Preservation of Fe isotope heterogeneities during diagenesis and metamorphism of banded iron formation

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The shaded areas on Fig. 10 were incorrectly labeled in the original article and the regionally metamorphosed sample studied by Dauphas et al. (2004) was incorrectly identified as an Isua BIF instead of an Akilia gneiss. Both errors are corrected on this revised Fig. 10. We apologize for the confusion.

Fig. 10 $\Delta^{56}\text{Fe}$ Magnetite–Carbonate and $\Delta^{56}\text{Fe}$ Magnetite–Silicate (Olivine, Chlorite, Hedenbergite, Grunerite, Greenalite) values for Biwabik minerals (Table 2) and theoretical fractionation factors as a function of metamorphic temperature. The upper shaded envelope shows fractionation factors for siderite and hedenbergite (Polyakov and Mineev 2000) relative to magnetite, and lower envelope shows the fractionation factors for olivine relative to magnetite (Polyakov et al. 2005, Polyakov, personal communication). In each envelope the upper bound makes use of new reduced partition functions for magnetite as calculated from inelastic X-ray scattering and the lower bound as determined by new Mössbauer spectroscopic data (Polyakov, personal communication). It is important to note that for those mineral pairs that apparently conform to theoretical predictions, the agreement is purely fortuitous because, as discussed in the text, magnetite did not participate in the silicate-forming reactions and temperatures $<650^\circ\text{C}$ were insufficient to attain isotopic equilibrium by diffusion. The magnetite–pyroxene pair from a regionally metamorphosed Akilia gneiss studied by Dauphas et al. (2004, closed circle) appears to have equilibrated due to its high temperature and long duration of heating

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