Conventional Satellite Retrieval

| Observed Satellite Data + Geometry Information + Auxiliary Data $\mathbf{x}$ | → | Retrieval Algorithm $\tilde{f}(\mathbf{x})$ | → | Satellite Data Product $\mathbf{y}_{\text{conventional}}$ |
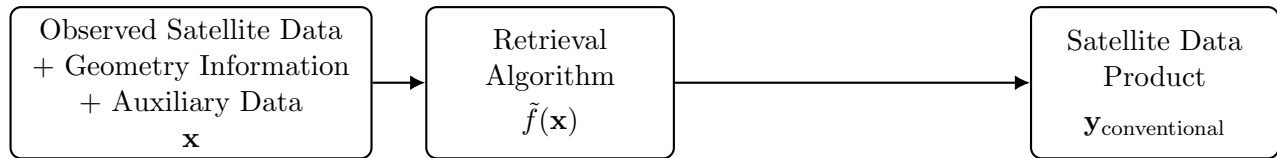
Fully Learned Satellite Retrieval

| Observed Satellite Data + Geometry Information + Auxiliary Data $\mathbf{x}$ | → | Machine Learning Algorithm $\hat{f}(\mathbf{x})$ | → | Satellite Data Product $\mathbf{y}_{\text{fully learned}}$ |
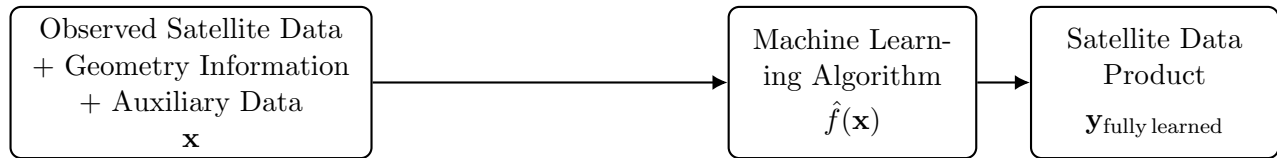
Model Enforced Post-Process Correction of Satellite Retrieval

| Observed Satellite Data + Geometry Information + Auxiliary Data $\mathbf{x}$ | → | Retrieval Algorithm $\tilde{f}(\mathbf{x})$ | → | Machine Learning Algorithm $\hat{e}(\mathbf{x})$ | → | Satellite Data Product $\mathbf{y}_{\text{model enforced}}$ |