

ANSWER

Round: 6B

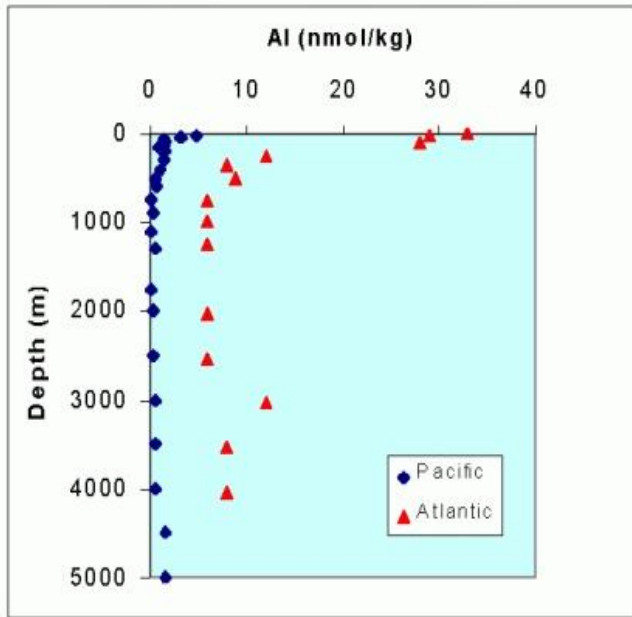


Figure 1: Open ocean vertical profiles of dissolved aluminum in the North Atlantic and North Pacific

ANSWER

ANSWER

1. What are the two (2) most likely source of aluminum to surface waters?

Atmospheric dust inputs (2 pts) AND river inputs (2 pts)

2. Why are dissolved aluminum concentrations higher in the Atlantic than the Pacific?

Greater contributions from river inputs in the Atlantic (2 pts)

3. What process causes aluminum concentrations to decrease in the upper 1000 meters of the water column?

Scavenging OR particle scavenging OR adsorption to particles (2 pts)

4. What is the most likely explanation for the anomalously high data point at 3000 m in the Atlantic?

Most likely reflects an advected source of hydrothermal vent fluid (2 pts).

5. On the plots below, draw and label the axes for (10 pts)
- a. A nutrient-like profile b. Conservative element profile

