Figure S1 Same as Figure 2 but for ^{137}**Cs.**

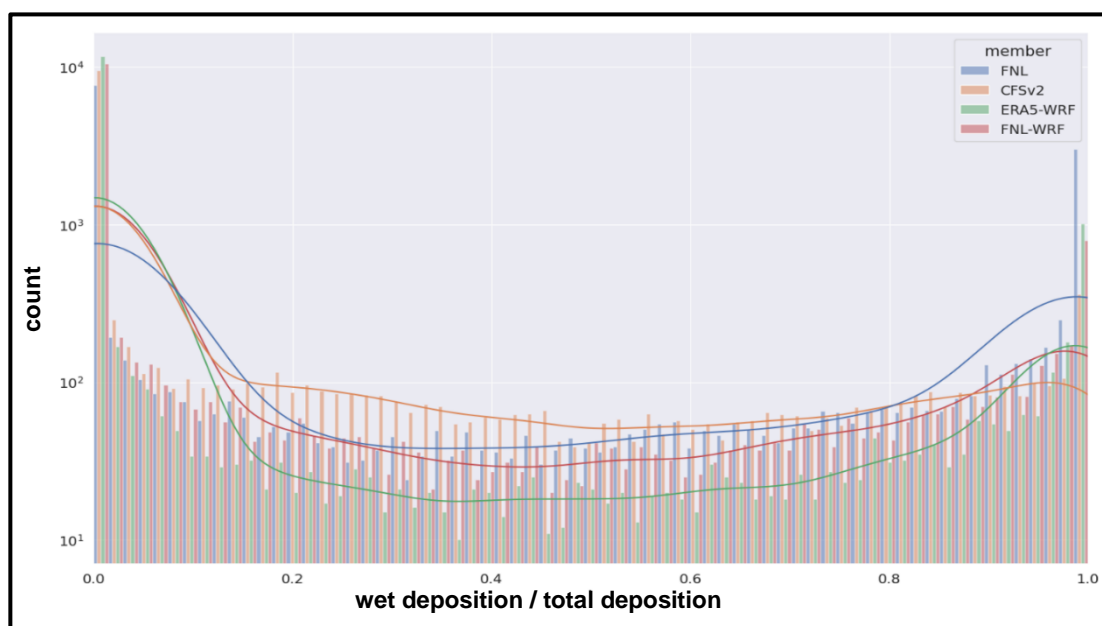



Figure S2 The distribution of the ratio of ^{137}**Cs wet deposition to total** ^{137}**Cs deposition. Colors represent members and lines are the corresponding kernel density estimates of counts. Counts are on a logarithmic scale.**

