$^{40}Ar/^{39}Ar$ CHRONOLOGY OF CENTRAL EUROPE TEKTITES (MOLDAVITES). M. A. Laurenzi[1], G. Bigazzi[1], M.L. Balestrieri[2], [1]Istituto di Geocronologia e Geochimica Isotopica, CNR - Area della Ricerca di Pisa, Via G. Moruzzi, 1 I-56124 Pisa, Italy, m.laurenzi@iggi.pi.cnr.it, [2]Centro di Studio di Geologia dell'Appennino e delle Catene Perimediterranee, CNR, Via La Pira 4, I-50121 Firenze, Italy

Moldavites are tektites found in sedimentary deposits of various ages (from Middle Miocene to Holocene) in Central Europe (the majority are in Southern Bohemia and Moravia, subordinately in Lusatia and North-eastern Austria) (see [1] for a thorough review). Ages reported in literature obtained with K/Ar, and, subordinately, with $^{40}Ar/^{39}Ar$ method are spread over a wide interval of time (14-15.3 Ma) [2].

In view of their use as reference materials for fission-track (FT) dating [3] , a $^{40}Ar/^{39}Ar$ investigation was undertaken on seven moldavites having different stratigraphic ages and different degree of annealing as concerns their FT ages. Samples representative of the Southern Bohemia subfield were two Fe-moldavites from Jankov deposit and one from Vrábce (Middle Miocene), one each from Chlum nad Malsí and Trebanice deposits (Pliocene). The reworked Slavice moldavite represents the Moravian subfield, and the Plio-Pleistocenic Radomilice is from the homonymous one. Four to fourteen small chips, clear and free from inclusions, were chosen from each sample and individually melted with a focused IR laser beam. All data are referred to an age for Fish Canyon Tuff biotite of 27.95 Ma [4] .

The spread of ages within chips of each moldavite was limited, below 2% on all samples except one, and the percentage of radiogenic ^{40}Ar was very high, 99% on average. Simple average ages of analysed samples ranged from 14.27 to 14.42 Ma, with standard deviations comprised between 0.05 and 0.11 Ma, while integrated total ages were from 14.26 to 14.43 Ma. Weighted average ages displayed high MSWD, but results were equal within error to other type of calculations. Isochron regression on individual samples was more difficult due to the low dispersion of points. The weighted average of the ages of analysed moldavite was 14.35 ± 0.05 Ma (2 σ, MSWD=0.78).

The weighted average ages of all analysed chips gave a value of 14.34 ± 0.021 Ma (2 σ, MSWD=1.3), and an isochron regressed on all points gave an age of 14.37 ± 0.07 Ma (2 σ, MSWD=1.38). These values represent the widest $^{40}Ar/^{39}Ar$ chronologic data set on moldavites, after early K/Ar data [5]. They may be considered at the moment as the best estimate of moldavite ages, definitely younger than the widely accepted $^{40}Ar/^{39}Ar$ age of 15.21 ± 0.25 Ma [6] . It is worth to note that ages obtained in this paper are equal within error to the 14.40 ± 0.25 Ma recently obtained on Lusatian moldavites [7] .

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