

THE SEARCH FOR GIANT HALOS IN YUGOSLAV BIOTITES
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The report of Gentry et al.⁽¹⁾ that superheavy elements had been found in giant halos in samples of biotites originating from Madagascar has aroused great interest for this unexpected discovery. Many questions connected with it were left unanswered. Subsequent investigations of several other groups^{(2), (3)} has not revealed the existence of superheavy elements in monazit, the mineral in which superheavy elements had been found by Gentry. Following the announcement of Gentry, we have undertaken an extensive survey of biotites originating from various locations in Yugoslavia, in order to verify the evidence for superheavy elements and also to study the giant halos, which by themselves present a puzzling phenomenon.

Samples of biotite from 31 locations in various regions of Yugoslavia were examined and relative abundances of radioactive halos were determined. Sizes of halos were also measured and their radius ranged from 30-65 microns. A total of about 3,000 samples were searched (Table I) and about 700 halos were identified. However, not a single giant halo was found. This may be connected with the age of mountains in Yugoslavia, the oldest of which, the Rodopes, date, from the end of the Paleozoic era.

These data will be used as a basis for the study of geological history of Balkanian region.

References:

1. R.V. Gentry et al.: Physical Review Letters 37 (1976) 1.
2. F. Bosch et al.: Z. Physik (preprint)
3. Conference on superheavy elements, Caen, 1976.