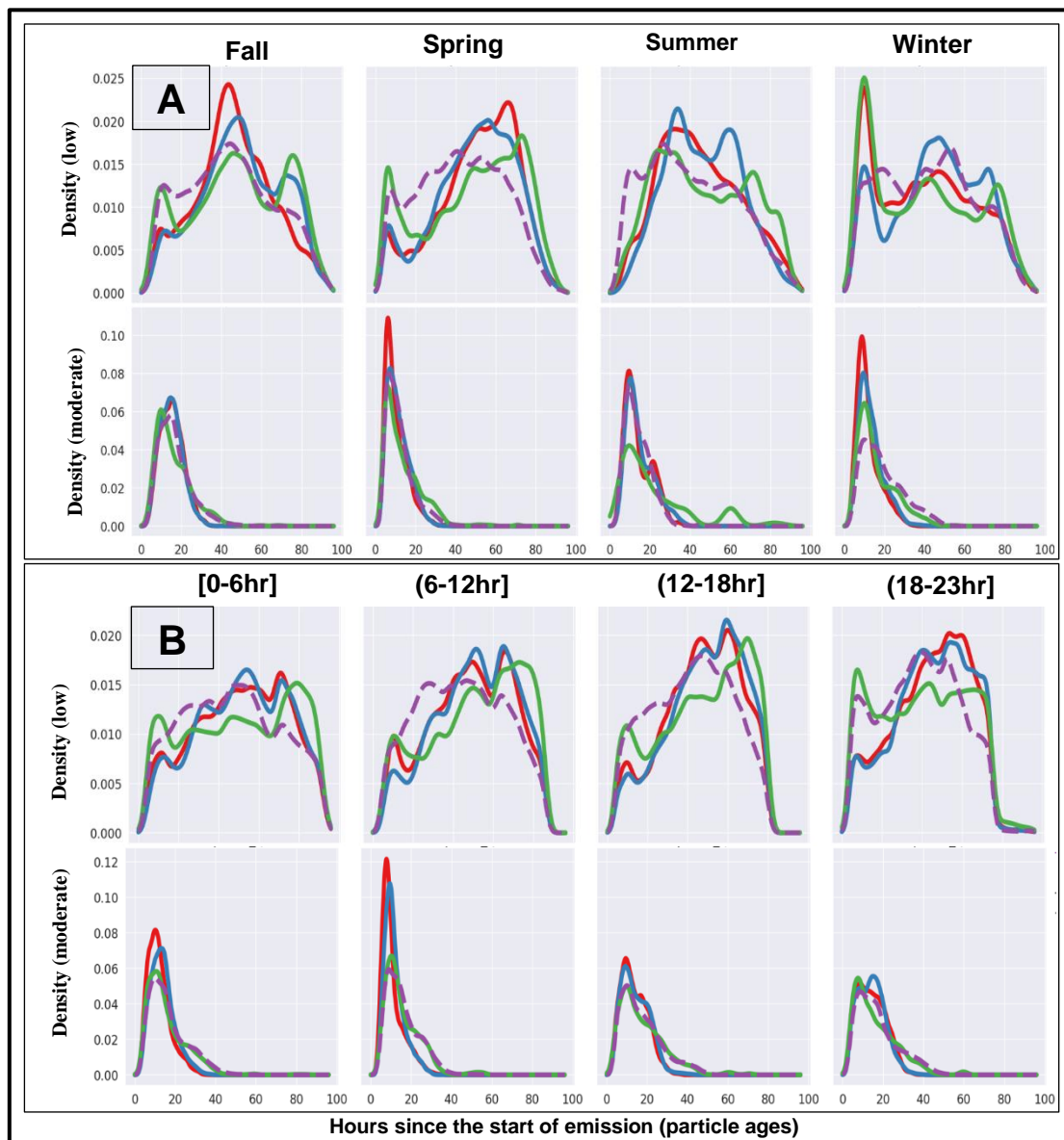



Figure S3 Same as Figure 2 but for the low and moderate concentrations of ^{131}I.

