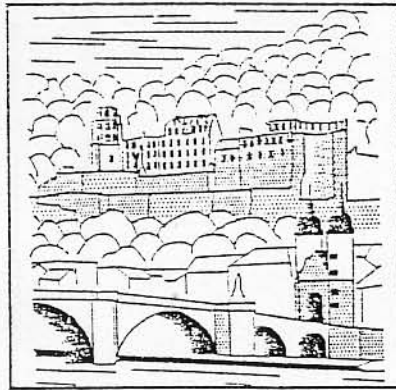

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ABSTRACTS

THE ROLE OF SOME MULTIVARIANT FACTORS THAT ACCOUNT IN THE URANIUM MICRODISTRIBUTION OF Hipparion MOLARS

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Fission track micromapping has been utilized in the study of uranium accumulation in Hipparion molars. The heterogeneity and high concentration of uranium in teeth raise difficulties when dating techniques (U-Th, ESR etc.) are applied. Teeth enamel seems to be the most suitable material for dating purposes. However heterogeneity of uranium microdistribution in enamel has been observed (Theodorou et al., 1989).

The analysed material comes from the Upper Miocene layers of Pikermi in Attica Greece, from where there is available information concerning stratigraphy, different taxa, palaeoenvironment and uranium concentrations. Some of the teeth belonged to one mandible and had different degrees of enamel wear. So it was possible to study the microdistribution in respect to complex geometry of enamel. The geometry varies also with the enamel wear and existing postsedimentary microcracks. In cases of folded teeth tissues the role of enamel as a barrier for U accumulation is discussed. The influence of the above factors affecting the uranium concentration and distribution in dentine, enamel, alveolar bone, associated sediments, calcitic fillings in the hollow parts is also discussed. Moreover the suitability for ESR dating of the enriched in uranium teeth components, bones and sediments is examined.

REFERENCES

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