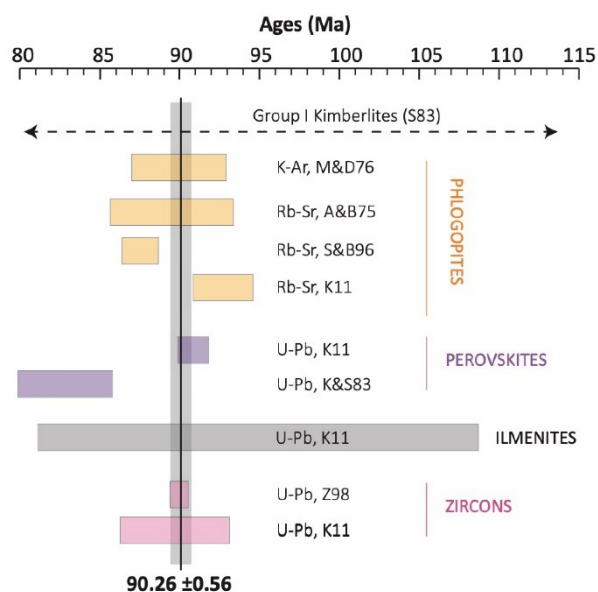Figure Supplementary 1.

Figure S1 Summary of Monastery kimberlite ages from previous studies and geochronological constraints. **S83**, Smith (1983) Group I kimberlites age range (80 – 114 Ma); Phlogopites - **M&D76**, McIntyre and Dawson (1976) K-Ar phlogopite age from Monastery (90 ± 3 Ma); **A&B75**, Allsopp and Barrett (1975) Rb-Sr on phlogopite megacrysts (89.6 ± 3.9 Ma), recomputed with ^{87}Rb-^{87}Sr decay constant of 1.3972 ± 0.0045 10^{-11} $a^{-1 1}$; **S&B96** Smith and Barton (1996) Rb-Sr age on a single phlogopite megacryst (87.6 ± 1.2 Ma); **K11**, Knowles et al., (2011) leached and unleached fractions (n = 7) of 2 phlogopite megacrysts (92.8 ± 1.9 Ma). Perovskites – **K11**, U-Pb age for 4 perovskite grain fractions (91.0 ± 1.0 Ma; Knowles et al., 2011), **K&S83**, Kramers and Smith (1983) U-Pb on perovskite (82.5 ± 2.5 Ma). Ilmenites – **K11**, Knowles et al., (2011) U-Pb age from 9 ilmenite fractions. Zircons – **Z98**, Zartman et al. (1998) U-Pb mantle zircon (90.1 ± 0.5 Ma); **K11**, Knowles et al., (2011) U-Pb age on a single zircon megacryst (88.8 ± 0.5 Ma). Weighed mean yields 90.26 ± 0.56 Ma (95 % CI) for a MSWD ca. 0.66 and Chi-squared p-value of 0.66