ESR dating of pseudotachylite

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ESR dating is a method to obtain ages from the natural doses accumulated in the minerals. The first preliminary results of ESR dating applied to two samples of pseudotachylite will be reported in the present paper. The Himalayan pseudotachylite was formed at the bottom part of land cluster of 3 km in diameter which slided about 2 km. ESR signals of Al and Ti-Li centers were observed in the samples. The equivalent natural accumulated doses were obtained by measuring the aliquots irradiated by gamma rays up to 1 kGy, to be 500-800 Gy. Natural dose rates have to be measured further in order to obtain the age. Assuming 5 mGy/y, a typical dose rate of granite, the age is calculated to be 100-160 ka.

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