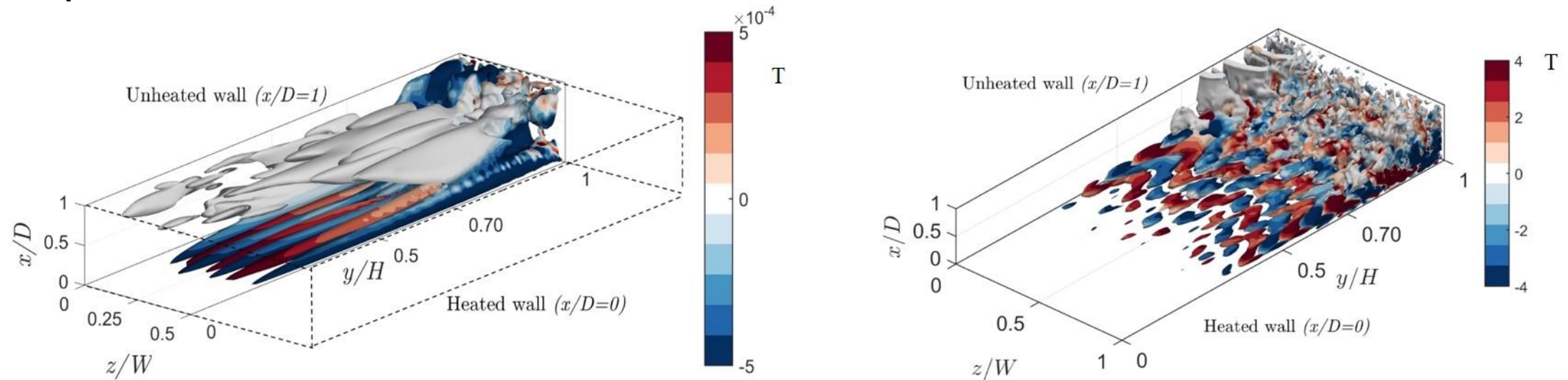


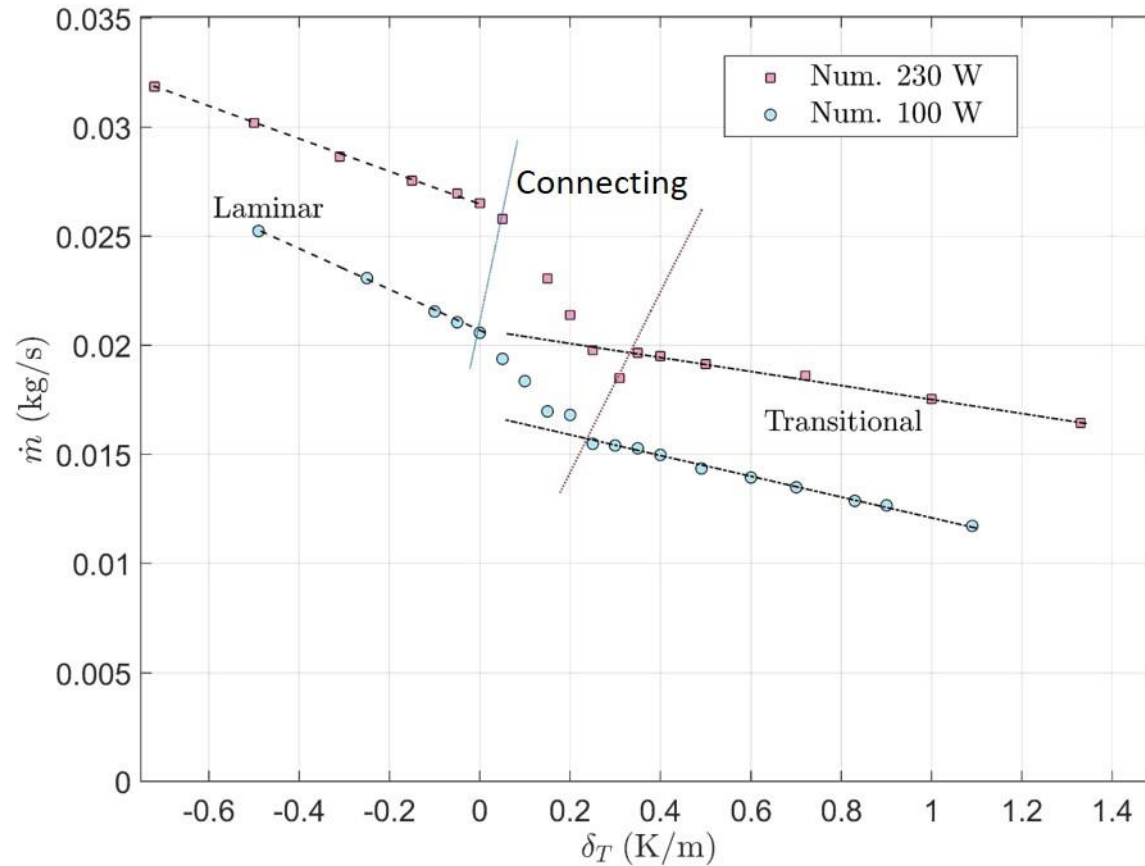
Flow patterns



Orthogonal decomposition (SPOD method) of the velocity and the thermal fields. LF modes (figure on the left) , MF-modes (figure on the right)

- The LF modes corresponds to streak-like modes and are characterized by streamwise elongated velocity structures alternating in the spanwise direction forming hot-high-velocity and cold-low-velocity streaks.
- The MF-modes are less energetic than the first LF-modes and correspond to V- or Λ -shaped staggered structures with strong vortical contents.

