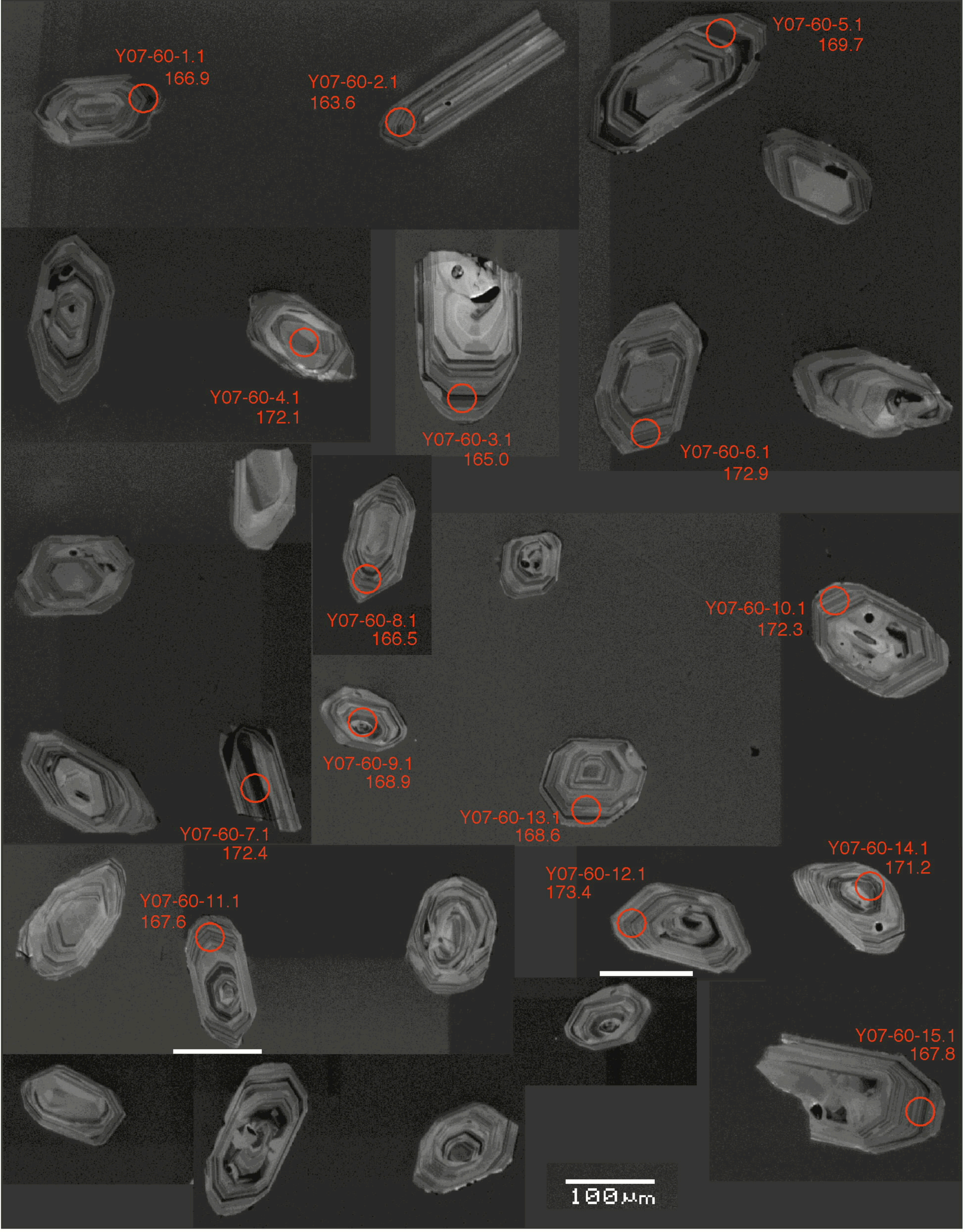

Figure 6.2 Cathodoluminescence (CL) images of zircon grains from sample Y07-60, Jfq unit of the Fulstone Volcanics, Buckskin Range, taken with a scanning electron microscope at the USGS - Stanford SHRIMP lab. Red circles and labels show where 30 micron diameter spots were analyzed with the SHRIMP ion microprobe, and the number below the label is the measured age. Brighter zones are less uranium-rich and the less-bright zones are more uranium-rich. Euhedral zones of uniform brightness in the central parts of some grains, such as the grains of spots 5-1, 6-1and the grain to the left of spot 11.1, are areas where a crystal surface lies at a low angle to the polished surface of the grain. A few grains have what may be older cores, such as possibly the grains of spots 1.1, 3.1, 4.1, 9.1, 11.1, 14.1, the grain below 12.1 and the grain just left of the scale. Only the cores of 4.1, 9.1 and 14.1 were analyzed, and these tend to have older ages, but in some grains outer zones have older ages also. The grain below 11.1 seems to have some of its interior zones truncated by irregular domains of homogenous low-U zircon or convolute zoning, which has in turn been overgrown by peripheral oscillatory zones.