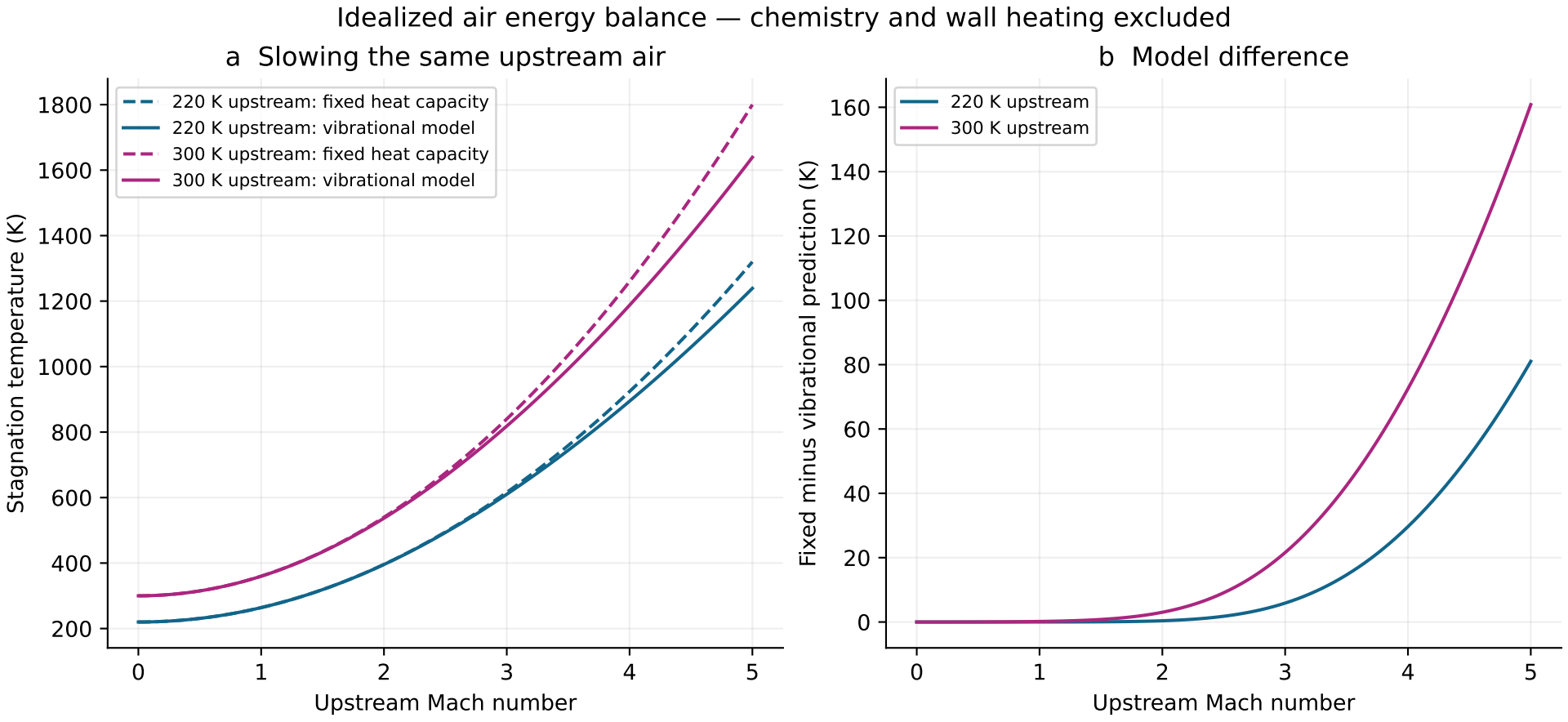

Idealized air energy balance — chemistry and wall heating excluded
a Slowing the same upstream air
b Model difference
220 K upstream: fixed heat capacity
220 K upstream: vibrational model
300 K upstream: fixed heat capacity
300 K upstream: vibrational model
Stagnation temperature (K)
Upstream Mach number
220 K upstream
300 K upstream
Fixed minus vibrational prediction (K)
Upstream Mach number