HINESADM (@ ${MIROC_DIR}/src/physics/padmn.F)
・Call **HINESADM**

$Input: U, V, p, T$ ↓ ↑ $Output: DRAG_{u,v}$

${MIROC_DIR}/src/physics/phgwd.F

HINESADM
・Read (F_{ji}, σ_{ji}) from external files (@ ${MIROC_DIR}/data/hines/)
・Calculate basic state variables (e.g., ρ, N, η)
・Call **HINES_KSTAR_INIT**
・Call **HINES_DSP3**

F_{ji} , σ_{ji} →
← k_j

HINES_KSTAR_INIT
・Call **HINES_WAVNUM2**
・Calculate k_j by Eq. (540)

σ_{ji} ↓ ↑ m_j

σ_{ji} , k_j ↓ ↑ $F_{u,v}$, $DRAG_{u,v}$

HINES_DSP3
・Call **HINES_WAVNUM2**
・Smooth m_j profiles
・Call **HINES_DRAG2**

σ_{ji} →
← m_j

σ_{ji} , k_j , m_j ↓ ↑ $F_{u,v}$, $DRAG_{u,v}$

HINES_DRAG2
・Calculate $(F_{u,v}, DRAG_{u,v})$ by Eqs. (540–541)

HINES_WAVNUM2
・Call **HINES_SIGMA**
・Calculate (m_{ji}, m_M) by Eqs. (532, 534)
・Call **HINES_WIND**
・Compute (m_j, σ_j^2) profiles using Eqs. (533 and 535–538)

σ_j^2 ↓ ↑ σ_h , σ_j

HINES_SIGMA

U, V ↓ ↑ $V_j - V_{ji}$

HINES_WIND