

## **Supplementary Material 6.**

A) U-Pb concordia diagram for the amphibole-gabbro MAT4 showing the distribution of concordant dates. B) distribution of the  $^{206}$ Pb/ $^{238}$ U concordant dates showing (blue) the dates used for the weighetd average calculation. Red analyses were not considered in the calculation because affected by partial Pb loss (younger dates) or because mixed ages.