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Cr isotope systematics and the Bosumtwi crater.

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The difference in both ε^{53} Cr and ε^{54} Cr isotope ratios between the Earth and meteorites, as authors of method claimed, is only a direct observation that 'does not involve any models' [1]. However, ratios deviations are possible because: (1) of the ⁵³Mn decay, (2) the ⁵³Mn, and then ⁵³Cr, can originate by thermonuclear tests, (3) the proton effect on Fe adds ⁵²Cr during deep earthquakes [2]. Deviations ε^{54} Cr are also possible since the synthesis in Supernova. In 1998, the Bosumtwi crater has been identified by the ICP-OES as the source of chondrite traces in Ivory tektite [1]. However, the ICP-OES plasma method till 2000 was imprecise, hence it was impossible to distinguish Cr (Fe, etc.) peaks due to interference [2], and the precision $\sim 0.5\varepsilon$ since heating/cooling plasma devices adds errors. The earth mantle could be inhomogeneous since the primordial accretion of chondrites mixture, etc. Both diamonds in the alluvia in Ghana and chromite rich diamonds in kimberlites of the Seguell area, Ivory coast [2] are indicators of deep fluids. Thus, the Bosumtwi crater most likely is endogenic, and the chondrite component in IVC-3395 can be the result of an explosive obduction.

[1] Shukolyukov, A. et al. (2002), 33rd LPSC [2] German
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