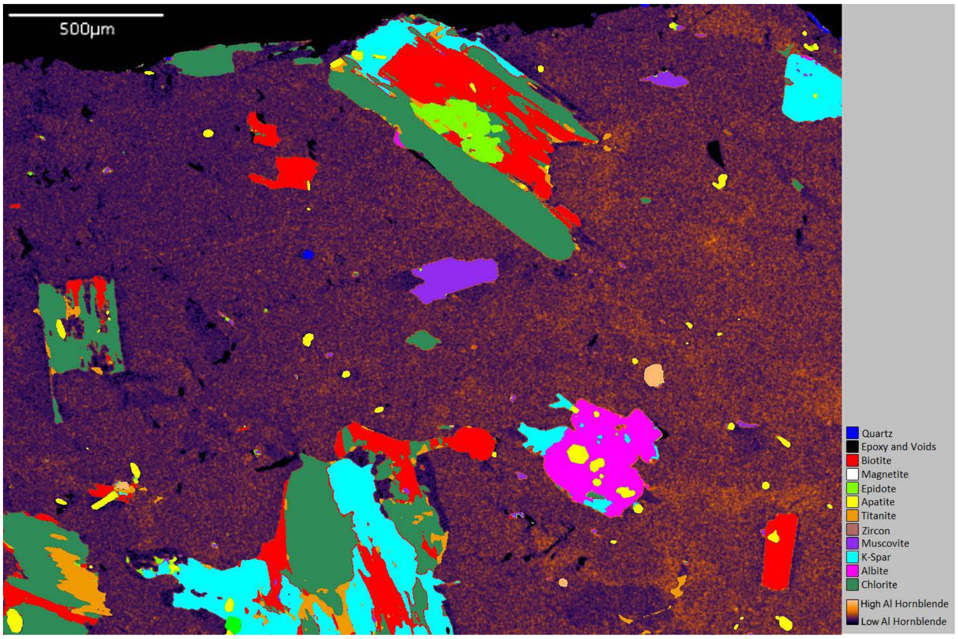
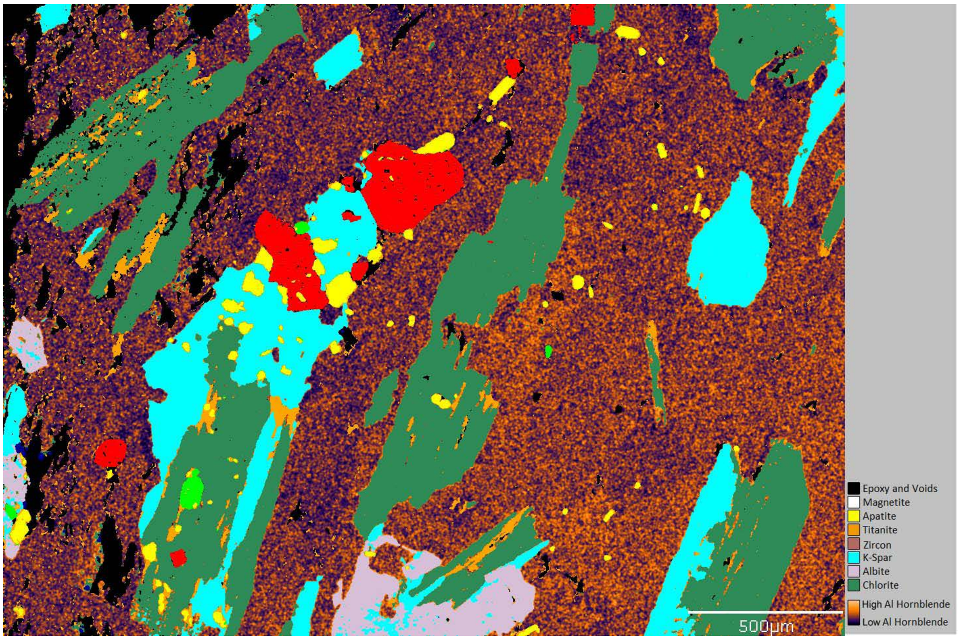
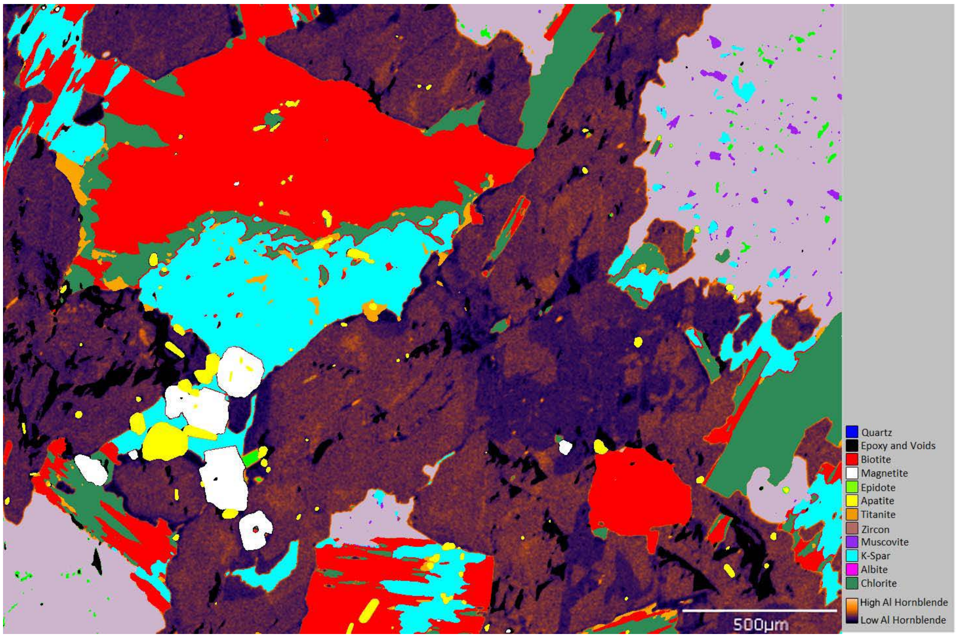
# Supplemental Figure 1: Mineral Maps of Select Phenocrysts