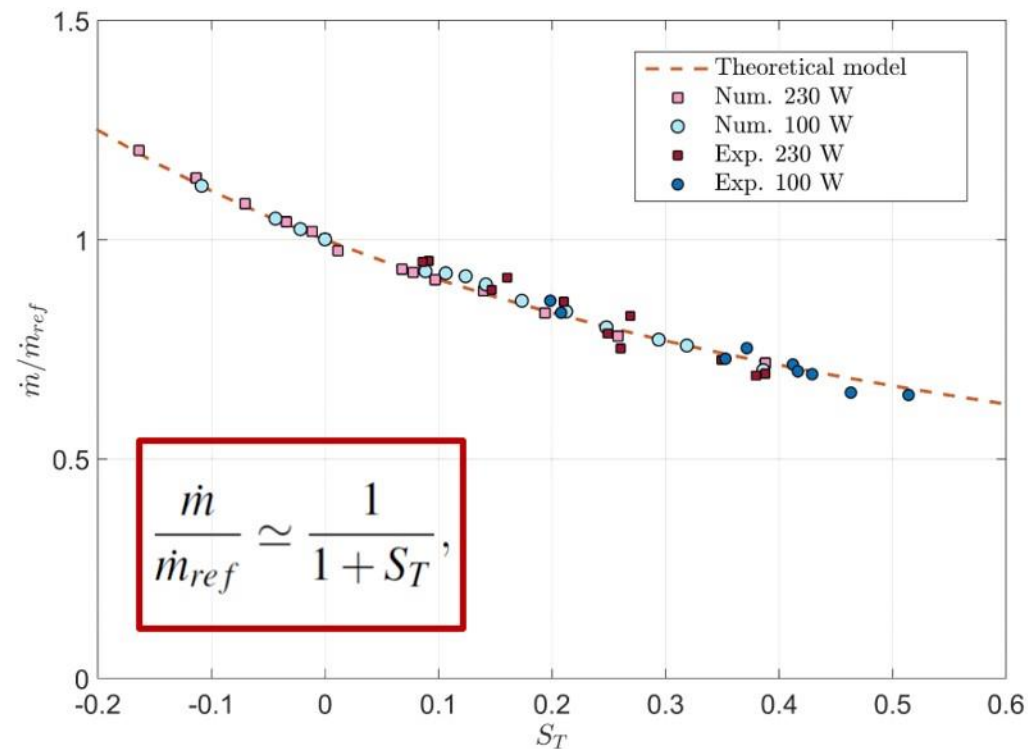
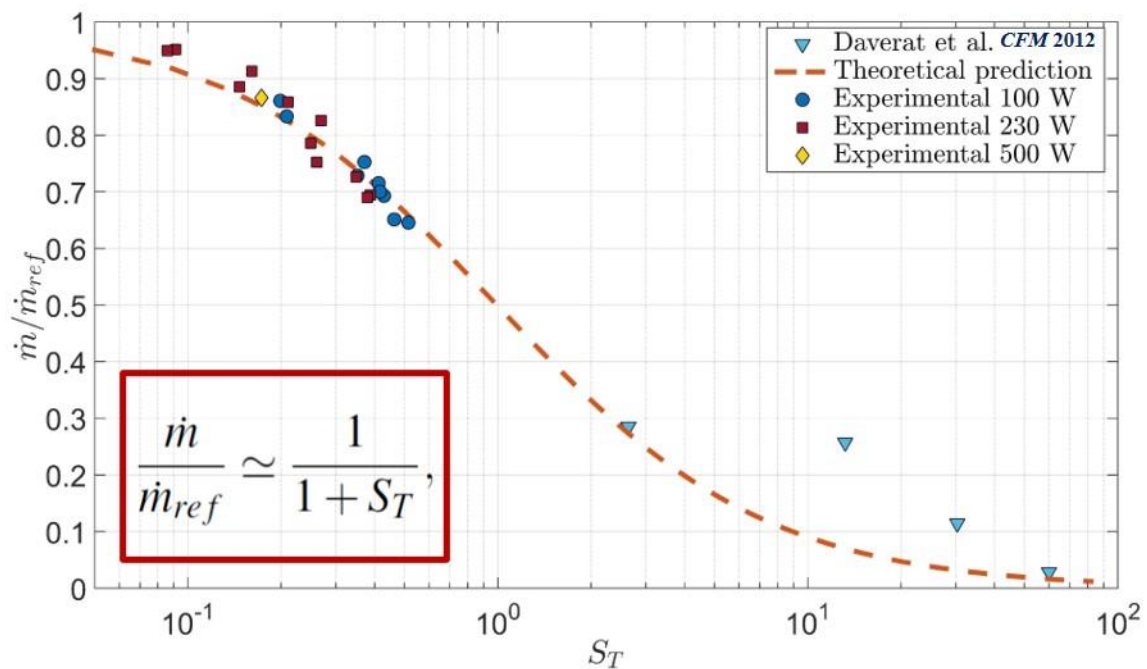
External stratification assessment



Impact of the stratification on the mass flow rate

Three different zones (Laminar, Transitional, Connecting) are observed

External stratification assessment



Mass flow rate vs stratification. Experimental and numerical validation of 1D theoretical model