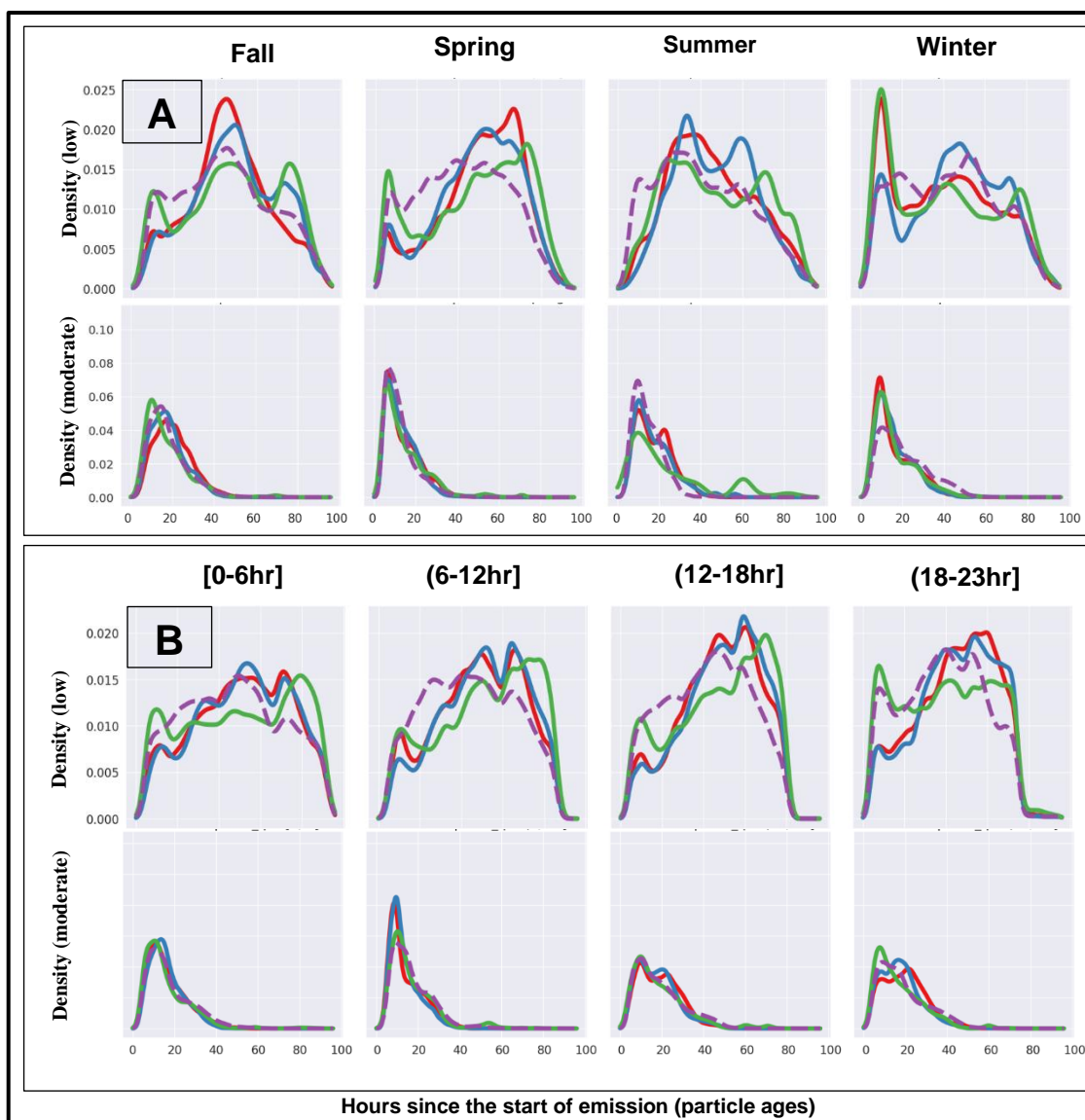



Figure S4 Same as Figure 2 but for the low and moderate concentrations of ^{137}Cs.