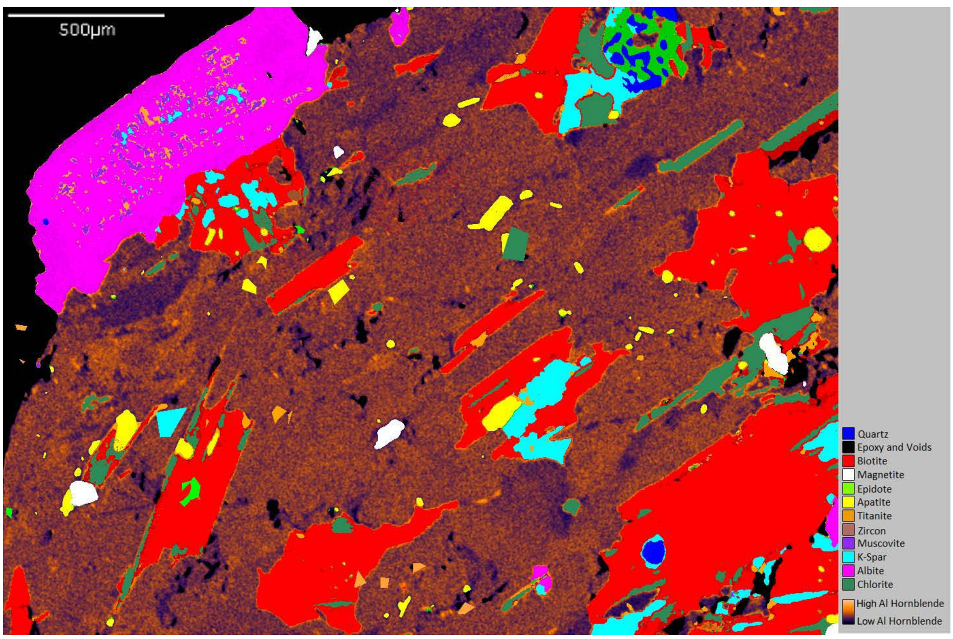

(a) Mineral map of crystal 1 which was mounted and sliced perpendicular to the ***c***-axis.



