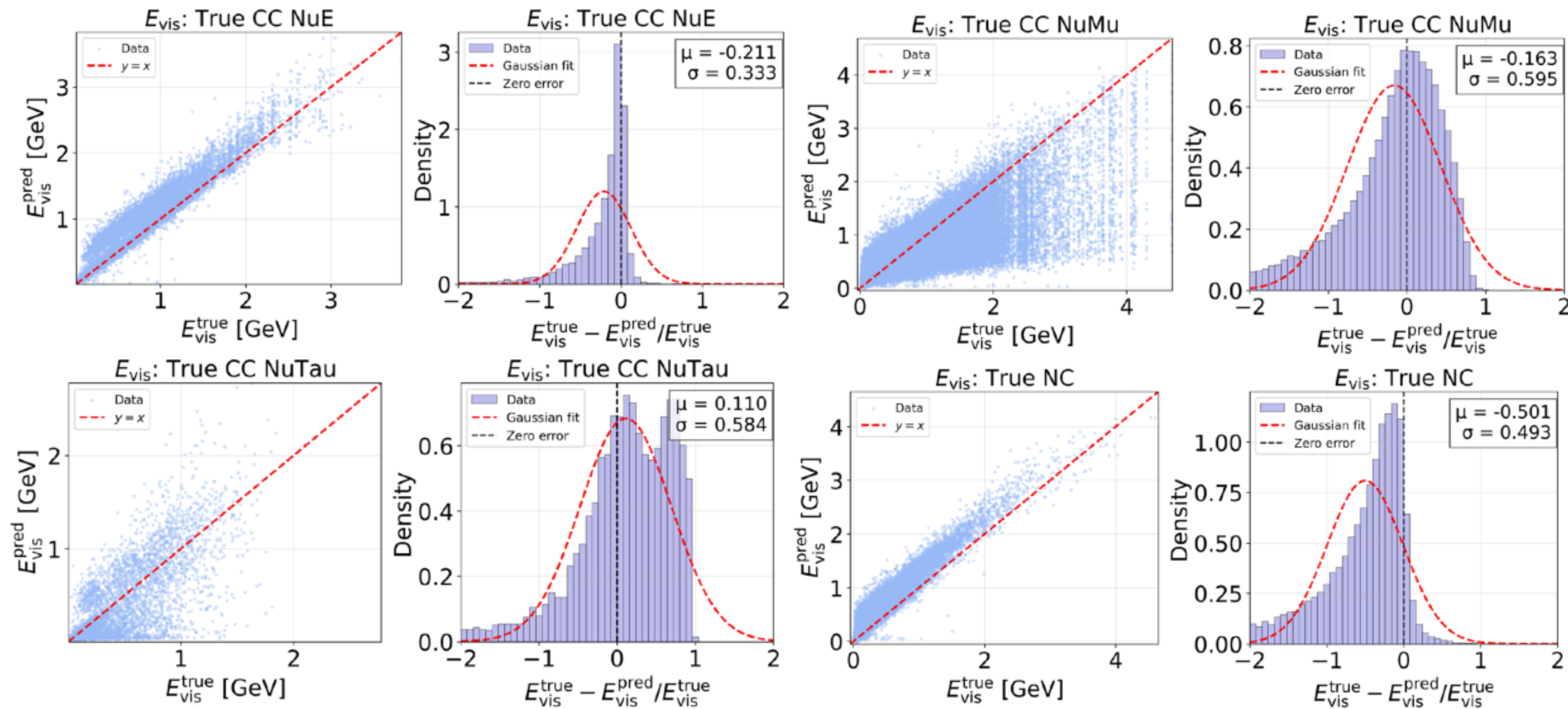


# BDT: Visible Energy

## Regression Results

- Large Systematic Bias in NC Events
- BDT Learns average energy correction from the dominant CC events and misapplies it to the inefficient
- Performance on CC Events:
  - Best performance: NuE CC
  - Poorer resolution: NuMuCC, NuTau CC



# BDT: Missing Pt

## Regression Results

- **The BDT's Failure:** The model is fundamentally confused by this and performs poorly on **all** classes.
- Massive Over-prediction for low  $p_T^{\text{miss}}$  events
- Poor Resolution for high  $p_T^{\text{miss}}$  events
- **The Problem:**
  - The true  $p_T^{\text{miss}}$  distribution is **bimodal**