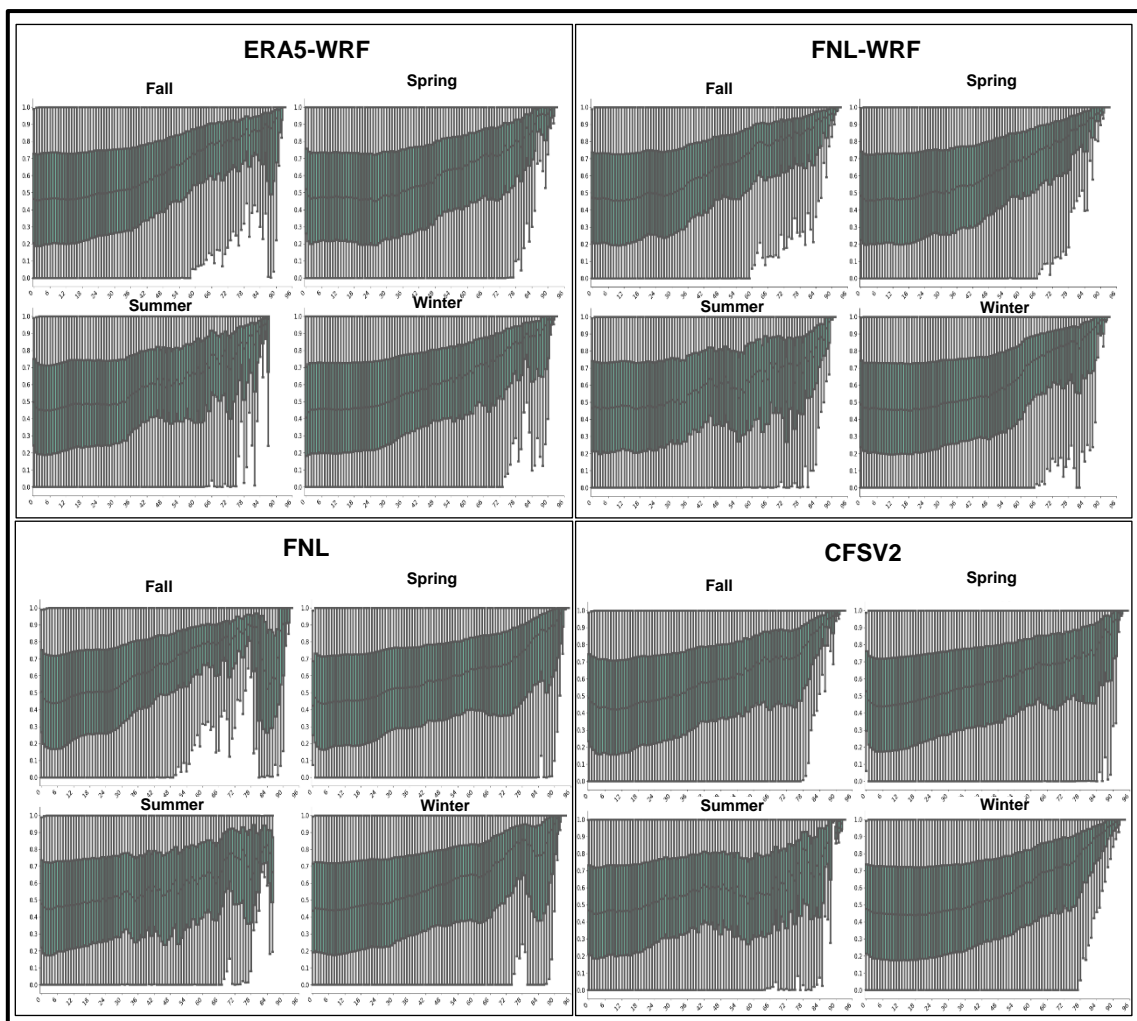



Figure S5 Same as Figure 3 but for all seasons.

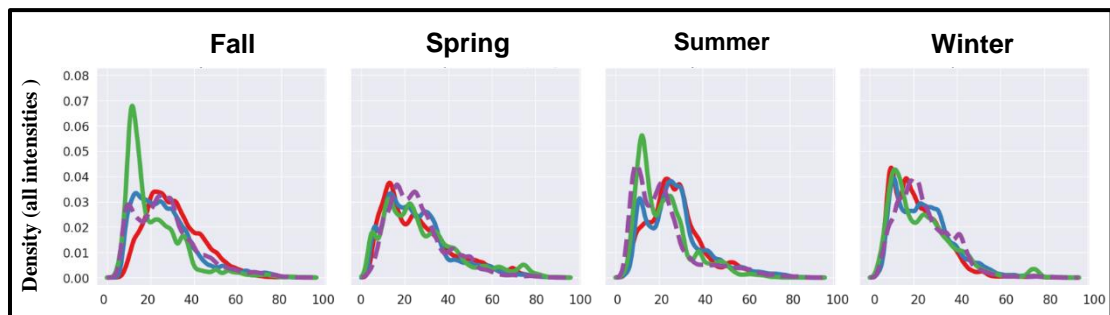



Figure S6 Same as the panel at the top in Figure 2 but for all intensities of ^{137}Cs depositions.

