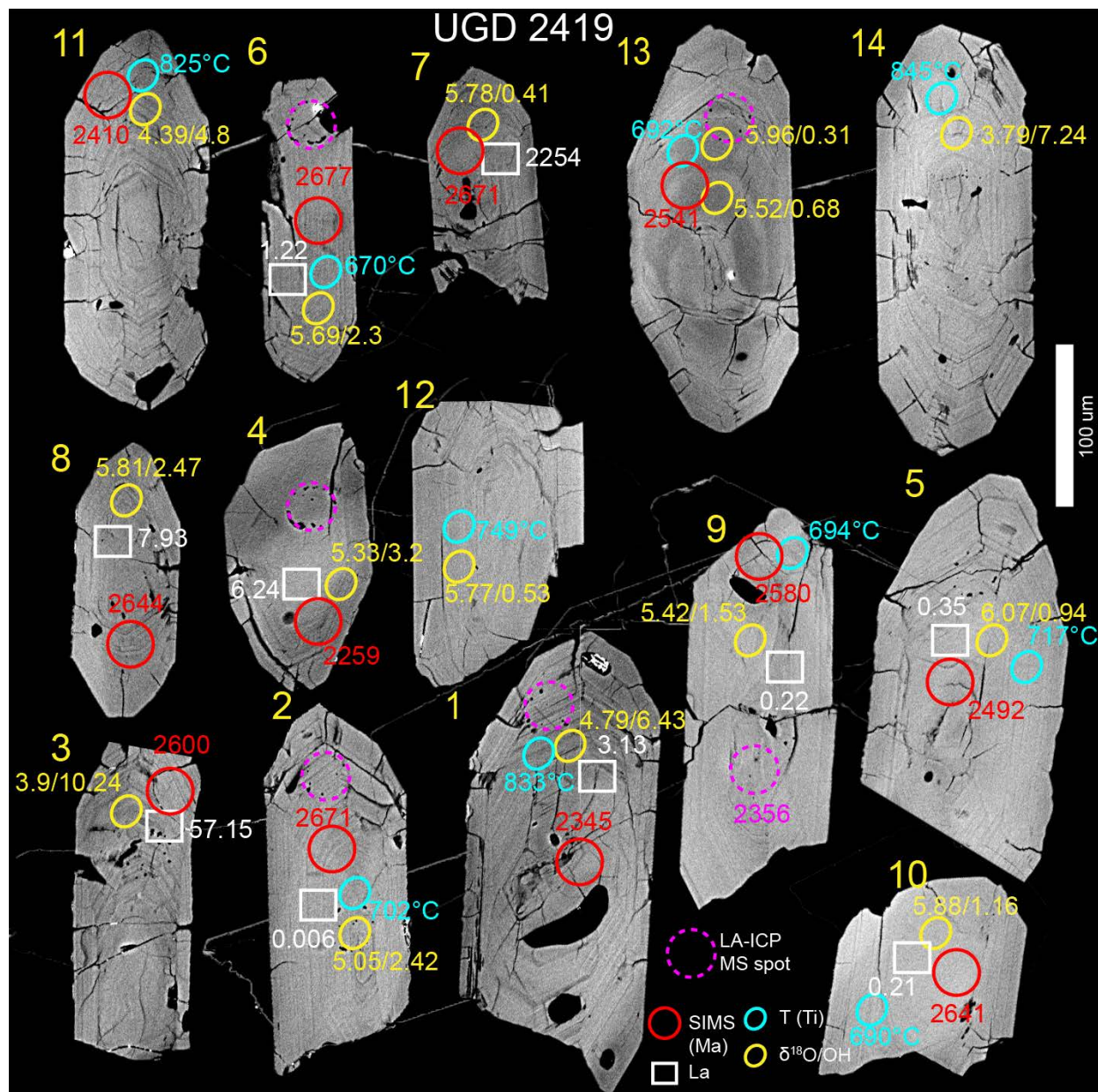
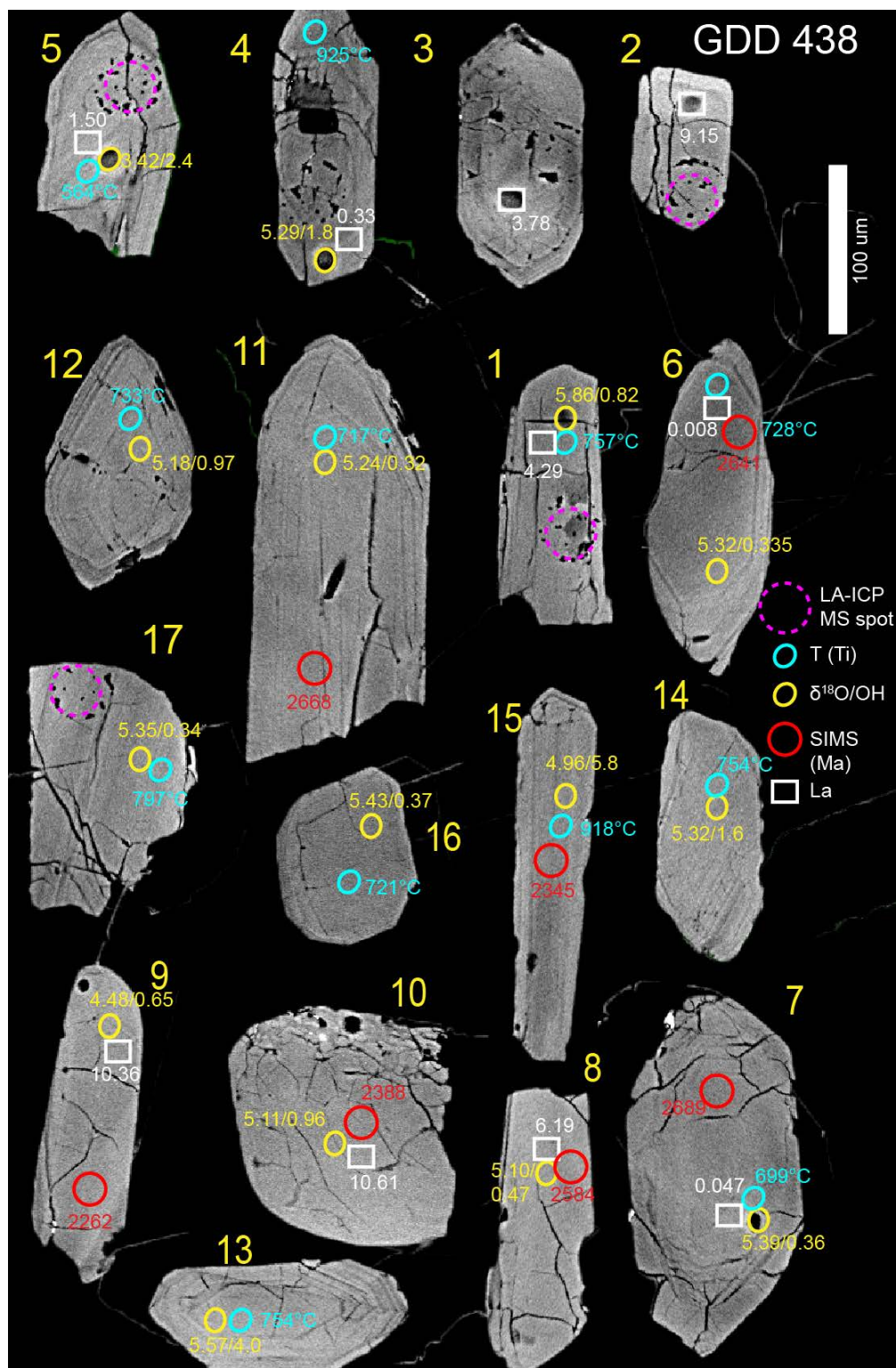


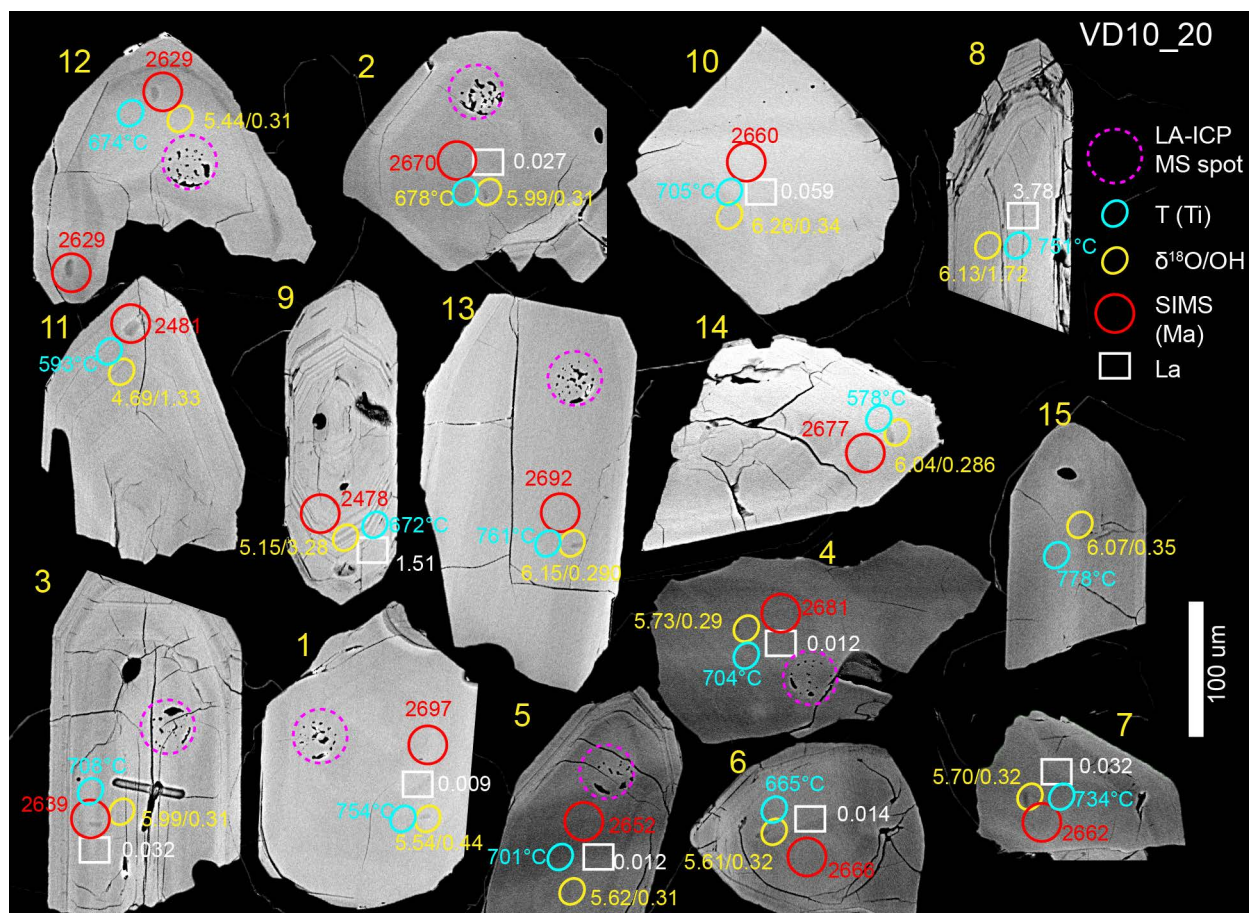
SUPPLEMENTAL FIGURE S1. Zircon LA-ICPMS U-Pb concordia and weighted mean diagrams for granitoids from Sunrise Dam (A-C), Kanowna Belle (D-F), and Velvet (G-I). Analyses of Group I of magmatic zircons are shown with separately.



SUPPLEMENTAL FIGURE S2. BSE images of representative analyzed zircons of granitoids from Sunrise Dam (UGD2419) and showing in situ U-Pb ages (purple dashed circle for LA-ICPMS, red circle for SIMS), O isotope/ $^{16}\text{O}^{1}\text{H}/^{16}\text{O}$ (10^{-3}) (yellow cycle), Ti content (blue cycle), and La content (white square).



SUPPLEMENTAL FIGURE S3. BSE images of representative analyzed zircons of granitoids from Kanowna Belle (GDD 438), and showing in situ U-Pb ages (purple dashed circle for LA-ICPMS, red circle for SIMS), O isotope/ $^{16}\text{O}^1\text{H}/^{16}\text{O}$ (10–3) (yellow cycle), Ti content (blue cycle), and La content (white square).



SUPPLEMENTAL FIGURE S4. BSE images of representative analyzed zircons of granitoids from Velvet (VD10_20), and showing in situ U-Pb ages (purple dashed circle for LA-ICPMS, red circle for SIMS), O isotope/ $^{16}\text{O}^{\text{H}}/^{16}\text{O}$ (10^{-3}) (yellow cycle), Ti content (blue cycle), and La content (white square).