

Low latitude
outgassing

High latitude
uptake

O₂

O₂

Mixed layer depth

Organic matter
export

O₂ < O₂^{sat}
AOU > O

Photosynthetic productivity
 $\text{CO}_2 + \text{nutrients} + \text{H}_2\text{O} \rightarrow \text{Organic Matter} + \text{O}_2$



OUR

Organic Matter + O₂ → CO₂ + nutrients + H₂O

O₂ ≈ O₂^{sat}
AOU ≈ O

Ventilation

Isopycnal surface