

## Sur l'origine des phosphates de l'atoll corallien de Nauru



Phosphates from the Nauru atoll lie on a karstic structure developed at the expenses of a coral reef. These formations are fluorapatites low in carbonate, with less fluorine than common marine carbonate-fluorapatites (CFA). At least one of the deposits is from the last interglacial era (Th-230-U-234 dating). Rare Earth spectra seems to be affected by the dissolution-precipitation reactions leading to the formation of the carbonate-fluorapatite. But U and Sr isotopic ratios support the marine origin of most of these formations, except for one result, which give a Nd-143/Nd-144 ratio indicating a slight volcanic influence. Our results and the literature reports favorise the hypothesis that these phosphates originate from the endo-upwelling of phosphorus rich deep seawater through the fractured and porous mass of the carbonated reef.

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