

Sedimentary Silicate Paleothermometers

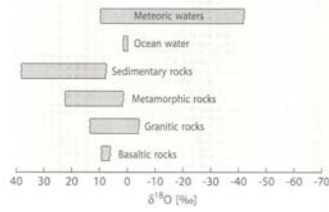
Lecture Six
Chapter 8

Oxygen variation

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Isotope Fractionation Mechanisms of Selected Elements

Fig. 27. $\delta^{18}\text{O}$ values of important geological reservoirs



• Hoefs, 2004

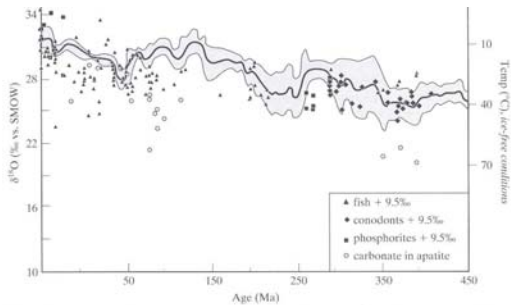


FIGURE 8.3: Compilation of marine phosphate analyses as a function of time. 9.5‰ was added to all points in order to generate a curve directly comparable to that for carbonates (the continuous curve). The data on carbonates in apatite are the $\delta^{18}\text{O}$ values of the carbonate component in apatite. Unlike the phosphate, which appears to preserve primary values, the carbonate component in old samples is clearly reset. (Data from Shemesh et al., 1983; Luz, Kolodny, and Kovach, 1984; Kolodny and Luz, 1991; Lécuyer et al., 1993.)

