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COMMENTS ON THE QUOTATION OF TL DATES

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Suggestions and comments on TL dates quotation have been made by authors after Aitken and Alldred (1972) and today publications such as "Ancient TL" (Sutton, 1981) or the "MASCA Journal" (Fleming, 1978) follow a derived format.

The basic features of this format are:

1. 1980 as a zero reference year
2. The use of two errors ($\pm p$, $\pm a$) where p is the standard error on the average age of a set of sherds from the same context and a is the standard error for the context, absorbing all the various recognized sources of error, random and systematic.

We would like to point out a few problems in the light of radiocarbon dating experience. Both methods are linked because:

- intercomparisons will multiply with the growth of the TL method.

- TL is today one of the most important partners of radiocarbon in the range (7,000-40,000) for its calibration. (Dendrochronology is expected to reach the 11th millenium within the next years).

A consensus now exists for the presentation and calibration of radiocarbon dates (Klein et alii, 1982) and it is desirable that the juxtaposition of a ^{14}C and a TL date do not show any ambiquity. But it does! Actually BP means for ^{14}C that:

- the result has not been calibrated
- the zero reference year is 1950
- 5568 years half-life is taken for ^{14}C

So a ^{14}C and a TL date both given "BP" are absolutely not comparable. We suggest that this mention should be rejected in the TL field. Why not simply use "B.1980"?

"BC" and "AD" are very useful for historical archaeology but have no significance for geological events or civilizations without any relation with our calendar. Furthermore, the mention "B.1980" has the advantage to remind that the given number is more the result of a physical measurement than a date on the Gregorian calendar.

This later remark introduces our second comment on the TL dates quotation: we think that calculating the mean age of a set of sherds "taken in the same context" is an intrusion of the physicist in the archeological field. This proceeding comes to presuppose the contemporarity of the different samples and the physicists are not competent to deal with this question. In fact, this is never done with ^{14}C dates but by date-users which take their own responsibilities.

When the TL samples have evidently the same age (samples collected in, or under, a lava flow example), the mean age and p might be calculated and notified in the datation comments.

Endly, we fear that the date-users will find the double quotation quite heavy and that they will re-publish them in their own publications (i.e. archaelogical, historical...) with only one of the two with a human tendancy to choose the one which serves best their demonstration.

So, why not publish every single TL result with its own overall error and leave the averaging to date-users when they think they are allowed to?

Maybe it is untimely to think of a complete unification within the different dating techniques but now that the dating methods and laboratories are multiplying it is worthwhile to think of erasing the causes of errors and confusions. Our last proposal is to initiate a discussion about this problem now and conclude it at the next TL Specialist Seminar in Worms.

REFERENCES

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The next issue of Ancient TL has some space still available for contributions. Research notes and additional comments on thermoluminescence date quotations are particularly of interest. Contributions should be sent to the editor before December 1, 1983, to insure inclusion in the upcoming issue.