



**Fig. S1.** Mosaic showing the locations of the laser ablation pits and the textural context of the K-rich feldspars from NWA 7034 (Black Beauty) with  $^{87}\text{Rb}/^{86}\text{Sr} > 1$  that provide the most leverage in the 2.2 Ga  $^{87}\text{Rb}$ - $^{87}\text{Sr}$  isochron.