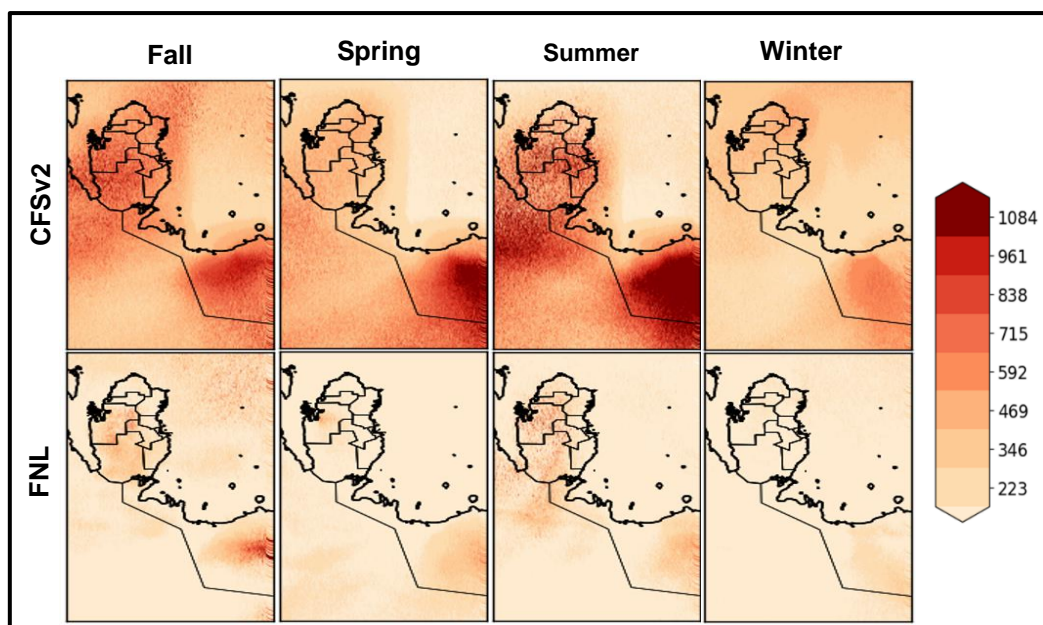
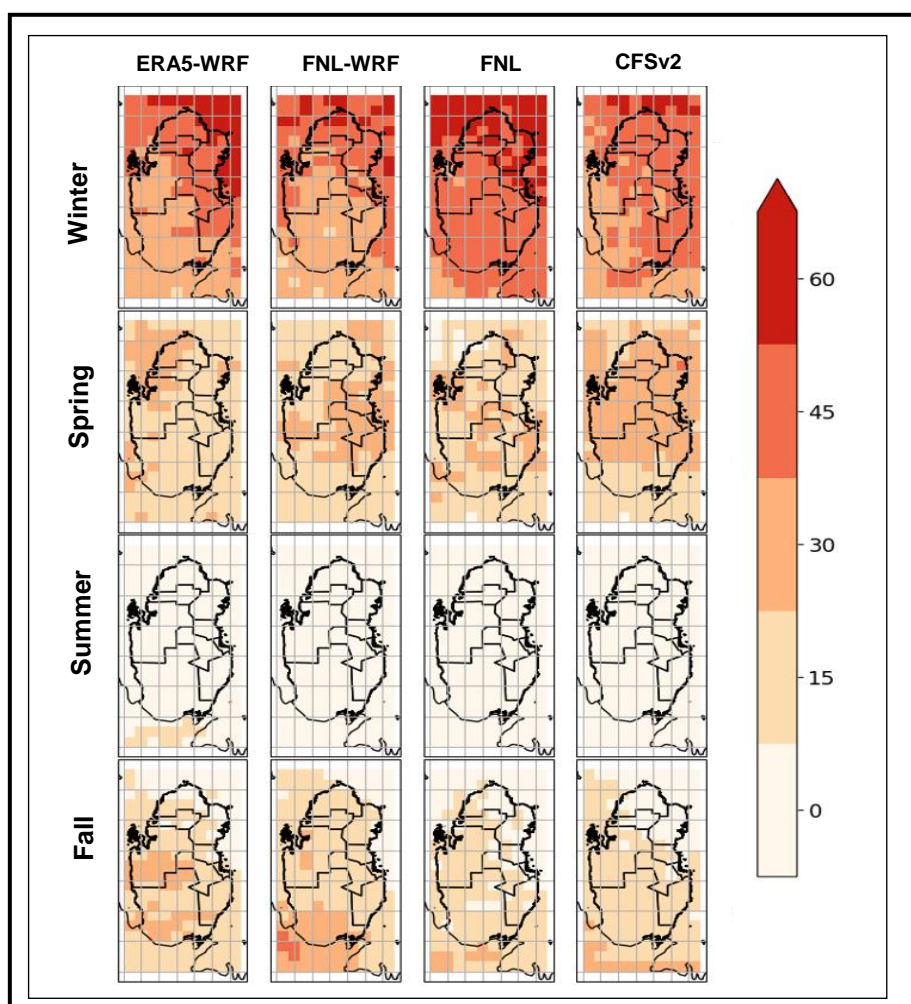



