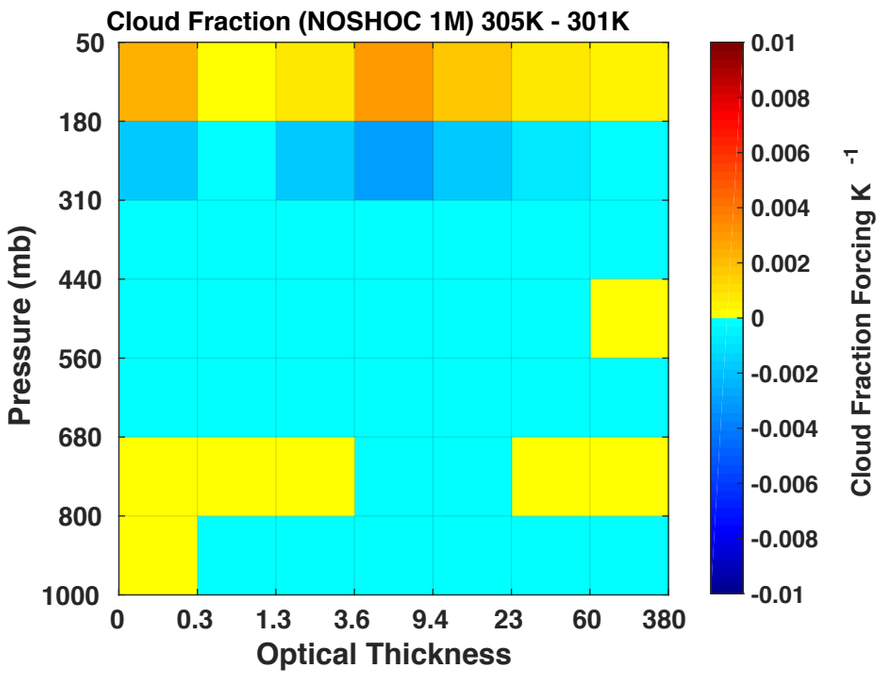


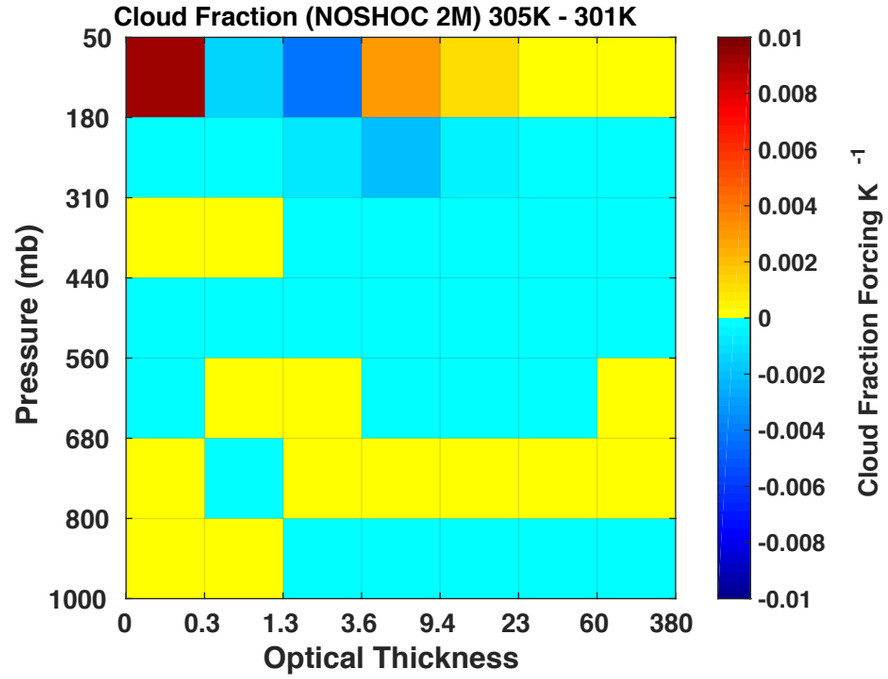
Cloud Fraction - 2M Runs

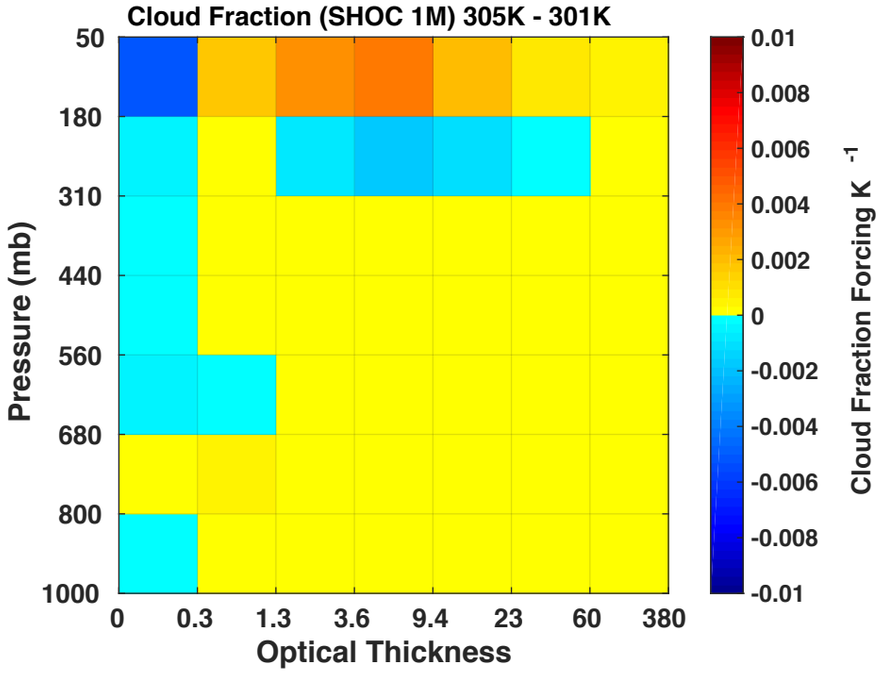