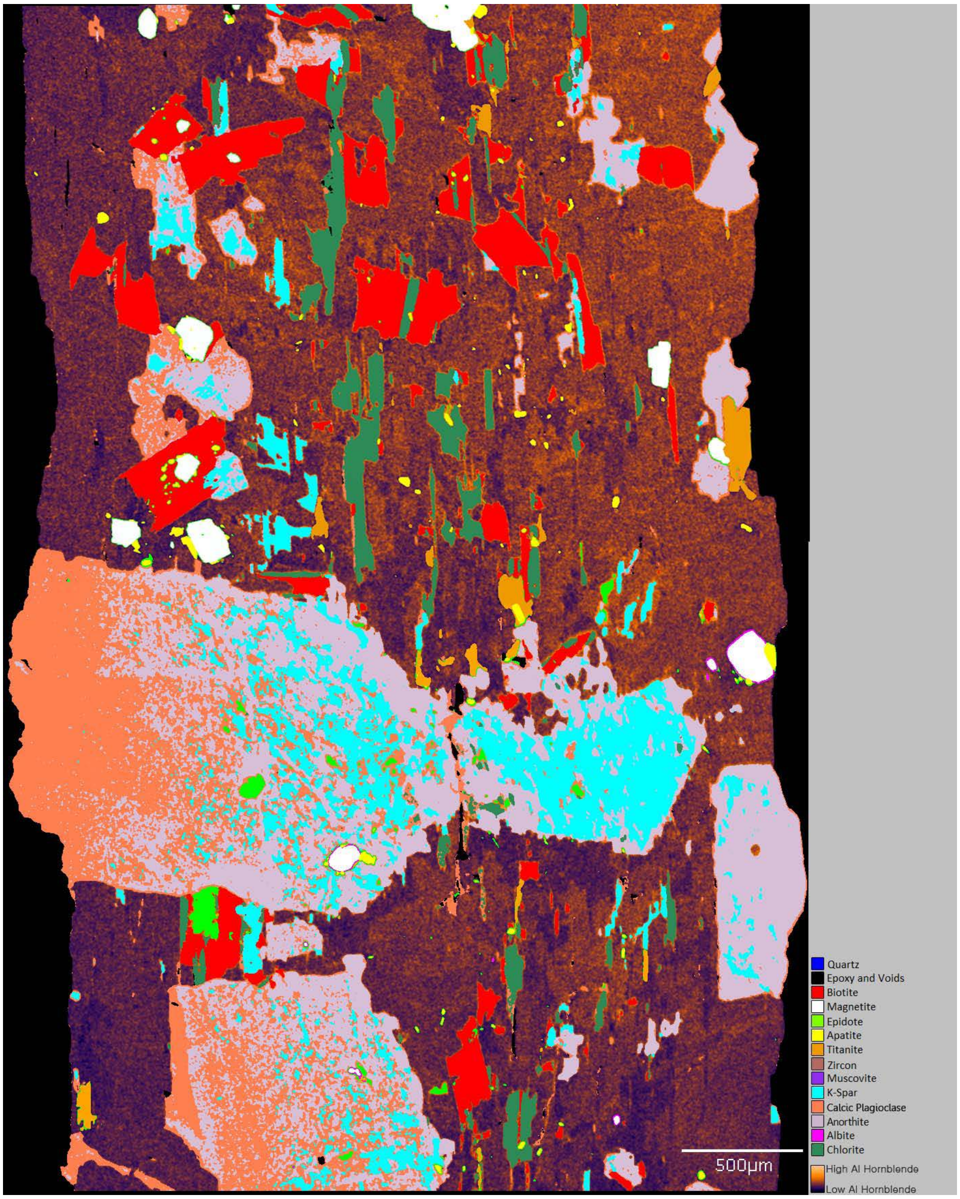

(b) Mineral map of crystal 2, which was mounted and sliced perpendicular to the ***c***-axis.




(c) Mineral map of crystal 3 which was mounted and sliced perpendicular to the ***c***-axis.




(d) Mineral map of crystal 4 which was mounted and sliced perpendicular to the ***c***-axis.




(e) Mineral map of crystal 6 which was mounted and sliced perpendicular to the ***a***-axis.

Five samples of hornblende (**a**-**e**) were mounted in epoxy, sliced and polished. Four were cut perpendicular to the *c*-axis (**a**-**d**) and one perpendicular to the *a*-axis (**e**). All were cut through the center. The polished samples were then examined in a Tescan VEGA 5341 scanning electron microscope, and X-ray maps of four of them were generated using a Sirius Si-drift detector and 4pi Revolution software. Typical analytical conditions were 15 kV accelerating potential and 5 nA absorbed current.

At minimum magnification of approximately 80x it is possible to create a map approximately of 2.7 x 2.0 mm. The elements selected for examination were Al, Si, Ca, Na, K, Mg, Fe, Ti, P and Zr. Because the Zr Kβ overlaps P Kα, the P map also includes Zr. These maps and the backscatter image were exported as image files, cropped, grayscaled and imported into ENVI. In ENVI, the files were georeferenced to an arbitrary preexisting map file. The maps were then run through a Gaussian low-pass filter with a kernel size of 9x9 to reduce noise.

Regions of interest were placed on representative crystals of mineral inclusions within the hornblende crystals, which were readily identified by their spectral characteristics. These regions of interest were then used as the basis for a supervised classification using the minimum distance method. The Al map was then superimposed over the areas of hornblende to better show Al zoning.