Figure S7 The seasonal median of boundary layer height (m) estimated based on CFSv2 (top row) and FNL (bottom row) inputs.

S8 Same as Figure 8-A but for ^{137}Cs column densities above respective 66th percentile.

S9 Same as Figure 9 but for FNL-WRF.

S10 Same as Figure 10 but for ^{137}Cs column densities.

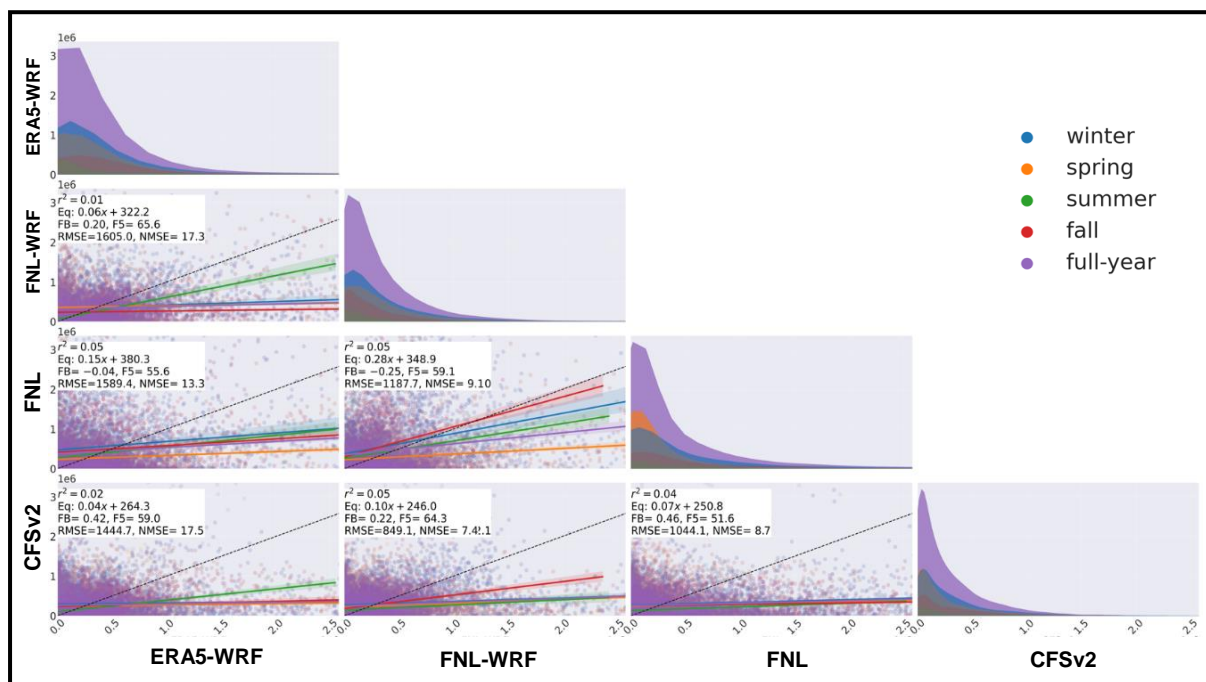
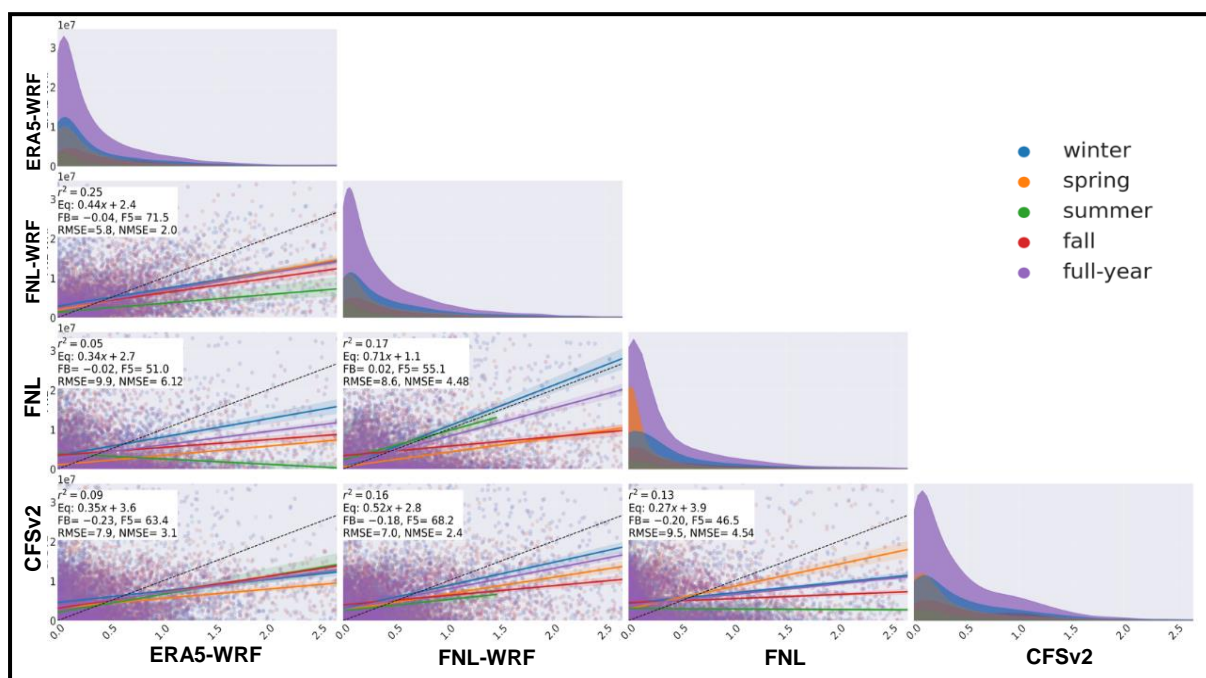



Figure 11 Same as Figure 10 but for ^{137}Cs deposition

S12 Same as Figure 10 but for ^{131}I depositions.