pg. 136 of the British Museum FOIA release

Result from Laboratories

ETH Eidgenössische Technische Hochschule Zürich

Ecole polytechnique fédérale de Zurich
Politecnico federale svizzero di Zurigo
Swiss Federal Institute of Technology Zurich

Institut für Mittelenergiephysik

HPK-Gebäude

Durchwahl Nr 01/377
Telefonzentrale 01/377 44 11
Telex-Nr 823 153 ehpk ch

Postadresse:
Institut für Mittelenergiephysik
ETH-Hönggerberg
CH-8093 Zürich

0970

Dr. M.S. Tite
The British Museum
Research Laboratory
London WC1B 3DG
Great Britain

Prof. Dr. W. Wölfli

August 31, 1988

Re: Revised data

Dear Mike,

As discussed yesterday on the phone I am sending you today by FAX as well as by express mail our revised data sheets.

When we submitted our first set of data sheets to you on July 20, we were aware that there might be a systematic difference between the mean values of run 1 and 2. Of course, we carefully checked every detail of our sample preparation procedure, the internal consistence of our standards. (For run 1 we used two independently prepared NBS and two independently prepared ANU and for run 2 we used another two NBS and one ANU standard, again separately prepared, but from the same basic material). We also checked the reproducibility of the measurements of each subsample as well as the evaluation procedure but at this time could not find any reasonable explanation for it.

Inbetween we had enough time to go all over it again and finally discovered that (to our shame) the ages obtained during run 2 have not been corrected for the so called current dependent effect. This effect is known to us for many years and we try to minimize it by preparing standards and unknown samples in exactly the same way, so that they should deliver about the same current. These conditions were nicely fulfilled for all samples of run 1 but not for those of run 2 where the unknown samples delivered about 10% higher ^{12}C-currents that the standards. Our $^{13}C/^{12}C$ ratio measurements allow us to determine the amount of this current dependency and to evaluate the corresponding correction factor.

The revised results from run 2 given in the enclosed data sheets include now this correction. As can be seen the agreement between run 1 and 2 is much better now. But more important is the fact that it does not matter now which way around the errors of the mean are being calculated.