is better crystallized and has larger grains, there will be more scattering from a sample of the α form than from a sample of the β variety. We have found that any such differences in sharpness disappear if specimens of α-hemihydrate are well ground during preparation of the mulls and disks.

Our studies have shown that α and β-hemihydrate have the same type of crystal lattice. The α-hemihydrate is produced in a more moist atmosphere (in saturated steam conditions) than the β form, which is usually obtained by thermal dehydration of the dihydrate under dry circumstances[9,14]. Moist conditions favour agglomeration of the particles and this suggests that β-hemihydrate is more finely divided than α-hemihydrate, hence its greater reactivity. The greater fineness of the β form would account for the differences observed in the DTA data[11–13]. The conclusion that the differences in behaviour of α and β-hemihydrate are essentially manifestations of particle size, are in agreement with the results of Kruis and Späth[15], who ascribed the differences between the two forms of hemihydrate to a difference in the respective surface areas.

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Received August 6, 1971.

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Ivory Coast Microtektites: Corrected Values of Uranium Content

THIS note is meant to correct the values of uranium content in Ivory Coast microtektites as published in our recent article in *Nature*[1]. The correction leaves unchanged all the values of age derived by us, as well as the inferences drawn in the article as to a possible correlation between tektite falls, geomagnetic reversals and faunal changes. The values of uranium content and the apparent range of fission fragments in glass as reported by us may, however, mislead other workers in the field. The error came to our notice just before the publication of our article.

During our measurements we failed to appreciate the fact that the reference glass, U-2, used by us for standardizing the uranium values, contained depleted uranium and not natural uranium. The isotopic abundance of ^{235}U in it, thus, was 3.6×10^{-3} (ref. 2) and not 7.14×10^{-3} as assumed by us. On correcting for this factor, the apparent range R_{ap} of an average fission fragment in glass is found to be ≈ 15 μm rather than 7.6 μm; this in turn practically halves all the uranium values reported by us.

The revised value of the mean uranium content of the thirteen Ivory Coast microtektites examined by us is 0.22 p.p.m. by weight, with a range of 0.19 to 0.26 p.p.m. between individual samples. This is in good accord with the average value of 0.23 p.p.m. (and a range of 0.12 to 0.48 p.p.m.) calculated from the results of Gentner *et al.*[3]. The value of the uranium content of the single Ivory Coast tektite studied by us is now changed to 0.7 p.p.m., which is to be compared with the value reported by Rybach and Adams[4] of 1.10 p.p.m. The latter is the mean of twenty samples, but the range of individual values is not given in ref. 4. It is known[5], however, that the uranium content in tektites in a given strewn field often varies by as much as a factor of two between samples, so that our revised value is not unreasonable.

A more precise determination of R_{ap} is continuing in our laboratory. The value of R_{ap} is inversely proportional, in the case of a material with a known amount of uranium in it, to the magnitude of the prolonged etching factor $f(t)$ used in equation (2) of ref. 1. We have previously used 39–43 (or, nominally ≈40) volumes % hydrofluoric acid at 21° C as the etchant. For more precise work we are now using 40.0 and 48.0 volumes % HF at 21° C, 17° C and 13° C. The values of $f(t)$ in several materials of interest, and the average range of fission fragments in them, will be published shortly. These determinations will, it is hoped, give uranium content values with greater precision than has been possible up to now with the fission track method.

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Received August 3, 1971.

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