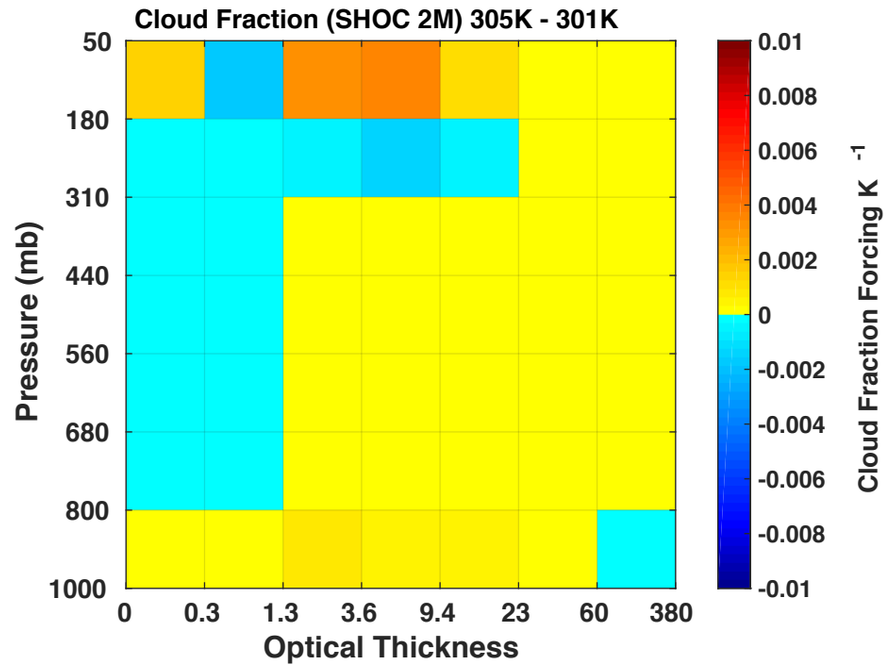


Cloud Fraction Forcings









Largest changes in cloud fraction are at highest elevations.
Sign change in top left corner for NOSHOC/2M vs SHOC/1M.