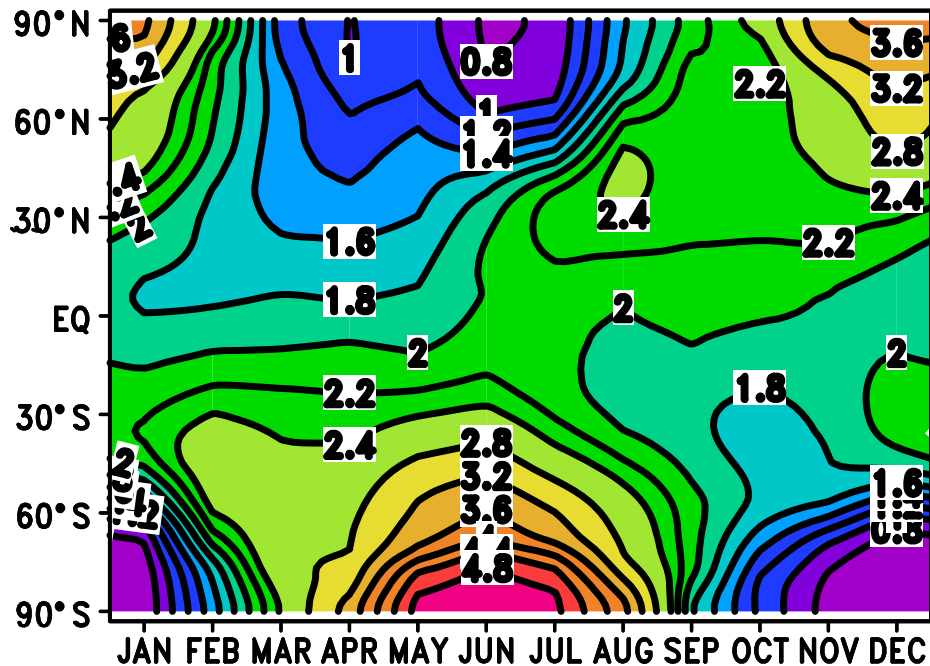
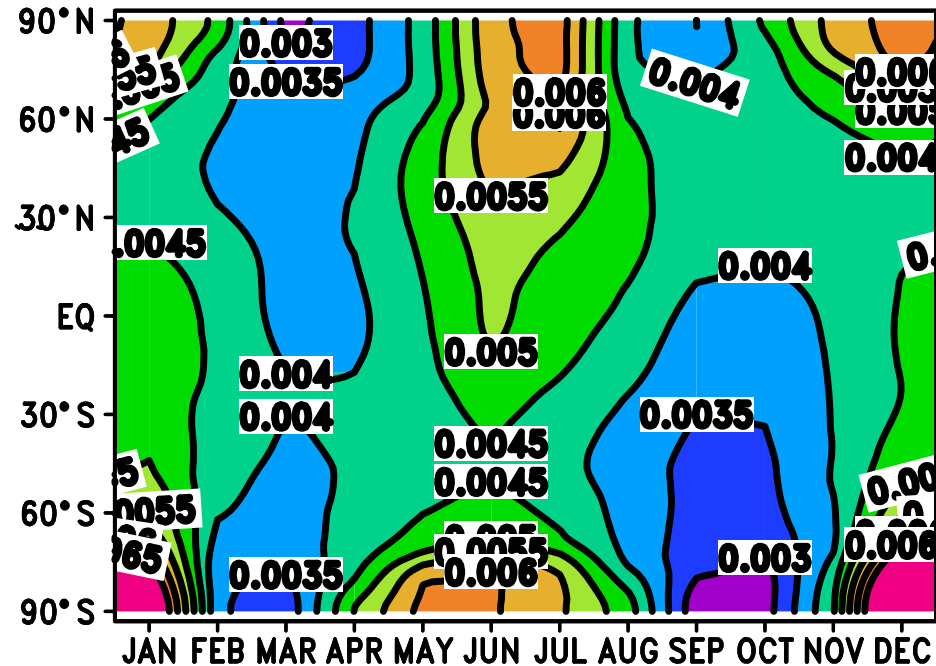


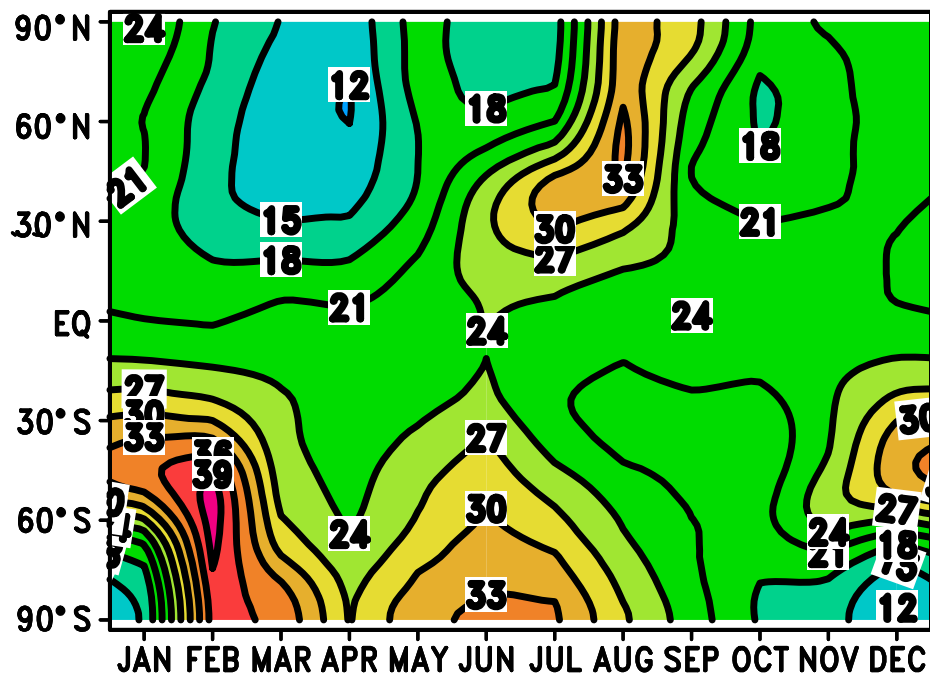
(a) WACCM-Ca Ca ( $10^7 \text{ cm}^{-2}$ )



(c) WACCM Ca/Na



(b) WACCM-Ca Ca<sup>+</sup> ( $10^7 \text{ cm}^{-2}$ )



(d) WACCM Ca<sup>+</sup>/Na<sup>+</sup>

