# PROXY SYSTEM MODEL: CORAL $\delta^{18}O$

Simulated MTM Spectra for each Signal Transformation, Palmyra Island

**INPUTS:**
SST, SSS, $\delta^{18}O_{SW}$

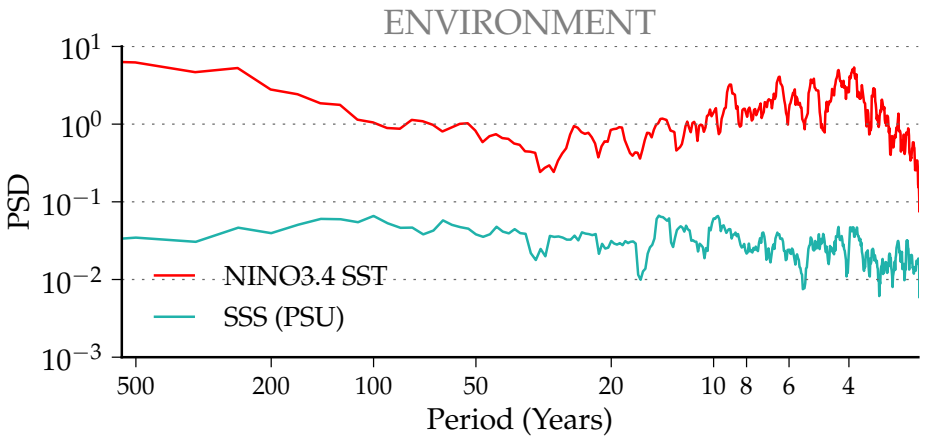
**SENSOR:**

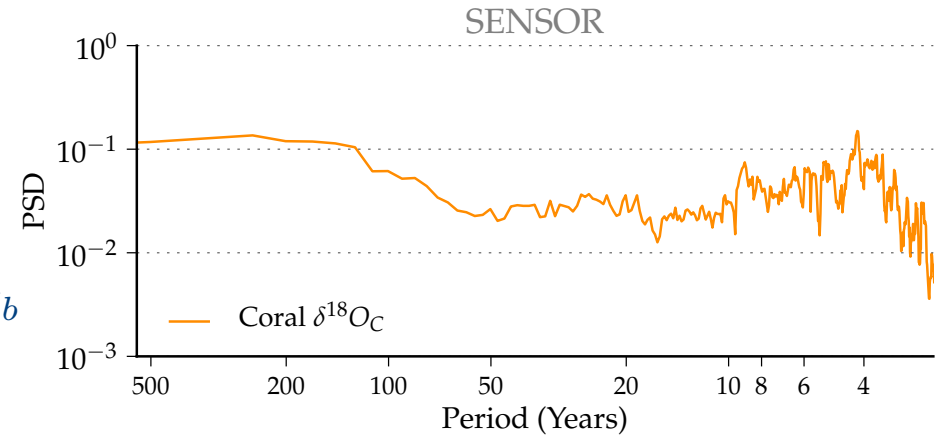
$$\delta^{18}O_c = \alpha \cdot SST_a + \delta^{18}O_{sw} + \epsilon_b$$

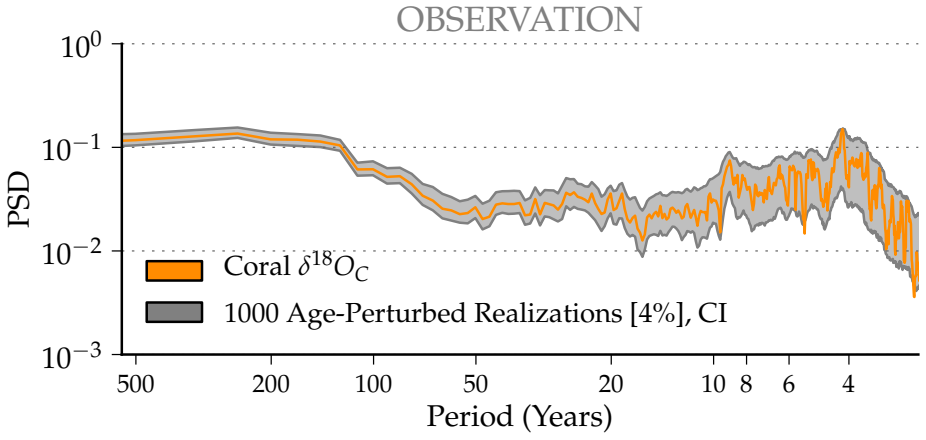
**OBSERVATION:**
Layer Counting (BAM)
Isotope Analysis

$$t_i = t_{i-1} - 1 - \Delta_i$$

$$\Delta_i = 1 + P_i^{\theta_1} - \min(P_i^{\theta_2}, 1)$$




$$\delta^{18}O_m = \delta^{18}O_c + \epsilon_m$$