CIDER Guide

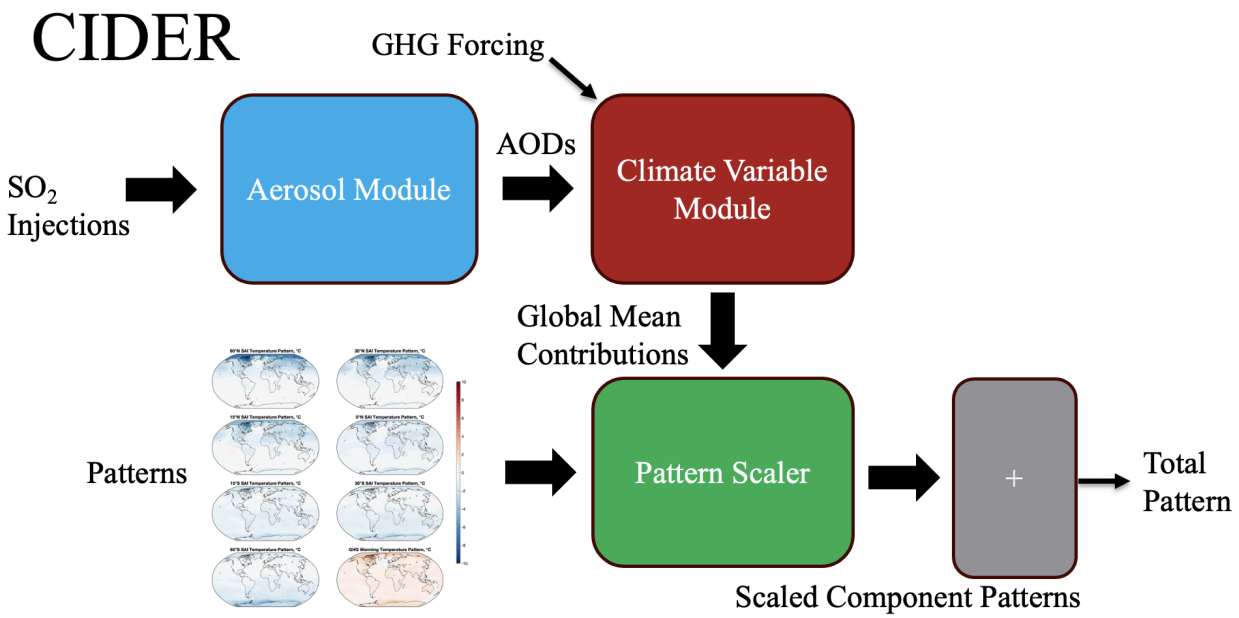

Diagram of CIDER

CIDER.pattern_from_all_injections_and_CO2(all_injection_and_CO2, all_param_AOD, all_param_climate, all_pattern_to_scale)

Inputs:

- **all_injection_and_CO2**: [[all SO2 injections],[CO2 Forcing]]
  - A (months x 8) array
- **all_param_AOD**: 7x3 array, determines behavior of Aerosol Module
  - I named the variable you feed in here param_AOD_all in the .mat file by accident
- **all_param_climate:** 8x2 array, determines behavior of Climate Variable Module
  - I named the variable you feed in here param_T_all and param_P_all in the .mat file by accident
- **all_pattern_to_scale:** pattern_T_all and pattern_P_all in the .mat file

Outputs: (288 x 192 x months) array of climate output (T or P), can be analyzed as ARISE/GAUSS output. I have a global_mean function and lat_band_mean function in Toolbox.py. You'll need a base pattern (there are some in the .mat file).

If you want just the global mean response, you can use response_from_all_injections_and_CO2, which drops the all_pattern_to_scale because it's not needed. You can alternatively just take the global_mean of the pattern.

In new_CESM_params.mat:

- "param_AOD_all"
- "param_P_all"
- "param_T_all"
- "pattern_P_all"
- "pattern_T_all"
- "pattern_AOD_all"
- "pattern_T_base"
- "pattern_P_base"