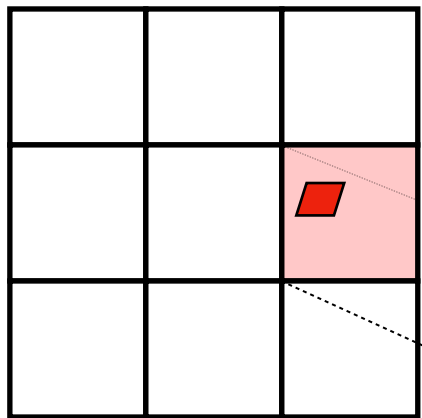
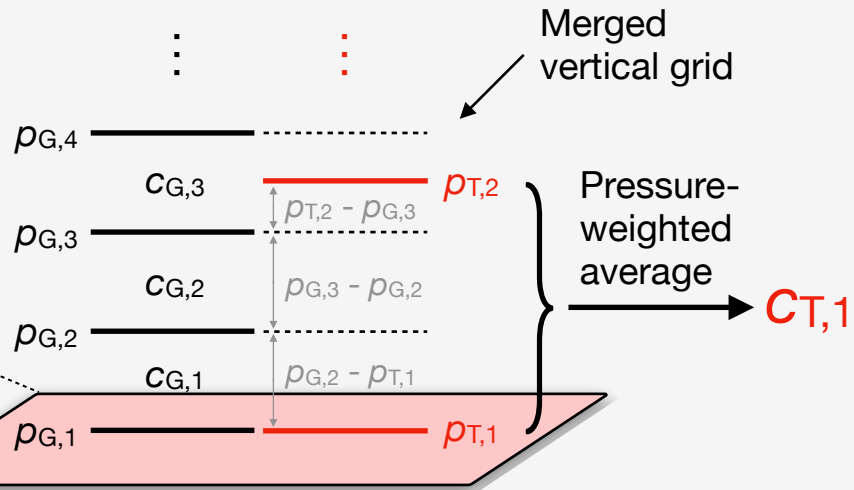


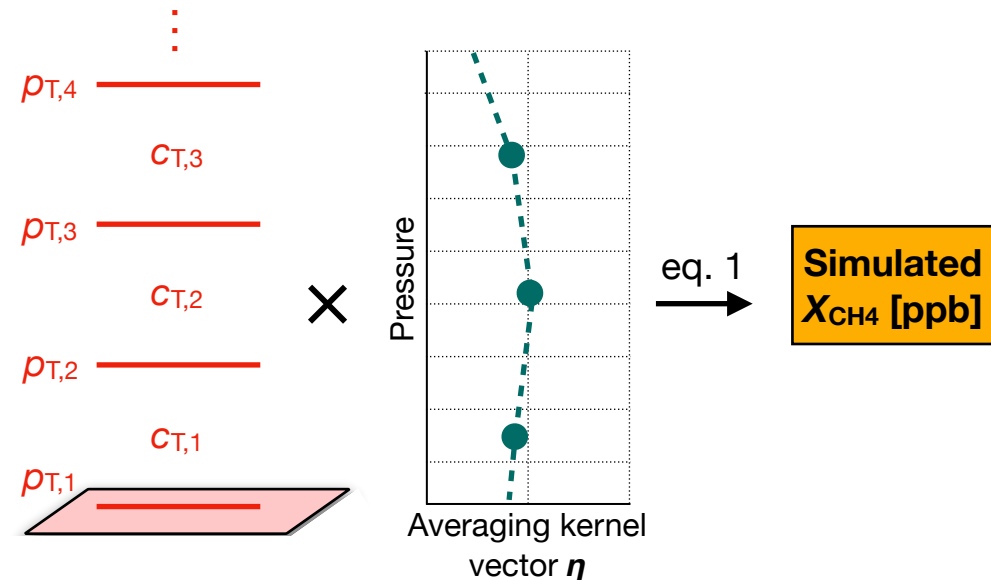
(a) Find overlapping GEOS-Chem grid cell(s)



(b) Remap GEOS-Chem CH₄ profile to TROPOMI pressure grid



(c) Infer TROPOMI X_{CH₄} in GEOS-Chem atmosphere



 GEOS-Chem grid (0.25° × 0.3125°)

 TROPOMI pixel

 Overlapping grid cell(s)

ρ_G GEOS-Chem pressure edges

ρ_T TROPOMI pressure edges

c_G GEOS-Chem CH₄ mixing ratios [ppb]

c_T Remapped GEOS-Chem CH₄ mixing ratios [ppb]